



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 2019 to 31 December 2019, which were mainly based on the data provided by the Group and certain large-scale subsidiaries. There is no significant change in the scope of this report from that of the 2018 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 service provider in the informatization sector in the PRC that positions itself as a “New Generation Integrated Smart Service Provider” and commits to “making our society smarter, making our life better, and making our employees happier”. The Group provides integrated comprehensive smart solutions in the informatization and digitalization sectors. It 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 endeavor to meet expectations and requirements of various parties.

The board of directors (the “Board”) of China Communications Services Corporation Limited (the “Company”) undertakes full responsibility for the Environmental, Social and Governance Report of the Group. The Group strictly complies with the provisions under the Guideline. The Board of the Company attaches great importance to the environmental, social and governance work and is responsible for evaluating and determining risks relevant to the Group to ensure the Company has effective risk management and internal control systems in place and for determining the Company’s environmental, social and governance approaches and strategies, conducting periodic reviews on the Company’s performance and approving the disclosures set out in the Company’s Environmental, Social and Governance Report. The report has been reviewed and approved to publish by the Board.

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The Strategic Planning Department of the Group is responsible for the overall planning of the “Environmental, Social and Governance Report” as well as the forming of working group together with the relevant departments of the headquarter and companies at the provincial level, which is responsible for the implementation of the environmental, social and governance strategies of the Company. The Strategic Planning Department is also responsible for the management and monitoring of the effectiveness and preparation for information disclosure of the “Environmental, Social and Governance Report” as well as the fundamental management works.

The Group has established an information collection system for the “Environmental, Social and Governance Report” and keeps improving such system, some items of which are subject to performance appraisal. The Group promotes communication with its stakeholders, including the government, shareholders, employees, customers and suppliers, by means of announcement, periodic report, meeting, symposium, interview, special communication and activity to hear their expectations and requests carefully. Opinions and suggestions from all parties are collected and addressed by the Group in a proactive manner.

Stakeholders	Mechanism and Means of communication	Expectation on the Company	Company Response
 Government and Regulatory Authorities	Meeting	Abide by laws and regulations	Comply with laws and operate in good faith
	Report and statement	Fulfill requirement of the government	Pay tax in accordance with law and promote employment
	Report and visit	Promote construction of industrial ecosystem	Innovate smart products and services
 Shareholders and Investors	Periodic report and announcement	Preserve and increase asset value	Operate in a stable and healthy manner and continuously create values for shareholders
	Special report and visit	Regulate corporate governance	Improve corporate governance and continuously improve internal control
	Daily communication	Prevent operating risks	Protect interests of investors, particularly minority shareholders in accordance with the laws
	Investor meeting	Regulate information disclosure	Disclose corporate information in strict accordance with rules
 Employees	Staff representative supervisor and staff meeting	Protect legal interests	Regulate labour management
	Employee symposium with management	Realize career development	Strengthen employee training and streamline career development path
	Employee questionnaire	Participate in management	Improve income distribution and benefit package mechanism
	Letter and visit	Care about employees	Care about employees' physical and mental health and improve working condition
 Suppliers	Supplier selection and engagement	Establish a clear procurement system, a strict process and a set of regulated conduct	Establish a synergistic and lawful procurement management system with separated supplier selection function, procurement function and monitoring function
	Subcontract management	Show explicit requirement and implement transparent management	Set up a supplier resource pool, ensure supplier qualification and service capability, provide necessary trainings and intensify full-process management on a project basis
 Customers	Contract fulfillment	Provide high cost-performance value solutions (services and products) to cater for customer needs	Further understand customer needs, innovate smart products and satisfy customer-tailored demand
	Visit and conference	Provide excellent services	Realize full life cycle business management through project report, regular meeting and project feedback
	Roadshow and exhibition	Respond quickly	Respond immediately to customers
 Community	Community communication activity	Protect environment	Implement energy saving and emission reduction and reduce water and electricity consumption
	Community construction activity	Secure emergency communications	Actively respond to disaster relief and communications safeguard
	Public welfare activity	Care about the underprivileged	Conduct poverty-alleviation activities and help the disabled and the poor



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ENVIRONMENTAL PROTECTION AND RESOURCES UTILISATION

As an informatization 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 in respect of environmental protection and resources utilisation, and embarked on energy saving and emission reduction activities to ensure that we can meet our energy conservation and emission reduction goals and strive to minimize the impact on the environment and natural resources in production operations. In 2019, the total energy consumption of the Group was approximately 162,000 tons of standard coal (2018: approximately 150,000 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 2019 pursuant to the Greenhouse Gas Protocol was approximately 415,800 tons (2018: approximately 388,300 tons).

Type of Emissions	2019	2018
Total greenhouse gas emissions (10,000 T)	41.58	38.83
Direct emissions (Scope 1)	27.15	25.28
Indirect emissions (Scope 2)	14.43	13.55

Note: Scope 1 direct greenhouse gas emissions include greenhouse gas emissions from the consumption of natural gas, coal, gasoline and diesel fuel.

Scope 2 indirect greenhouse gas emissions include greenhouse gas emissions from the purchase of electricity and heating.

Total greenhouse gas emissions are the sum of Scope 1 direct greenhouse gas emissions and Scope 2 indirect greenhouse gas emissions.

Direct/Indirect energies by type



Electricity (GWh)
2019: 213.51
 2018: 200.63



Diesel fuel (Million L)
2019: 15.29
 2018: 13.20



Gasoline (Million L)
2019: 98.76
 2018: 93.21



**Natural gas
 (Million standard cubic meter)**
2019: 7.73
 2018: 7.21

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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, the Group attaches great importance to the reasonable and efficient usage and reduce the consumption of water resource. We also strive to promote and advocate water conservation by regular public service announcements to raise our employees' awareness of water conservation.

The Group takes various steps, including posting water conservation notice, advocating multi-usage of water, installing water-saving taps, and checking for water leaks, to further intensify the management of water resource utilization.

The Group has made great efforts to promote water conservation in our provincial companies. The Group proposes to adopt effective measures to reduce squandering of water resource and each provincial company made active responses. The Group's total water consumption for 2019 was approximately 5.90 million tons.

As a "New Generation Integrated Smart Service Provider", the Group firmly follows the principle of green development, implements various energy saving and emission reduction policies and regulations issued by the government, improves energy conservation awareness within the Group, performs reasonable control over total energy consumption and endeavors to realize green and high-quality development. The Group provides integrated green services to the external customers. It integrates the energy conservation concept into each service including consultation, design, construction, maintenance, general facilities management and supply chain and renders energy saving services during the process of infrastructures construction, joint construction and sharing, energy saving reform and big data application by leveraging on the advanced energy-saving technologies and products to help customers with energy saving and emission reduction.

The Group realized energy saving and consumption reduction and achieved its energy saving target in a full manner by adopting various measures. In 2019, the Group's energy consumption was 13.77 kg of standard coal equivalent per revenue of RMB10,000, representing a year-on-year decrease of 2.8%.





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The Group further improves the organizational system, management system and work process relevant to energy saving and emission reduction and the informatization level in monitoring and controlling its energy saving and emission reduction, through which the Group's energy consumption has been effectively reduced. The Group uses various methods, both online and offline, to minimize the energy consumption within the Group, including the implementation of a paperless office to effectively reduce the consumption of paper-made resources, using a vehicle management system to strictly control fuel charges and effectively reduce oil consumption, and installing GPS on vehicles to help to find the shortest route for driving while ensuring safety and reducing oil consumption and vehicle exhaust.

Our provincial companies and professional companies organized diversified trainings on energy saving and emission reduction, promoted new technologies and new businesses in relation to energy saving. The companies also actively participated in seminars in relation to energy-saving and environment-friendly products and businesses to share energy saving experience and results and promote energy-saving products in collaboration with its partners.

The Group also proactively helps customers in implementing energy saving and emission reduction. The energy saving elements are integrated into each part of services provided to customers. The Group makes strong efforts to promote the establishment of green base stations and green data centers and facilitate the recycling of waste materials. During the new construction and reconstruction of equipment rooms, IDCs and other infrastructures, the Group follows the advanced development principle of green and energy saving, adopts the form of contracted energy management and entrusted energy management, provides green consultation, design, construction, maintenance, general facilities management and other services to promote the application of energy-saving products, energy consumption monitoring platform and big data applications, enabling customers to save energy while raising efficiency.

China Comservice Energy Saving Technology Co., Ltd. (中通服節能技術服務有限公司), a subsidiary of the Group, collects returned network equipment and inefficient equipment of high-energy consumption for recycling and disposal via a green auction platform, which is supported by 26 warehouses & logistics systems, 1,100 reliable recyclers and 16 valuation techniques. In 2019, waste and obsolete products of approximately RMB10.69 billion were disposed of through auction at a total price of approximately RMB1.1 billion, which not only helped its customers to improve economic efficiency but also minimized the risk of waste emission.



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The Group will continue to increase investment in the research and development of new energy saving technologies and businesses, further follow and implement the development principles of innovation, coordination, green, openness and sharing and establish a green ecosystem and green Comservice to achieve digital life. While ensuring energy saving and emission reduction within the Group, we assume more social responsibilities related to energy saving and emission reduction. Together with its customers and partners, the Group will intensify the application of 5G, Big Data, Cloud Computing, Internet of Things and other new technologies to inject new momentum into energy saving and emission reduction. Through innovation of management and technology, the Group is committed to improving efficiency in all aspects, realizing energy saving target and making a better life.

Consumption of Packaging Materials

The Group operates in the informatization communications services industry and is mainly engaged in design, construction and supervision, management of infrastructure for information technology, etc. There is no substantial usage of packaging materials in the course of production and operation.

Climate Change

Climate change not only has profound effects on the global ecosystem, but also has significant impacts on the global economy. The carbon dioxide emission is adopted by the PRC as an important indicator for the evaluation of enterprises' performance in production and operation, which is certain to bring some pressure on the enterprises to adapt to climate change. Enterprises must realize the effects of risks and policies associated with climate change on their operations, and capture the opportunities arising therefrom.

Consensus on the control of greenhouse gas emission, promotion of green and low-carbon development and responding to climate change and greenhouse gas emission has been reached worldwide. In 2019, the Group had active studies and discussions on the target and system in relation to the control of greenhouse gas emission, promotion of green and low-carbon development and adaption to climate change and organized relevant capabilities construction, scientific research and publicity work in fighting against climate change and endeavored to improve its capability in environmental management to assist in containing the rise in global temperatures.





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HUMAN RESOURCES MANAGEMENT

Employment

The Group had approximately 91,000 employees as at 31 December 2019. We are committed to ensuring equal development opportunities for both genders, protecting and enhancing the rights of female employees. Our employees are located primarily in the PRC with certain number of them located in the other districts such as Africa, Middle East and Southeast Asia. Our employees are divided into contract employees, dispatched employees, part-time employees and other employees.

Indicator	2019	2018
Total employees (As at the end of the year)	91,564	93,087
By type		
Contract employees	87,706	88,930
Dispatched employees	3,500	3,713
Part-time employees	99	166
Others	259	278
By geographic location (%)		
Mainland China	96.4	96.4
Hong Kong, Macau, Taiwan and overseas	3.6	3.6



Total number of
newly hired employees
2019: 10,024
2018: 10,619



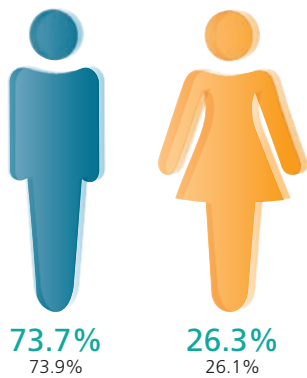
Total number of
resigned employees
2019: 11,547
2018: 16,733

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Contract + Dispatched

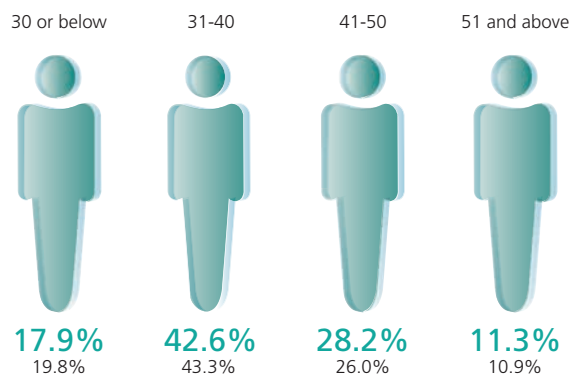
By gender

- 2019
- 2018



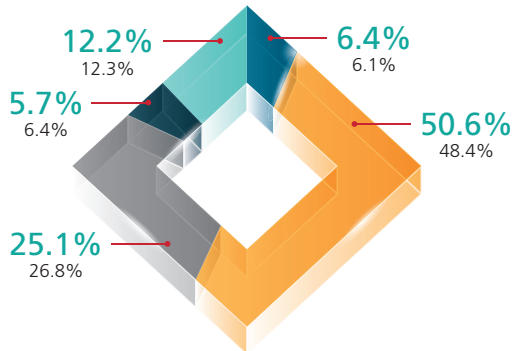
By age

- 2019
- 2018



By education level

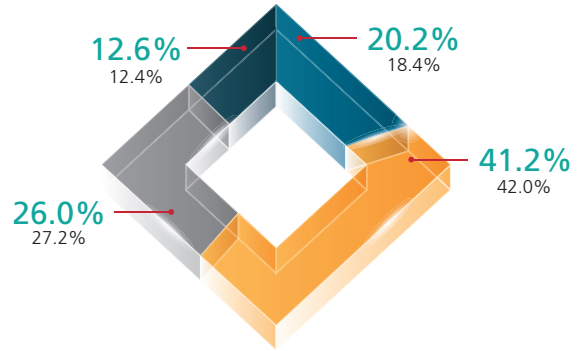
- 2019
- 2018



- Post-graduate or above
- University graduate
- College graduate
- Technical school graduate
- High school graduate or below

By nature

- 2019
- 2018



- Administration and management
- Telecommunications infrastructure services
- Business process outsourcing services
- Applications, content and other services

Contract

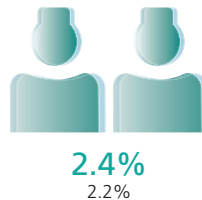
Employees attending the trade union

- 2019
- 2018



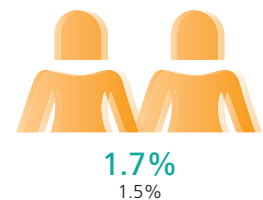
Employees of ethnic minority

- 2019
- 2018



Female management

- 2019
- 2018



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As a state-owned enterprise, the Group assumes its important social responsibilities for stabilizing employment in the society by providing large number of job opportunities and encouraging the upstream and downstream enterprises to provide numerous job opportunities every year, which plays a significant role in attracting talents and addressing the problem of graduates employment.

The Group helps its employees to enhance personal capabilities and raise social value by offering trainings and exercises on their skills such as technical skills and management expertise. Meanwhile, the Group actively responds 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 provides favourable policies and support their innovation and entrepreneurship.

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 system.

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 held various trainings to enhance the skills and capabilities of employees

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Labor Standards

The Group has always complied with laws and regulations on recruitment and dismissal, working hours and anti-discrimination. Our employees are entitled to national holidays. The Group strictly abides by and implements the laws and regulations in relation to labor employment and labor rights protection, including the PRC Labor Law, the PRC Labor Contract Law and the PRC Trade Union Law, pursuant to which, the Group protects the labor rights, democracy and spiritual and cultural rights of its employees. It strengthens labor employment management in a lawful and standard manner and ensures the entering into labor contracts with contract employees and makes contributions to the social security fund. It also stipulates the form and contents of contracts entered into with the labor dispatching institutions and checks if labor contracts are duly entered into by the labor dispatching institutions and contributions for the dispatched employees are made to the social security fund in order to protect the interests of the dispatched employees.

The Group stands on various labor policies, including but not limited to, the gender equality and equal pay for equal work. It protects employee privacy in compliance with laws and implements a paid holiday system. Child labor and forced labor are strictly forbidden in the Group. In 2019, there was no child labor and forced labor in the Group. The Group also supports the trade union to perform its duties and responsibilities lawfully and encourages employee engagement to maintain a harmonious and stable labor relationship.

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 2019, a wide range of trainings were provided by the Group. It organized relevant leadership trainings for the management of its provincial companies and an industry leader training camp for the management reserves of its provincial companies to improve the integrity and leadership of the management. In respect of core business products, it organized marketing elites training camps, a speech training class on advanced products, a smart airport training camp, a smart emergency management product training class, an Internet of Things pre-sale consultation training camp, an advanced cloud engineer training class and a Beijing-Tianjin-Hebei collaborative development training camp. In order to improve professional abilities, the Group organized an advanced training class for frontline project managers and key 5G technologies and network evolution seminars for its technical experts. Through various targeted and diversified trainings, the Group continuously improves the overall employee quality, enhances its competitive edge and capabilities for high-quality development. The Group also organized various lectures on mental health, seminars targeted for female employees and seminars in other themes.

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Overall training situation



Total training expense (RMB million)
2019: 175
 2018: 144



Total number of trainings (Person-time)
2019: 569,252
 2018: 491,358



Total training hours (Hour)
2019: 16,698,979
 2018: 13,311,916



Average training expense (RMB/person-time)
2019: 307
 2018: 294



Average training hours (Hour/person-time)
2019: 29
 2018: 27

Types of Training	Unit	2019	2018
Safe production training	No. of trainings	14,040	12,378
	Person-time	219,057	185,710
Anti-corruption training and activities	No. of trainings	1,628	1,490
	Person-time	46,193	39,299
Operation management training	No. of trainings	3,446	3,058
	Person-time	60,267	52,730
Technical expertise training	No. of trainings	13,179	12,294
	Person-time	192,374	174,622
Other training	No. of trainings	2,259	1,496
	Person-time	51,361	38,997

Training Description by Position/Gender	Unit	2019	2018
Senior management	Person-time	1,376	1,446
Middle management	Person-time	39,481	30,750
General employees	Person-time	528,395	459,162
Male employees	Person-time	429,935	368,970
Female employees	Person-time	139,317	122,388



The Group put emphasis on training management reserves

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In 2019, the Group launched a new series of industry leader training camp, participated by 41 management reserves from the provincial companies of the Group. Through continuous innovation on the scenarios, contents and forms of training, the industry leader training camp further improves the leadership awareness of the cadres, assists the provincial companies and professional companies of the Group in discovering and identifying talents and continuously expands the management reserves team and strengthens the development of the Group's human resources.

In 2019, the Group targeted to improve the capability of the marketing team and organized three "China Comservice Training Camp for the Elite of Marketing" to provide trainings to 161 marketing elites from the provincial companies, which effectively improved the cognitive competence on marketing, customer insight and presentation and expression skills of the trainees and developed many marketing elites who have market awareness, understand customer needs, are good at communication and expression, have influence and are familiar with sales procedures.

In 2019, by focusing on the frontline 5G technology talents of professional companies, designers and engineering technicians from the designing institute from each province, the Group organized three "China Comservice key 5G Technologies and Network Evolvement Seminars" to 172 technical experts. Through trainings on 5G origination, application scenarios and networks, the participants mastered key 5G network technologies, wireless network planning and station solutions deployment, improved their capabilities in working out solutions to 5G planning and construction as well as product delivery. The trainings play an important role in promoting and implementing company policies, improving technology strengths and expanding talent pool for 5G business development of the Group.

The Group attaches great importance to the training of its frontline employees. By spreading and inheriting the "Comservice Craftsmanship Spirit", the Group endeavors to develop employees with high-level expertise in different fields and professions to fuel the development of the Group. In 2019, the Group won a number of awards including all the three grand prizes in the "Information System Wiring & Smart Family Occupational Skill Competition" jointly organized by China Association of Communication Enterprises and China National Defense and Post & Telecommunication Trade Union.



The Group showed the "Comservice Craftsmanship Spirit" in industry competitions

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Our international subsidiary organized a safety training to 341 employees in Nepal, which improved the safe production awareness, safe production capabilities and communications infrastructure construction capability of the communication contractors in Nepal.

Thanks for the training given by the China Communications Services International Limited. In the past, I didn't know the importance of safe production. Through this training, I feel safe production not only protects my own work but also ensures a happy life of my family. In the future work, I will change my bad habits, follow the safe production procedures and always produce in a safe manner.

— Narendra Kunwar, a local employee in Nepal



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 Labor 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 provincial companies under the Group are required to make a standard provision for safe production expenses to ensure sufficient funds are invested in safe production. Each professional company is required to provide necessary protective equipment in special work scenarios and to the frontline construction employees to ensure their life security.



The Group adopted competitions instead of trainings to enhance safe production

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The Group launched “Safe Production Month” activities to carry out promotions and trainings on safe production, aiming to continuously improve safe production management and raise safety awareness of employees in workplace. Periodic self-inspection and irregular checks were conducted by the provincial companies within the Group on safe production to eliminate potential safety threats and prevent significant risks. The provincial companies formulated emergency management measures and conducted safety production drills in different scenarios in order to improve their emergency management and response capabilities.

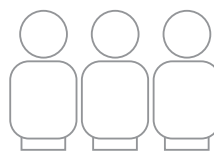
The Group made an overall plan to address the problem of imbalanced development of safe production management in the construction segment of the Group. It invited an expert group to formulate the *Manual for Safe Production of Information Communications Engineering*, which was published and issued in May 2019. Being the first manual elaborating the management and operation of safe production of information communications engineering in a systematic manner in the industry, it does not only provide standards of construction management and operation for the whole process of the Group’s safe production, but also provides standards for the whole communications industry and drives the implementation of safe production in the industry. The headquarter of the Group organized two faculty trainings nationwide to provide top-down trainings on safe production to its provincial companies. About tens of thousands of employees attended the trainings, driving the education and training on safe production to be effectively conducted throughout the Group. Besides, the Group increased the frequency of inspection and innovated inspection method to make sure safe production is duly implemented at the basic level of the Group.



The Group formulated safe production standard for the industry

In 2019, no significant accident in respect of safe production occurred within the Group.

Indicator of Health and Safety	Unit	2019	2018
Safe production training	Time	14,040	12,378
Safe production training	Person-time	219,057	185,710
Workplace Fatalities	Person	0	0



The Group organizes safety drills regularly



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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. 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.

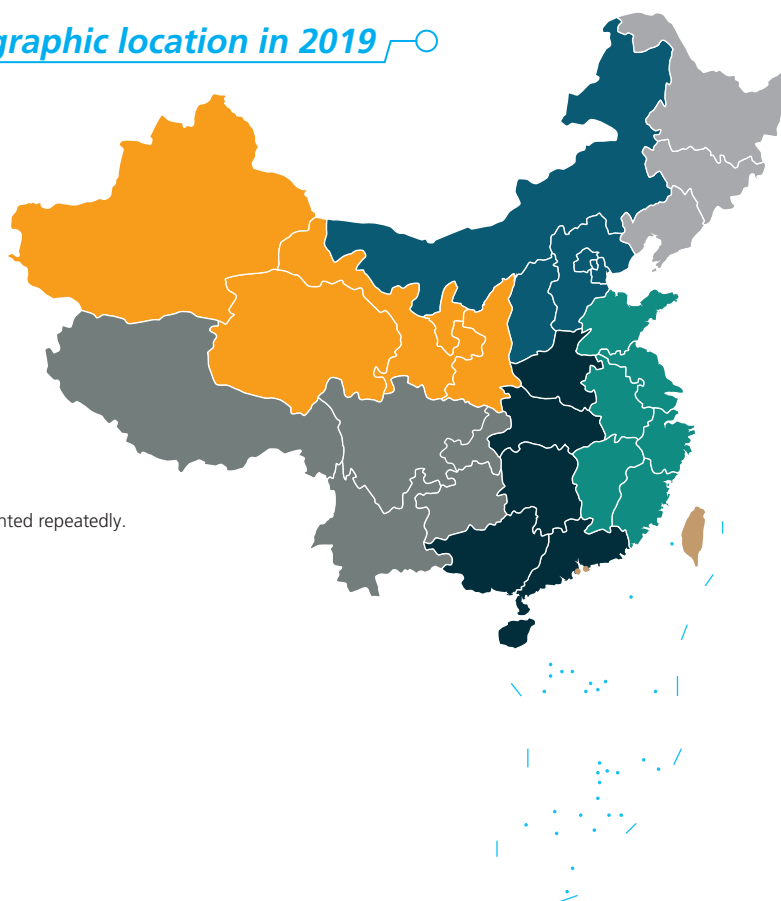
The Group adopts a hierarchical supplier approval system and formulated the China Comservice Engineering Service Procurement Management Measures, the Group strictly controls the eligibility of suppliers with stringent selection based on their general information. Routine and annual assessments are conducted on supplier performance and an exit system and a blacklist system was established. The assessment results are used for the selection of suppliers in order to promote the suppliers to improve their service quality and safety management.

The Group follows five procurement principles: legal compliance principle (to abide by national laws and regulations and relevant industry rules); fair, open and just principle (to insist on a transparent system, strict procedure, standardized operation and scientific selection); cost reduction and efficiency improvement principle (to reduce operating costs and realize high-quality development); tolerable risk principle (to prohibit "outsourcing substituting management", focus on project quality and safe management and prevent risks related to laws, employment and safety) and integrity principle (to prevent the rules and discipline violation, including the abuse of power for its own profit and interests conveyance).

Numbers of suppliers by geographic location in 2019

Geographic Location	Unit (Number)
● Northeast region	717
● Northwest region	1,905
● Mid-South region	4,152
● Southwest region	2,286
● North China region	1,109
● East China region	5,027
● Hong Kong, Macau and Taiwan	2
Overseas	19
Total	15,217

Note: Suppliers operating in more than one region are counted repeatedly.
The number of repeated counts is 1,864.



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The Group implements hierarchical management over its headquarter, provincial companies and professional companies. The headquarter is responsible for the establishment of a synergistic procurement system, preparation of procurement management measures and IT management requirements, and inspection and assessment of the procurement management of the provincial companies. A provincial company is responsible for the establishment of a provincial procurement system and implementation of centralized management over the suppliers within its province by IT means and also responsible for the establishment of implementation measures for procurement management, improvement of corresponding internal controls, and inspection and assessment of the procurement management of professional companies. A professional company is responsible for the specific implementation of its own procurement management, establishment of management standards or specific measures and is subject to inspection and assessment by the headquarter and the provincial company of the Group.

The Group has considered business subcontracting as the key area for auditing and supervision. We conducted audits and reviews on supplier admission, tendering and bidding, subcontracting pricing, signing of subcontracting contracts, materials procurement and settlement of subcontracting 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 continuous amendments and improvement on the mechanism, the Group drives the implementation of procurement system and further improves management, implementation and monitoring capabilities. It strictly follows the selection and examination procedures to kick out the disqualified suppliers, instructs suppliers to improve their awareness of safe production, provides full insurance coverage for the working personnel of subcontractors, eliminates hidden risks and promotes the healthy development of the Company through the establishment of IT systems and standardization of management processes.

Product Liability and Customers

The Group has committed to providing high-quality, efficient and safe informatization services to customers and makes contributions to “Building Smart Society, Boosting Digital Economy, Serving a Good Life”. The Group has complied with applicable laws and regulations in relation to product liability.

The Group always focuses on customers and provides them with quality products and services. Relying on its smart products and services, the Group helps the government to improve urban management, emergency management and ecological and environmental control. With established local supporting teams all over the country, the Group keeps active communications with customers, makes timely response and provides services subject to customer needs and emphasizes the protection of customer information, which has been well received by the broad customers.

In Sichuan, the Group established an integrated government service platform for the government of Sichuan province, the first in the country covering province, cities and counties. The platform provides online services to the public, whereby people can “stay at home and just click the mouse” to handle government affairs. In 2019, over hundreds of millions of cases were processed online and the big data about government services was also collected for analysis through the platform to support the decision-making process of the government.

In Ningxia, the Group established a “Safety Alert and Risk Control Platform” for the government of Shizuishan, Ningxia. The platform has been applied to over 200 local hazardous chemicals manufacturers to assist the government to make real-time analysis and assessment on the production condition and risks of such enterprises. It formed a looped management over the full life cycle of the risks associated with the enterprises and improved the alert management of the enterprises in aspects of “people, machine, material, environment and management”.

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In Zhejiang, the Group completed the comprehensive environmental improvement project for 1,075 small towns in Zhejiang Province by leveraging on its smart pipeline management system, smart light poles and smart cloud booths. Through data integration, the smart small-town comprehensive environment management system made analysis on the omissions and difficulties of human control, addressed the problems that existed in environmental governance, improved environmental governance pre-judgment, extended the scope of ecological environment governance and effectively improved the quality of production, living and ecological environment in small towns.

In 2019, the Group provided integrated informatization construction service for many significant national events, including the Beijing International Horticultural Exhibition and the 7th CISM Military World Games, and also provided information communications network construction and communication security protection services for other important events, including "The 2nd Digital China Summit", "Boao Forum for Asia Annual Conference 2019", the "Sixth World Internet Conference (Wuzhen Summit)", "The Second Western China International Fair for Investment and Trade", "The 14th FINA World Swimming Championships (25m)" and "2019 Guangxi Pingnan International Half Marathon", showing the brand of "Comservice" in the new era.

The China Telecom Prime IP Backbone Network (CN2) Construction Project undertaken by China Communications Technology Co., Ltd (a subsidiary of the Group) garnered the "Classic Project" by China Association of Construction Enterprise Management. The Company insists on "365 days safe production & compliant operation" to drive the substantive change in and facilitate the safety and quality work of the Company.



The Group provided communication support for major events

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group has participated in the natural disaster relief and telecommunications network restoration during and after major disasters and public safety incidents to fulfil our corporate social responsibilities. We assist in the repair of communications lines to ensure smooth communications network.

In 2019, more than 39,000 person-times of the Group with more than 12,000 vehicle-times participated in disaster-relief work for a total of over 53,000 hours and repaired more than 32,000 communication facilities. It also actively participated in post-disaster epidemic prevention and disinfection and environmental cleaning, fully demonstrating our corporate capabilities and commitment to social responsibility in disaster relief.

On 17 June 2019, a 6.0-magnitude earthquake hit Changning in Yibin, Sichuan province, which caused a large area of breakdown of base stations, outage of several optical cables and shutdown of various transformer substations and dozens of communication lines. Immediately after the earthquake, our Sichuan subsidiary dispatched 48 rescue teams consisting of over 160 workers with 54 vehicles, 95 oil engines, 15 welding machines and a large number of optical cables, splice closures and other logistics materials for the earthquake relief. The Group made outstanding contribution to the resumption of the operators' communications with great efforts and successfully completed the 6•17 communications repair task. In response to the catastrophe, the excellent attitude and professional quality showed by the rescue team of our Sichuan subsidiary was highly recognized by the authorities and customers and also received attentions from media.



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The flood brought by the consecutive rainstorms in Guangdong, Jiangxi and many other regions caused a large area of power outage and breakdown of base stations, affected more than ten thousand broadband users and resulted in direct economic loss of tens of millions of RMB. Our Guangdong subsidiary and Jiangxi subsidiary immediately organized several rescue teams for the repair of optical cables and mobile base stations and logistics support to be engaged in disaster relief work as arranged by the "emergency communications command center". The Group dispatched more than 600 person-times with rescue vehicles of 151 vehicle-times, oil engines of 340 engine-times and other equipment to support the full recovery of communications in the disaster-affected areas and was highly recognized by the local governments and telecommunications operators.



Due to rainy and snowy weather in different regions of Gansu province, heavy snow knocked down high-voltage power lines and caused large areas of power outage in Longnan, Gannan, Qingyang and Pingliang. More than 700 power outages occurred at peak, and the disaster caused over 1,200 cumulative power outages.

Immediately after the occurrence, our Gansu subsidiary launched a snowstorm emergency plan and dispatched a total of 620 person-times, 290 vehicle-times and oil engines of more than 780 machine-times to ensure the resumption of communications network. The emergency response was not only a test for our emergency management plan, but also an on-site emergency drill. It achieved desired effect and received recognition and praise from the operators.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Information Security and Privacy Protection/Network Security

The Group attaches great importance to the information, privacy and data security of the Company, its employees and customers. It strictly abides by the PRC Network Security Law, the Rules Protecting Personal Information of Telecommunications and Internet Users and other laws and regulations, keeps improving each network and information-related systems, intensifies controls over various network and information security risks, addresses network security vulnerabilities in time and ensures contents and information security. For customer-oriented APPs, the Group makes individual assessment on its ability in protecting personal information, carries out specific rectification work and ensures requirement of each department is duly satisfied and users' personal information is effectively protected.

The Group strengthens the relevant trainings on information security and privacy protection for its employees. It improves the employees' awareness of network information security by utilizing online promotional videos and organizing lectures on network information security. In 2019, the Group organized 5 trainings on network and information security knowledge such as policy interpretation, cutting-edge technologies and solutions to the relevant management and technical personnel, with a total of 302 person-times participation. The Group also organized 5,398 employees to attend the network information security contest to improve their know-how and skills on network and information security.

The Group proactively attended China Cybersecurity Week & Cybersecurity Expo and set up a Q&A section for cybersecurity knowledge in order to spread the theme that "cybersecurity aims for people and relies on people".

In 2019, no occurrence of leakage of customer privacy and information was identified within the Group. In line with customer needs, the Group enters into relevant agreements on information security and signs confidentiality agreements with relevant employees, if necessary, and strictly complies with the terms under such agreements. For data involving confidential information of government or other customers, the Group adopts Internet isolation and data encryption to prevent information leakage.

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, handling and resolving infringement disputes on a timely basis. The Group strengthens trademark management to regulate the use 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 smart society products, the Group attaches great importance to the protection of intellectual properties and the application of corresponding patents or software copyrights.

In 2019



Received **355**
new authorized patents



Applied for **408** new patents



Obtained **962** new software copyrights



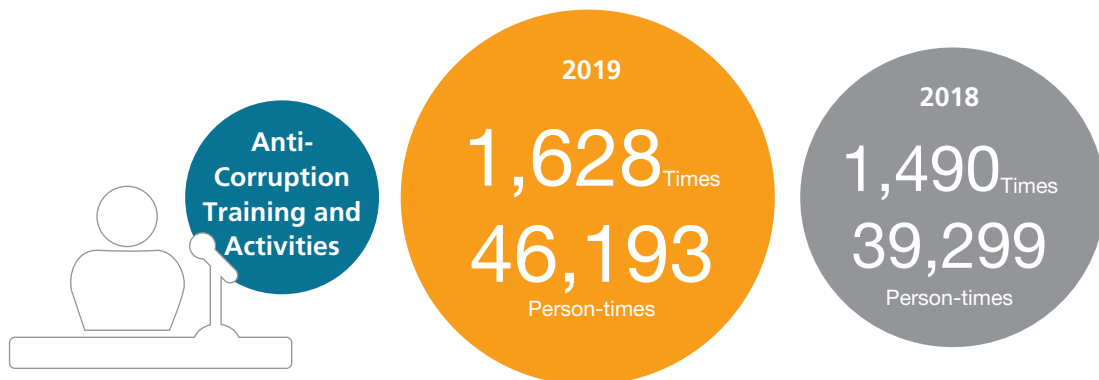
ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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, creditors, customers and partners 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, themed conferences and new internet media to procure our management and employees to comply with relevant laws and regulations. In addition, we further reinforce our daily supervision in respect of anti-corruption and focus on priorities to conduct supervision and inspection by combined internal efforts such as the audit department and discipline inspection department, and strictly prevent activities such as bribery, blackmail, fraud and money laundering. The Group intensifies peer supervision and actively promotes joint supervision and particularly keeps a close watch on major festivals or holidays. It sets 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 with anti-corruption responsibility letters signed with the relevant responsible parties. The Group will duly address relevant illegal and non-compliant activities according to the requirements of laws, regulations, rules and disciplines, with a view to safeguarding the normal operation of its businesses.

Each provincial company and professional company of the Group also organized different anti-corruption trainings and activities for a large number of people to make anti-corruption training available for everyone and improve their anti-corruption awareness.



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

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COMMUNITY PARTICIPATION

The Group carefully implements the poverty relief tasks from the government, sticks to the fundamental principle of targeted poverty relief, combines poverty relief with education and training, keeps a balance between development-oriented poverty relief and protection-oriented poverty relief, focuses on the 6 poverty-stricken counties and organizes poverty relief activities in various forms, including education and training, industrial development, public welfare and consumption. The Group fulfills its social responsibility by promoting the poverty relief program and assisting the central government and local government in achieving their poverty relief tasks in all aspects. In 2019, the Group issued the "2019 China Comservice Poverty Relief Implementation Scheme". The provincial companies of the Group have aggregately enrolled 77 registered impoverished households; and post colleges owned by the provincial companies have enrolled totally 27 registered impoverished students, granted student subsidies of RMB0.21 million and organized skill trainings and career talks participated by 695 person-times. The Group's investment in consumption-led poverty relief amounted to RMB14.79 million.

In view of the requirement of the local poverty-relief office and its parent company, our Guangxi subsidiary focused on poverty relief through training. It focused on the most urgent problem to be settled through training during the poverty relief campaign and organized various training programs. By organizing e-commerce-themed trainings in rural areas, it focused on problem solving, relied on its technology training resources and adopted a theory and on-site teaching method in a top-down manner, i.e., providing trainings to cadres responsible for poverty relief first and then bringing them to the villages and fields, which were well-received by the public. A total of 345 households joined the e-commerce industry chain, and 142 registered poverty-stricken households were encouraged to commence online marketing and 16 of them concluded transactions during on-site e-commerce marketing practices. Various leaders stood out during the e-commerce-led poverty relief campaign, driving the increase of the poverty-stricken people's income. The poverty relief training program received unanimous recognition from the local poverty-relief office and cadres who received training and made great contributions to the poverty relief of Guangxi.



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Our Xinjiang subsidiary aligned poverty relief campaign to its operation development to improve the production skills and fortune-making capabilities of the minorities. During project construction, it firstly hired the nearby impoverished minority villagers in Jiayi Village, Jiayi Town, Yutian County and Akeqima Village, Ruokeya County, Minfeng County and provided them with pre-job trainings on construction and production safety. Aiming to drive poverty relief undertaking, it has provided 60 jobs with monthly salary no less than RMB3,500. It helped the impoverished minority villagers in south Xinjiang to master professional skills and realize poverty relief of both individuals and households and improved the fortune-making ability of the surplus labors in rural areas, and received local appreciation.

The management of our Chongqing subsidiary brought daily necessities to the Special Child Service Center in Chongqing. It expressed its willingness to continue to pay close attention to the special group. Meanwhile, the positive energy from the children channeled to the company, which inspired and encouraged more kind-hearted people and enterprises to bring warmth and care to the children.



Our international subsidiary actively participated in various local public welfare activities. In the theme of "Love Without Borders", the South Africa Branch made a donation of 74,000 South African Rand (approximately RMB36,000) to a local school for the deaf. The donation was used to purchase hearing-aids for the deaf students and helped them to solve practical difficulties, which showed the Group's fulfillment of social responsibility.

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Since its establishment over ten years ago, as a fulfillment of its social responsibility, our Saudi Arabia subsidiary has always respected the local belief and culture. It has organized the “Warm Ramadan” activity for many consecutive years. During the year, the subsidiary mobilized all the staff to donate their old clothes and sundries to the refugees in the surrounding war-torn countries.



The vice president of the Group and the general manager of China Telecom (Beijing) invited 8 manufacturer representatives to visit the industry-based poverty relief project in Shufu County, Xinjiang, a targeted poverty alleviation project. They paid visits to local manufacturers and orchard bases in which they have invested together with the manufacturer representatives and organized the representatives to negotiate with the government of Shufu County in respect of cooperation intentions and also expressed their solicitude to local poverty-stricken households.



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Caring about 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 2019, the Group endeavored to become an outstanding enterprise trusted by the employees and recognized by the society. It learns about the thoughts of employees in a timely manner. Throughout the year, it resolved requests from them, made significant input in renovating, constructing and purchasing new properties to improve the production and living condition of employees, and set up the “Four Small Facilities” including the “Small Canteens, Small Restrooms, Small Shower Rooms and Small Activity Rooms” in a timely manner. During 2019, 562 “Four Small Facilities” were newly constructed and 1,449 were renovated with total investment of RMB24.13 million to fulfill its social responsibility for caring about employees.

The Group cares about its employees stationed outside of the province, enhances rights protection for female employees, and frequently helps and supports the poor, ensuring that students from poverty-stricken families can go to school and keeps them warm in winter and cool in summer. It focuses on the basic problems existed within the Group, such as the improvement of dining conditions, working environment and healthy drinking water supply, and helps to alleviate the economic burdens of employees who suffered from serious illnesses or chronic diseases. It spent a total amount of RMB5.82 million in poverty alleviation throughout the year.



The Group showed care for employees through multiple measures

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The diversified cultural and sport activities of the Group

The provincial companies and professional companies of the Group organized various group activities with its customers, for instance, skills competition and safety drills depending on different profession and business nature, as well as Spring Festival parties with customers and partners, which improved customer recognition, boosted the brand image of "China Comservice" and enhanced the Group's human-based management and its reputation in the industry.

The Group seeks to create a good environment characterized by "happy work and healthy life" for its employees. The headquarter, provincial companies and professional companies of the Group organized a series of diversified cultural and sports activities beneficial to the physical and mental health of employees and conducive to the Group's culture construction, including spring sports games, brisk walk competitions, balls competitions, singing activities, art performance, and lectures on mental health, which relieved the mental stress of employees arising from busy work, enhanced staff's sense of identity with enterprise and employee happiness and improved enterprise cohesion.