



China Telecom Corporation Limited

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CREATE A BETTER FUTURE WITH DIGITAL TECHNOLOGIES



A central graphic features a digital brain composed of a network of blue and white circuit boards. Inside the brain, several circular icons represent different technologies: a hand holding a gear (green), a person working (orange), a 5G signal (blue), a factory building (grey), and an AI icon (blue). Binary code (0s and 1s) is visible throughout the circuit board network.

**SUSTAINABILITY REPORT 2024
(ESG REPORT)**

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CHAIRMAN'S STATEMENT

Ke Ruiwen
Chairman and
Chief Executive Officer



2024 was a pivotal year for fulfilling the objectives China set for its 14th Five-year Plan. China Telecom tightly seized the development opportunities arising from the era of AI, made technological and industrial innovation major contents of its corporate strategy, further implemented its Cloudification and Digital Transformation strategy, and sped up the fostering of new quality productive forces, continuously empowering the sustainable development of the economy, society and environment.

Upholding innovation-driven development and empowering digital transformation. The Company continued to consolidate its digital foundation, fully completing construction of the world's largest 4/5G co-built and co-shared network. The number of 5G co-built and co-shared base stations in use totalled 1.375 million, achieving continuous coverage of townships and above and coverage of key scenarios on the target list. The Company built the world's largest Gigabit fibre network, with 1.22 million newly-built 10G PON (passive optical network) ports. Two of the Company's projects, including the "fifth-generation mobile communication system" and the "next-generation Internet source address", were honoured with the First Prize of the 2023 National Science and Technology Progress Award. The Company pressed ahead with the national project of "East-to-West Computing Resource Transfer", launching "Xirang", a one-stop intelligent computing service platform, building two fully liquid-cooling 10,000-GPU pools respectively located in Beijing-Tianjin-Hebei region and the Yangtze River Delta, deploying 1,000-GPU pools in Guangdong, Jiangsu, Zhejiang, Inner Mongolia, Guizhou, among other areas, bringing the intelligent computing power to 35 EFLOPS, and steering China Telecom Cloud towards a new stage of intelligent cloud. The Company drove the upgrade of digital and intelligent products and services, independently

developed "Xingchen" large model portfolio covering semantics, speech, vision, and multimodality, took the lead among central enterprises to open sources, built more than 50 large industrial models with the focus on segments such as education, government administration, emergency response, and transport, and advanced the deeper integration between large AI models and industries in all aspects. The Company released the e-Surfing AI brand, achieving "AI+" upgrade of digital family, smart community, Internet of Video Things, among other scenarios. The Company deepened the service assessment mechanism of "All Customers' Say", continuously enhanced smart service capabilities, and addressed the urgent, difficult, and pressing issues of customers.

Pursuing green development and safeguarding our beautiful homeland. The Company actively implemented the philosophy of green development, focused on China's carbon peaking and carbon neutrality goals, and continuously advanced the "1248" green development mode, empowering green development through digitalization and leading digital transformation through green initiatives. The Company built the green cloud-network, reduced greenhouse gas emissions by more than 15 million tons through co-building and co-sharing as well as various energy-saving measures, and brought the greenhouse gas emissions per unit of the total volume of telecommunications services down by 19.2% year on year. The Company refined the energy consumption structure, using 2.7 billion kWh of green electricity, up by 145% year on year, strengthened resource recycling, and further advanced the recovery, disposal and reuse of waste, effectively promoting the development of circular economy. The Company sped up green technology innovation and standard formulation, independently developed smart energy-saving technology for base stations and facility rooms and promoted their application. The Company enhanced green management, intensified fine management of energy and carbon information and cultivation of talent teams, continued with internal carbon transactions, and tapped the potential of cutting carbon emissions through the market-oriented mechanism. The Company empowered the green development of the economy and society, improved the green product and service system, and made continuous efforts in green public services, ecological protection, and pollution prevention and treatment, to empower the green transition of industries and promote the harmony between humanity and nature.

Adhering to the bottom-line mindset, and building a robust security barrier. The Company deeply implemented the overall outlook on national security, and incorporated secure development into the whole chain and every process and scenario of its operations. The Company systematically strengthened key infrastructure protection capability, forged a defense-in-depth system for cybersecurity, and consistently improved security in the construction of digital information infrastructures. The Company intensified production safety management, earnestly performed its primary responsibility in ensuring production safety through institutional building, removal of hidden dangers and publicity & education, and further pushed forward the digitalization of production safety management. The Company introduced new security products and services, built the first operator-level Managed Security Service Provider (MSSP) at home, and served more than 300,000 customers through e-Surfing Security Brain. With the quantum-encrypted messages and calls recording nearly 5 million users, the Company built Hefei quantum metropolitan network, the world's largest in scale with the largest number of users and the most complete applications. The Company successfully accomplished the communication support for major events, including the Third Plenary Session of the 20th CPC Central Committee and the celebration of the 75th anniversary of the founding of the PRC, and provided satellite communication support for the ice & snow or flood & typhoon prevention and relief efforts in Hunan, Liaoning, and Hainan provinces, as well as the earthquake response in Aksu Prefecture, Xinjiang. The satellite communication services therefore play a big role in the disaster rescue and relief work.

Taking a people-oriented approach and promoting inclusiveness and sharing. The Company protected employees' rights according to law, and built a comprehensive employee support system, to help employees improve abilities and values while continuously improving their welfare and well-being. The Company served rural revitalization, further advanced paired assistance, gave play to its strength, constantly expanded its network to cover more border and remote areas, and promoted the construction of digital villages. The Company advocated support for elders, and drove the AI-

enabled elderly-oriented improvement of products and applications, to provide elders with exclusive services that are more accessible and considerate and of higher-quality. The Company was passionate about public welfare activities, actively providing assistance to the poor, disabled or disadvantaged people. It ranked first at home by the number of outlets with "Caring Stations", and was awarded the "Significant Contribution Unit of Dual 15 Project of Labour Union" by All-China Federation of Trade Unions, with the case listed among the ten best cases in the Central Enterprises CSR Blue Paper (2024) released by the State-owned Assets Supervision and Administration Commission of the State Council. The Company engaged in the high-quality Belt and Road cooperation, facilitated the connectivity of global networks, continuously enhanced capabilities to serve cross-border communications, and provided long-term support for overseas communities in areas of healthcare, education and environmental protection, fulfilling its responsibility as a Chinese enterprise.

Championing reform and opening-up and unleashing the momentum of development. The Company further improved corporate governance, implemented the Board member diversity policy, advanced fine management and solid operation, further refined the governance structure of subsidiaries at various levels, and increased authorization and delegation of power, to ensure that corporate operation aligns with the long-term interests of the Company and its shareholders. The Company continued to deepen the transformation and innovation of internal organization, processes and mechanisms, stepped up reforms in technological innovation, strategic emerging businesses and talent development, among other areas, and further improved the market-oriented operation

mechanism, constantly enhancing the vitality of high-quality development. The Company expanded cooperation in both breadth and depth with partners across the industrial chain in technology, cloud-network, data, capital and new-type digital information infrastructures, pressed ahead with the construction of the World Broadband Association (WBBA), and scaled up technological exchanges and joint innovation in fields like cloud-network infrastructures, further forming a high-quality cooperation ecosystem and significantly enhancing its global influence.

No matter how rugged and long the journey is, perseverance will lead to success. China Telecom will firmly fulfil its responsibilities in building Cyberpower and Digital China as well as maintaining network and information security, further deepen the implementation of its Cloudification and Digital Transformation strategy, fully deepen reforms and speed up high-quality development. The Company will work with various stakeholders, remain guided by the philosophy of sustainable development, and contribute its strength to Chinese modernization.

ABOUT CHINA TELECOM

COMPANY PROFILE

China Telecom Corporation Limited ("China Telecom" or "the Company") is a listed company controlled by China Telecommunications Corporation. The Company's A Shares and H Shares are listed on the Shanghai Stock Exchange and the Main Board of The Stock Exchange of Hong Kong Limited respectively. It mainly provides digital information services including mobile communications, wireline communications, and satellite communications, Internet access, cloud computing and computing power, Big Data, AI, quantum, ICT integration, etc..

COMPANY STRATEGY

China Telecom firmly fulfils its responsibilities in building Cyberpower and Digital China as well as maintaining network and information security. Anchoring on its mission and vision of building a service-oriented, technology-oriented and secured enterprise, the Company fully and deeply implements its Cloudification and Digital Transformation strategy. Insisting on the customer-oriented approach, China Telecom strengthens the core capabilities of sci-tech innovation and speeds up the construction of new information infrastructures. The Company builds a big platform for empowering digital transformation of the economy and society, provides customers with intelligent, convenient, green, secure and high-quality information services, continuously enhances corporate values, customer values and employee values, and accelerates the building of a world-class enterprise.

EXECUTIVE DIRECTORS AND MANAGEMENT OF THE COMPANY



KE RUIWEN
Executive Director,
Chairman and Chief Executive
Officer



LIU GUIQING
Executive Director and
Executive Vice President



TANG KE
Executive Director and
Executive Vice President



LI YINGHUI
Executive Director,
Executive Vice President,
Chief Financial Officer and
Secretary of the Board



LIU YING
Executive Vice President

THE STATEMENT OF THE BOARD OF DIRECTORS

During the reporting period, the Board of Directors (the "Board") of the Company has participated in the evaluation, prioritisation and management of environmental, social and governance (ESG) related matters, including risks of the Company's business. The Board has reviewed the Company's original ESG indicator system and the level of completion of key performance, considered the working group's suggestions on the adjustment and optimization of various original indicators in accordance with relevant requirements of the Listing Rules of the Hong Kong Stock Exchange, and finally approved the 2024 version of the ESG indicator system and the disclosure plan of key performance indicators.

The Board attaches great importance to risk management and has incorporated key ESG risks into the Company's comprehensive risk management system. The Company regularly keeps track of environmental goals and negative indicators and leverages risk assessment, risk process management and control, and response to risk incidents to promote comprehensive risk management and control covering all processes and all employees. The Board has reviewed various indicators, noted relevant management measures adopted by the Company and made recommendations on the effectiveness of the management measures.

In accordance with the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies – Sustainability Report (Trial)* and the *Environmental, Social and Governance Reporting Code* as set out in Appendix C2 to the *Listing Rules of the Hong Kong Stock Exchange*, and with reference to United Nations Sustainable Development Goals (SDGs) and the GRI Standards released by the Global Reporting Initiative (GRI), the Company has evaluated important ESG issues related to the Company's business operations from two dimensions, i.e. the materiality of the impact of such issues on the economy, society and environment and the materiality of the impact of such issues on the Company's finance, selected material issues and set ESG-related goals relevant to business operations. The Board has reviewed and discussed the material issues and ESG-related goals and provided disclosure recommendations.

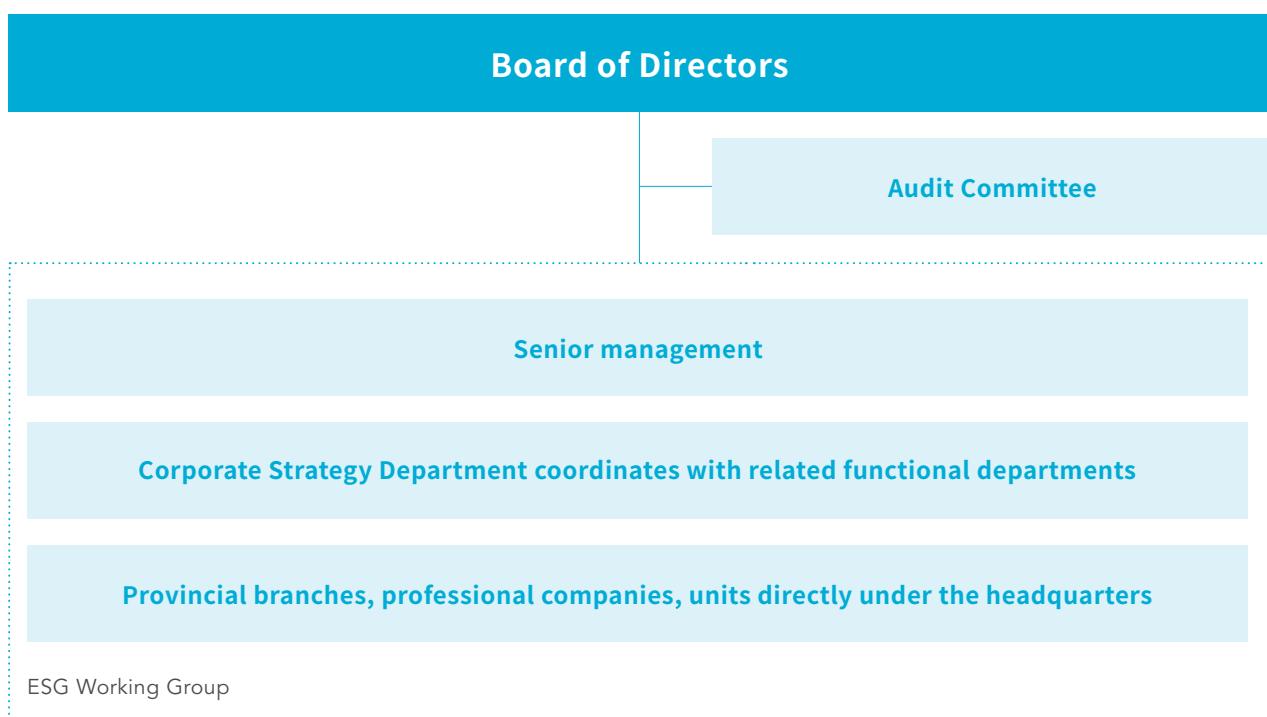
This Report has strictly complied with the relevant requirements of the Shanghai Stock Exchange and the Hong Kong Stock Exchange. Please refer to the index of this report for the compliance of the relevant ESG reporting guide.

This report has been reviewed and approved for publication by the Board.

ESG GOVERNANCE

GOVERNANCE SYSTEM

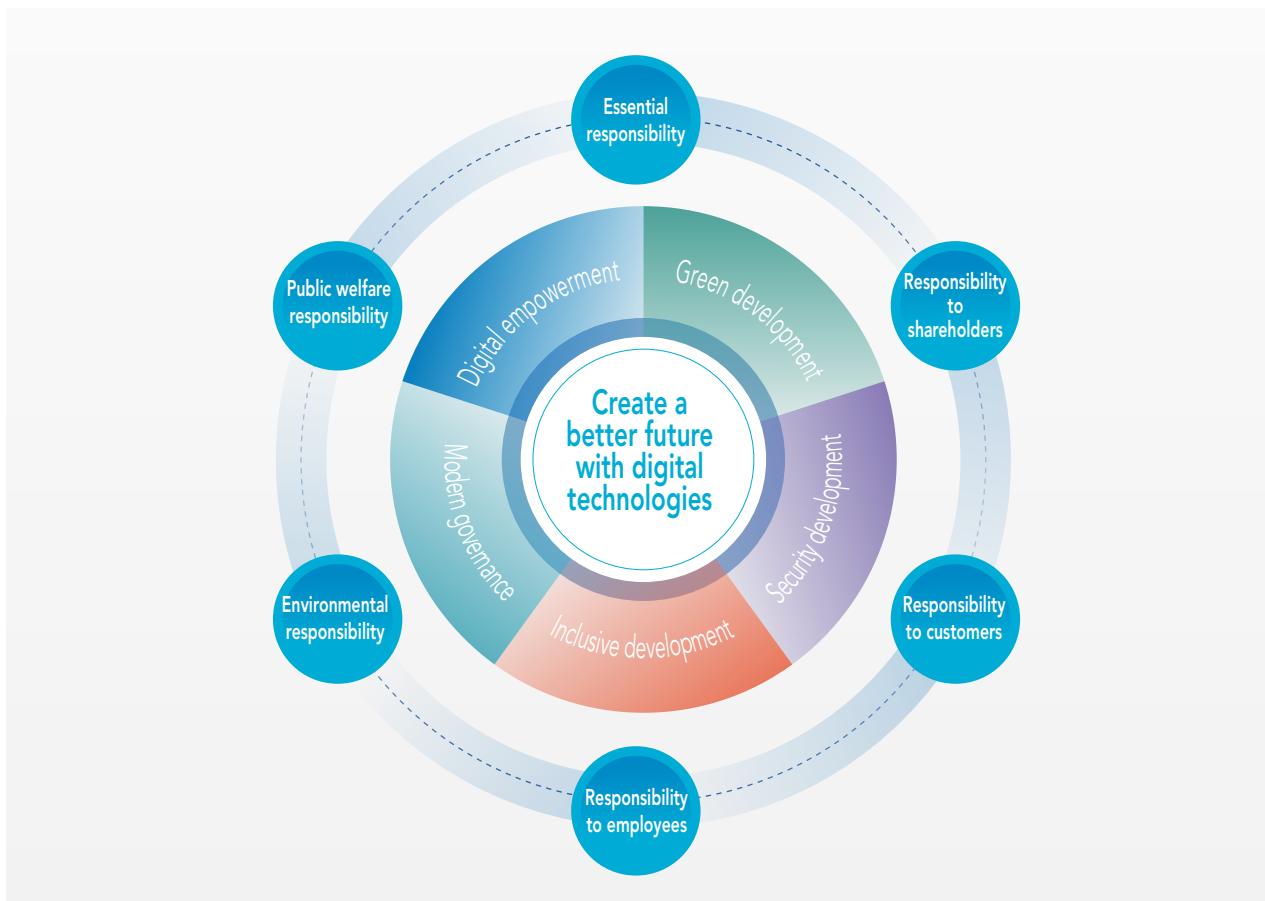
Adhering to the principles of sustainable development, service strategy, complete integration and harmonic co-creation, the Board of the Company is responsible for formulating the Company's ESG management policies and strategies including evaluating, prioritising and managing the Company's ESG-related matters, to ensure that the Company has established an effective ESG risk management and internal control system. The Board has set up the Audit Committee, which is responsible for assisting the Board to oversee ESG matters. The Company has established an ESG working group which is managed by senior management, while our Corporate Strategy Department is responsible for coordinating relevant departments in the headquarters to engage the participation of the provincial branches, professional companies and units directly under the headquarters in ESG related work. The working group is authorised by the Board to be responsible for implementing ESG strategies.



The working group is responsible for preparing ESG reports and promoting ESG performance management, information disclosure and relevant fundamental work. The working group regularly reports and makes suggestions to the Audit Committee in areas such as material ESG issues, revision of indicator system as well as indicator tracking and management. The Board and the Audit Committee provide the management and the working group with opinions for optimisation through means such as listening to ESG related work reports on a regular basis, reviewing the Company's performance as well as reviewing the Company's ESG reports and other relevant materials, to ensure continuously enhancement of the Company's responsibility performance.

RESPONSIBILITY PERFORMANCE FRAMEWORK

Adhering to the concept of "Create a Better Future with Digital Technologies", the Company actively fulfils its responsibilities to the nation, its shareholders, customers, employees, the environment and social welfare. Leveraging sci-tech innovation to drive its development, the Company carries out implementation of its responsibility performance concentrating on digital empowerment, green development, security development, inclusive development and modern governance. The Company serves the people and empowers thousands of industries. The Company also works together with its partners to build an open and win-win ecology and strives to make constant contributions to the accomplishment of SDGs of the United Nations as well as the sustainable development of the economy, society and environment.



COMMUNICATIONS WITH STAKEHOLDERS

The Company promotes communications with its investors, customers, employees, government and regulatory authorities, communities and other stakeholders through various channels including announcements, reports, meetings, seminars, visits, service hotlines, questionnaires and events. The Company earnestly listens to the expectations and needs of the stakeholders, sorts out the opinions and suggestions from all parties and actively responds to the concerns raised.

To protect investors' legitimate rights, increase exchanges of information between the Company and its investors and potential investors, deepen investors' understanding and recognition of the Company, and promote the positive relations between the Company and investors, the Company strictly abides by the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, the *Guidelines for the Articles of Association of Listed Companies*, the *Guidelines for Investor Relations Management of Listed Companies*, the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* and the *Rules Governing the Listing of Stocks on Shanghai Stock Exchange*, among other applicable laws, regulations, departmental rules, normative documents, and relevant provisions of the securities regulators and stock exchanges in the places where the Company's stocks are listed, and earnestly implements the *Articles of Association of China Telecom Corporation Limited* and the *Measures for Investor Relations Management of China Telecom Corporation Limited*, among other regulations of the Company.

The Company's management has been actively attending results announcement conferences. The Company provide important information to the capital market and media, respond to investors' concerns and promote stakeholders' understanding of our business and the overall development of the industry through various forms of activities such as online and offline investors briefings, results briefings and investor roadshows.

The Company has been actively using diversified channels to improve daily communications with its stakeholders. The Company has provided a dedicated service hotline of investor relations and an investor relations section on the official website. The Company has launched an investor relations WeChat public account and an investor relations WeChat mini-programme to facilitate stakeholders' timely and convenient access to latest news of the Company and enhance daily communications and interaction between stakeholders and the Company.

The Company attaches great importance to shareholder returns, and has gradually increased the profit distributed in cash to above 75% of the profit attributable to equity holders of the Company for the year within three years since 2024, constantly creating value for shareholders.

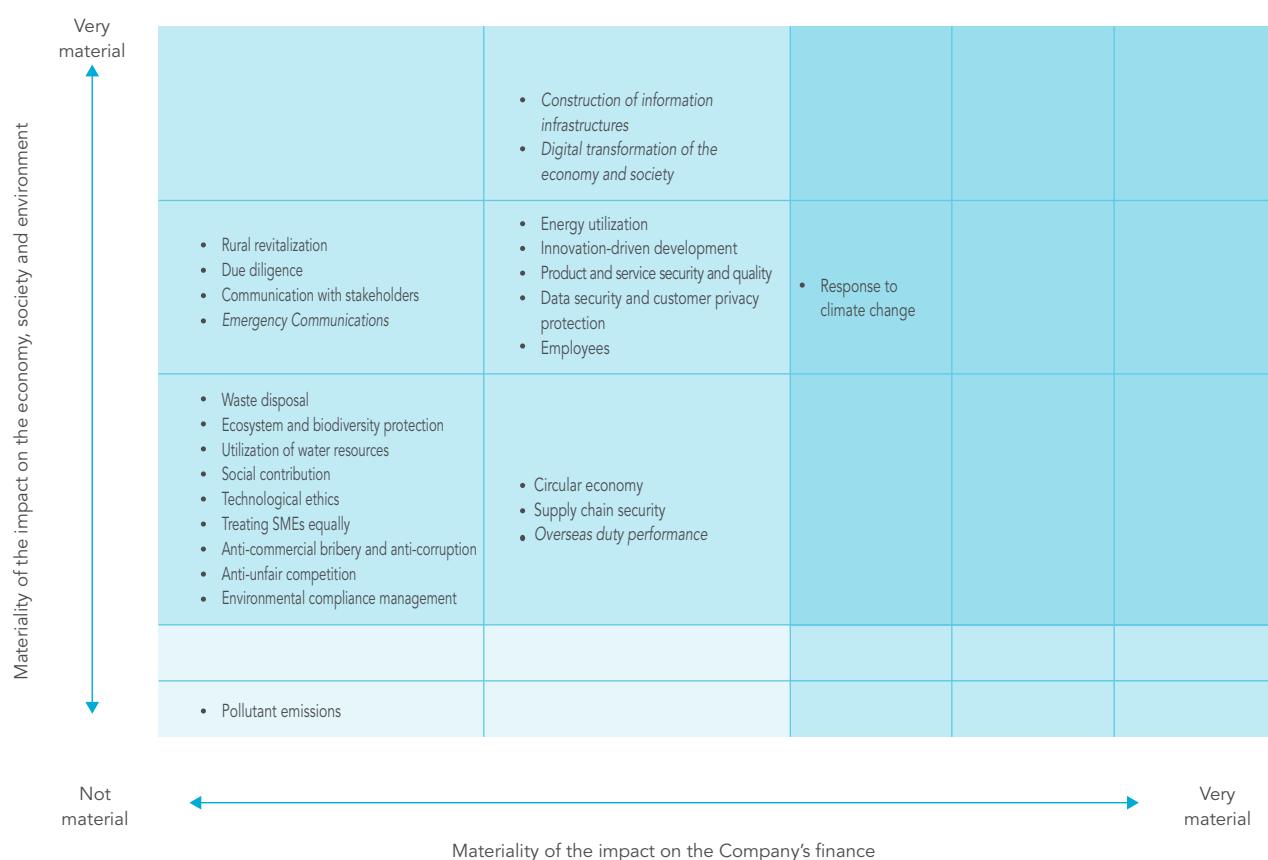
STAKEHOLDERS' EXPECTATIONS ON THE COMPANY AND OUR RESPONSE

Stakeholders	Communications Mechanism and Methods	Expectations on China Telecom	China Telecom's Response
Investors	<ul style="list-style-type: none"> Statements and announcements Visits Daily communications Investor conferences Investor relations column on the Company's website Reverse roadshows for investors 	<ul style="list-style-type: none"> Asset value retention and appreciation Regulating corporate governance Operational risk prevention Regulating information disclosure 	<ul style="list-style-type: none"> Operate steadily and continue to create value for shareholders Enhance corporate governance level and continuously enhance internal control system Protect the rights of investors, especially small and medium investors, in accordance with laws Disclose corporate information in strict accordance with regulatory rules
Customers	<ul style="list-style-type: none"> Customer service hotline Customer managers' visits Customer surveys Customer communications activities 	<ul style="list-style-type: none"> Suitable and quality services and products Enhancement of service quality Tariff reduction Harmful information prevention Personal privacy protection 	<ul style="list-style-type: none"> Promote service and products innovation Promote transparent consumption Set reasonable and preferential tariff Regulate value-added service cooperation management Protect customer information in accordance with laws
Employees	<ul style="list-style-type: none"> Employee representative congress Employee-management conversations Employee opinion surveys Complaints and grievances 	<ul style="list-style-type: none"> Legal rights protection Realisation of professional development Management participation Caring for employees 	<ul style="list-style-type: none"> Regulate labour management Optimise income distribution and welfare protection mechanism Reinforce employee training and enhance career development Count on the function of employee representative congress Enhance work conditions

Stakeholders	Communications Mechanism and Methods	Expectations on China Telecom	China Telecom's Response
 Government and Regulatory Authorities	<ul style="list-style-type: none"> Meetings Statements or reports Briefings and visits 	<ul style="list-style-type: none"> Compliance with laws and regulations Implementation of government management requirement Facilitation of industry development Promotion of employment 	<ul style="list-style-type: none"> Govern the Company in accordance with laws, and operate with integrity Pay taxes in accordance with laws, and foster employment opportunities Innovate digital products and services, promote high-quality economic and social development Actively provide advice and suggestions
 Supply Chain	<ul style="list-style-type: none"> Business communications Business trainings Seminars or forums 	<ul style="list-style-type: none"> Equal and mutually beneficial cooperation Co-creation of value Promotion of industry development 	<ul style="list-style-type: none"> Cooperate with integrity, create mutual benefit and achieve win-win Actively create an industrial ecosystem and promote industry development
 Peers	<ul style="list-style-type: none"> Forums or conferences Dispute coordination and resolution Special topic working groups Visits 	<ul style="list-style-type: none"> Lawful and fair competition Reinforce communications and cooperation, promote healthy development of the industry 	<ul style="list-style-type: none"> Actively communicate and exchange experience Promote inter-connection and inter-communications Actively engage in co-building and co-sharing
 Community	<ul style="list-style-type: none"> Community communications activities Community co-building activities Social welfare activities 	<ul style="list-style-type: none"> Environmental protection Telecommunications universal services Emergency communications assurance Helping the poor, the disabled and the underprivileged 	<ul style="list-style-type: none"> Implement energy conservation and carbon reduction as well as environmental protection measures Actively promote universal services Maintain smooth communications Create social welfare services brands such as "Caring Stations"

ANALYSIS OF MATERIAL ISSUES

In accordance with the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies – Sustainability Report (Trial)* and the *Environmental, Social and Governance Reporting Code* as set out in Appendix C2 to the Listing Rules of the Hong Kong Stock Exchange, with reference to United Nations Sustainable Development Goals (SDGs) and the GRI Standards released by the Global Reporting Initiative (GRI), while taking into consideration stakeholders' expectations and needs and expert opinions based on the characteristics of our business and the industry, the Company assesses ESG issues related to the Company's business operations from two perspectives, i.e. the materiality of the impact on the economy, society and environment and the materiality of the impact on the Company's finance. In 2024, the Company optimised the issue names and adjusted the priority of the issues, added compliance issues including technological ethics, ecosystem and biodiversity protection, product and service security and quality and treating SMEs equally, and the Company identified 24 material issues in total.



Note 1: The issues in italics represent special issues (4 in total), while others are the compliance issues stipulated in the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies – Sustainability Report (Trial)* (21 in total).

Note 2: Given the fact that neither the Company nor its subsidiaries are listed as enterprises subject to mandatory environmental disclosure requirements, the assessment results of pollutant emissions are neither material in impact nor material to finance. Consequently, this issue is deemed non-material.

DIGITAL EMPOWERMENT



The ongoing round of sci-tech revolution is advancing with tremendous momentum, with generative AI continuously upgraded at an unprecedented speed, and the demands for intelligence, greenness and security raising the bar for digital information infrastructures. Consequently, industrial innovation ushers into a critical period characterised by development driven by mass application. Fuelling development through technological innovation, China Telecom further consolidates the foundation for new digital information infrastructures, speeds up the upgrade of large models, vigorously advances the deeper integration of "AI+" applications into production, life and social governance, and constantly enhances product and service quality, to deliver customers with satisfactory services.

CONSOLIDATING DIGITAL FOUNDATION

The Company thoroughly implements the general requirements of "accelerating the construction of the high-speed and ubiquitous, aerial-ground integrated, cloud-network integrated, smart and agile, green and low-carbon, secure and controllable comprehensive intelligent digital information infrastructures". With network as the foundation and cloud as the core, the Company grasps the trends of AI, and proactively advances the upgrade of new digital information infrastructures, to consolidate the foundation for the information-based, digital and intelligent transformation of the economy and society.

Upgrades of various networks

The Company accelerates the construction of dual-Gigabit networks. In terms of mobile network, the Company fully completed the construction of the world's largest co-built and co-shared 4/5G network. The number of 5G co-built and co-shared base stations exceeded 1.375 million, achieving continuous coverage of townships and above and effective coverage of key scenarios on the target list. In terms of broadband network, the Company completed the construction of the world's largest Gigabit fibre network with 1.22 million newly-built 10G PON (passive optical network) ports, effectively supporting the development of Gigabit services in thousands of cities.

The Company accelerates the all-optical upgrade of networks. G.654E new-type fibre was adopted for all the newly-built inter-province backbone optical cables, supporting the deployment of long-distance and high-speed transmission network. The Company further deepened the regional integrated networking, with 400G high-speed ports deployed in hotspot regions, and built a world-leading interconnected network of broadband, with the average latency reducing by 5% nationally. The superior government-enterprise OTN (optical transmission network) network covered all cities nationwide and key China Telecom Cloud resource pools.

Advancing from Gigabit networks towards 10-Gigabit networks that connect all homes



On March 20 2024, Poly Tianhui Community in Yangpu District, Shanghai became the world's first "10-Gigabit Cloud Broadband Demonstration Community" powered by F5G-A (enhanced all-optical network) technology. Leveraging 50G-PON (Passive Optical Network), this project enables on-demand instant access to 10-Gigabit terminals, accelerating the evolution of both 5G mobile and wireline communication networks towards 10-Gigabit networks.

China Telecom continues to build its 10-Gigabit cloud broadband product system. By leveraging 10-Gigabit access capabilities and integrating ultra-fast smart home storage, premium cloud interaction, 3D optical sensing and 3D/XR cloud live streaming, it delivers products with tangible and immersive 10-Gigabit broadband experiences.



Ubiquitous computing services

The Company thoroughly implemented the national project of "East-to-West Computing Resource Transfer". It preliminarily completed the construction of cloud-intelligent computing power infrastructures with unified training-inference capabilities, built two fully liquid-cooling 10,000-GPU pools respectively located in Beijing-Tianjin-Hebei region and the Yangtze River Delta, and deployed 1,000-GPU pools in Guangdong, Suzhou, Zhejiang, Inner Mongolia, Guizhou, among other areas, bringing the intelligent computing power to 35 EFLOPS.

China Telecom builds China's first homemade 10,000-GPU public intelligent computing centre

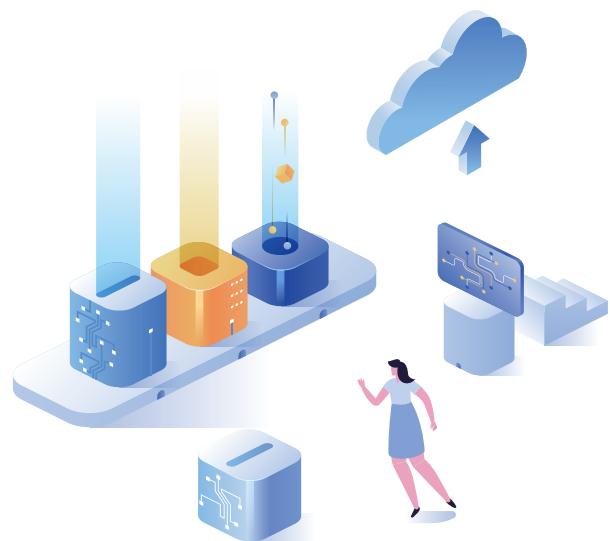
 CASE

In March 2024, China Telecom Cloud homemade 10,000-GPU computing pool at Shanghai Lingang was officially put into operation, marking the first homemade liquid-cooling computing cluster with 10,000 GPUs in one single pool that has ever been put into use in China, as well as an industry-leading fully homemade public intelligent computing centre featuring cloud-intelligence integration.

The centre enables 10,000-GPU high-speed connectivity within a single cluster, meeting the multi-node/multi-GPU parallelism and lossless high-throughput communication, among other requirements, for trillion-level parameter LLM training. Built on an innovative cube-like modular architecture, it addresses demands in power supply, cooling, and installation, aiming to be the next-generation AIDC facility with liquid cooling at the core that delivers cloud-intelligence integrated services for multi-tenant scenarios and empowers the digital and intelligent transformation of all industries.



China Telecom Cloud fully ushered into a new stage of intelligent cloud development. Guided by its "Xirang" brand strategy, it worked to forge a product matrix comprising an integrated computing acceleration platform, a one-stop intelligent computing service platform and an interconnected computing power scheduling platform, and build "Xirang" with industry-leading integrated intelligent computing platform capabilities, achieving the integration of computing network scheduling, training and inference, technical architecture and resources management. It continuously drove breakthroughs in core technologies, such as network topology-aware scheduling, self-developed collective communications library, computing-storage coordination and computing plugins. At a scale of 10,000 GPUs, checkpoint resumed training records 1-minute detection, 5-minute localization and 10-minute recovery, covers 75% of failure scenarios and delivers a MFU (Model FLOPs Utilization) rate of 47%, demonstrating industry-leading computing power at home. The three major intelligent computing service platforms were launched on public clouds, and their hybrid cloud, lightweight and all-in-one versions were released. These platforms have the capabilities to provide integrated product solutions for I+P (infrastructure and platform) in the domestic environment, and offer efficient heterogeneous computing services, one-stop training and inference services, and powerful computing network scheduling services, making China Telecom the first service provider in the industry to achieve 10,000-GPU parallel training with full-stack homemade chips.



EMPOWERING DIGITAL AND INTELLIGENT TRANSFORMATION

The Company proactively seizes opportunities arising from the ongoing round of sci-tech revolution and industrial transformation, meets the trends of digitalization, connectivity, intelligence and green transition, and drives the deeper integration among networks, cloud, AI and Big Data, to empower the intelligent transformation of industries, enhance the efficiency of social governance and make life smarter and easier.

Industrial Digitisation

Creating vertical large models

In 2024, the Company built more than 50 large models for sectors including education, government administration, emergency response and transport, to drive the transformation of traditional industries in a more accurate and efficient way. It integrated large model technology, high-quality industrial dataset and digital platforms in five major scenarios, including creative generation, knowledge extraction, decision-making assistance, task scheduling and intelligent interaction, to provide end users with application services, offer strong support for industrial upgrade and transformation, and deliver more natural and fitting next-generation intelligent interaction experiences.

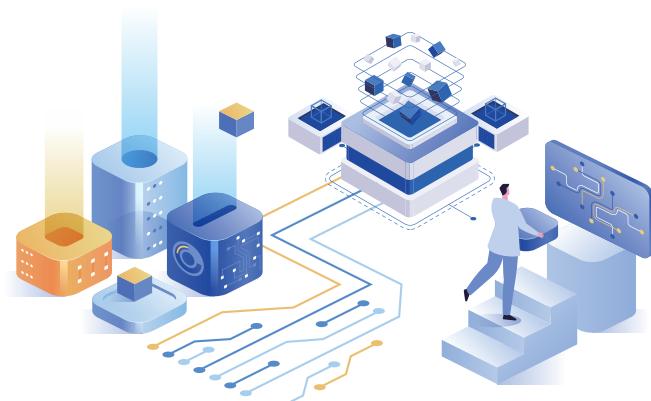
Guided by the design concept of openness and mutual benefit, the Company forged a customer-centric full-element ecosystem platform for large models with the ecosystem at the core. It built multi-cloud heterogeneous computing power management services based on the "Xirang" platform, providing large model services covering the whole process from model evaluation, product selection, model deployment, data annotation, model training, model inference to model application. It accumulated rich datasets across the industry, and built the easy-to-use functions of the Xingchen Agent (intelligent agent), helping users better leverage the capabilities of the large model platform to quickly find the models, datasets, tools, etc. that meet their needs, and promoting the deeper integration of AI large model technology and the industry in all aspects.

Launching the large model for Xingchen government administration hotline



China Telecom worked to build the 12345 hotline into the centralised gateway, core hub and general advisor for social governance. Focusing on the intelligent duty performance capabilities of the government, it integrated intelligent data, computing and application capabilities, to support whole-process intelligent upgrading in government scenarios such as the government's 12345 hotline, management via a single website, and government administration services.

To empower fine urban governance with "AI + 12345 government administration hotline", the Company built a large model for government administration hotlines, introducing features such as intelligent call summary, intelligent work order filling/allocation, intelligent knowledge Q&A, hot event discovery/analysis, public opinion analysis, auxiliary report generation, similar work order retrieval, clustered event retrieval, and assisted training and testing generation for hotline operators and operation staff. Existing customers include Yueshengxin in Guangdong, the Public Security Bureau of Xicheng District in Beijing, the Information Technology Application Innovation Office of the CPC Hangzhou Municipal Committee, and the CPC Lishui Municipal Committee. Shanghai's 12345 hotline project covers 15 scenarios under 7 major categories, with the call answer rate increasing by 20%, the accuracy rate of work order allocation improving by 15%, the first-time event resolution rate rising by 30%, and the answering time shortened from 2 minutes to 20 seconds. The large model supports the generation of reports based on hot issues, enabling "the calls to be answered faster, the work orders to be allocated more precisely and the matters to be resolved more effectively".



China Telecom's Xingchen speech large model supports mixed speaking of Chinese and English, as well as 40 dialects

 CASE

China has rich language resources, boasting ten major Chinese dialects and countless local dialects. At China Telecom, over 10,000 intelligent customer service personnel receive millions of calls every day, many of which are made in dialects. To address the problem, China Telecom launched the Xingchen speech large model in May 2024, which was capable of recognizing multiple dialects. Less than six months later, the Xingchen speech large model achieved another breakthrough in its multi-dialect feature, not only increasing the number of recognised dialects from 30 to 40 by including Zhanjiang dialect, Yibin dialect, Luoyang dialect and Yantai dialect, etc., but also enabling the recognition of English.



Empowering industrial transformation and upgrades

Focusing on key areas such as manufacturing, agriculture, healthcare and education, the Company accelerated the R&D of platforms and data application, and promoted the conversion of the old and new momentum and the industrial transformation and upgrades as well.

● SMART MANUFACTURING

5G empowers future digital garment factories

 CASE

In Suzhou, Anhui Province, China Telecom leveraged its advantage on cloud-network and independently developed a 5G+ industrial internet platform, providing a one-stop digital factory solution for Suzhou Yingde Garment Co., Ltd. The platform incorporated all production processes into digital management, achieving unified management of products from production to shipping with a single code, real-time monitoring of production information, real-time collection of production capacity information, online management of production equipment, and early warning of failures. This effectively promoted the transformation of the company from "manufacturing" to "smart manufacturing". Since the operation of the smart digital factory, the company has seen a surge of 30% in its total production capacity.



Empowering Meishan Iron & Steel's 5G Factory and Enabling Remote Control of Steelmaking

 CASE

China Telecom's Jiangsu Branch helped Meishan Iron & Steel build a 5G factory, which was included into the 2024 5G Factory List released by the Ministry of Industry and Information Technology. "Nanjing Carries out Whole-Process Ultra-Low Emission Transformation of Iron & Steel Enterprises to Drive the High-End, Intelligent and Green Development of the Industry" was listed among the typical cases publicised by the Ministry of Ecology and Environment.

In 2024, Meishan Iron & Steel planned construction of a 5G private network, adding 41 new 5G base stations. Empowered by 60 5G base stations, multiple 5G application scenarios were realised. The dedicated 5G network of Meishan Iron & Steel is the first dual-5G UPF (User Plane Function) kite redundant backup solution in China, ensuring the reliability of the network.

5G+ four major coke oven cars

Based on 5G signals, the management system enables real-time transmission of both signalling data and video signals from the cars to the central control room, making the operation data of the four major cars fully visible. Besides real-time monitoring of car operation, the system also allows human-machine conversation to facilitate the sending of work instructions.

5G+ torpedo ladle cars

5G base stations were built in the blast furnace area and the molten iron ladle station area for the remote control of the opening and closing of the covers of the torpedo ladle cars, ensuring production safety and stability.

5G gateway-based improvement of travelling cranes in the steelmaking factory

The PLC (Programmable Logic Controller) data of the traveling cranes in the steelmaking factory were all transmitted back to the ground wirelessly via 5G, facilitating real-time view of PLC data.

“

In the past, safety and environmental protection on the production site relied solely on manual efforts and monitoring systems, which couldn't achieve comprehensive coverage. Now, we can monitor and handle various situations in real time through the system. Whenever anomalies occur, both on-site audio-visual alarms and pop-up alerts on computer screens will immediately warn employees for prompt actions.

-- Li Qingshou, electrical engineer of Meishan Iron & Steel

”



● SMART AGRICULTURE

5G digital and intelligent technologies empower agricultural production

 CASE

By building a comprehensive management platform for smart agriculture, China Telecom's Xiangtan Branch drove a significant improvement in the agricultural production in Quanhu area. Built on IoT, Big Data and AI, among other technologies, the platform collected data about soil moisture, temperature and light intensity through temperature and moisture sensors and cameras, creating favourable conditions for crop growth. Meanwhile, equipped with satellite remote sensing technology, the platform also enabled precise calculation of planting areas and timely discovery of natural disasters, significantly boosting the efficiency of agricultural production.



Telecom technology empowers modern agriculture through “Tianfu Granary”

 CASE

China Telecom's Meishan Branch leveraged AI, 5G and other advanced technologies and built the “Tianfu Granary”, a high-standard digital Yongfeng Big Data service platform. The platform utilised digital agricultural systems such as fully automatic spore capture analysers and the pest monitoring information collection system to provide targeted and intelligent agricultural services. Meanwhile, it introduced the agricultural product traceability system to improve the added values of products and increase farmers' income.



Building green and low-carbon animal farms and driving high-quality development of the beef cattle industry

 CASE

Based on China Telecom's 5G and Gigabit optical networks, the Kunming Branch pioneered the only AI cow rumen capsule technology in China. For the first time in the country, it successfully achieved breakthroughs in the collection of real-time physiological data and location tracking data inside the living bodies of ruminants, building green, low-carbon and smart animal farms through the integrated application of technologies such as cloud computing, IoT and AI. Moreover, the innovative Big Data accounting model for cattle carbon footprints enabled monitoring and targeted reduction of carbon emissions throughout the breeding process, effectively cutting carbon emissions. Going forward, the Kunming branch will continuously optimise the accounting method for cattle carbon footprints, explore the establishment of a carbon emission database for the beef cattle industry, and actively promote the formulation of carbon footprint accounting standards for the livestock industry, so as to facilitate the green and low-carbon transition of the breeding industry, and contribute to the realization of the carbon peaking and carbon neutrality goals in China's livestock industry.



“

China Telecom used the solution and helped us address problems in beef cattle breeding, such as the difficulty in collecting physiological data, transmitting data and tracing sources. With the platform, we can not only monitor the health conditions of cattle in real time, but also manage feed formula and breeding plans scientifically. This improves breeding efficiency and the quality of beef. Through real-time tracking of cattle location, we can provide traceable beef products to the market. Network technology has empowered the digital transformation of beef cattle breeding and taken us onto a path of green development.

-- Ma Ji, General Manager of
Xundian Pengyuan Animal Husbandry Co., Ltd.

”

● SMART HEALTHCARE

AI “doctors” launched to assist “Cloud-based Medical Examination”

 CASE

China Telecom's Wenzhou Branch assisted the Wenzhou Health Commission in fully launching the construction of the "Cloud-based Medical Examination" application. Based on the existing medical imaging cloud platform, it leveraged emerging technologies like AI and Big Data analysis and built an AI-based imaging analysis platform, enabling AI-assisted analysis for primary-level medical institutions. This effectively solved problems such as the insufficient medical service capacity of primary-level medical institutions in Wenzhou and poor patient experience. The project was successively included into the excellent cases of the "No. 1 Development Project" for the innovative improvement of the digital economy in Wenzhou and typical cases of innovative applications of AI to healthcare in Zhejiang Province, and was honoured with the silver award in the Medical Service Experience Improvement Cases Competition of Zhejiang Province.



Taking Xiamen's smart healthcare construction to a new level

 CASE

Relying on its technical strengths in cloud, network, data, intelligence and security, and leveraging resources like cryptographic services, China Telecom's Xiamen Branch collaborated with the Xiamen Health Commission and upgraded the "Healthcare Cloud" service platform. In doing so, it has built a unified, high-speed, secure and reliable regional healthcare connectivity system for the city's healthcare Big Data centre, effectively boosting the level of healthcare services and management informatisation.



● SMART EDUCATION

“Cloud” lights students’ dreams

 CASE

Relying on the urban-rural education community, China Telecom's teaching video cloud platform further connects the teaching spaces of various schools. It has established smart education scenarios through new technologies, such as live broadcast, AI, and educational Big Data, and formed six core capabilities, including online and offline interactive teaching, multi-terminal adaptation, intelligent video segmentation, automatic generation of teaching resources, high-speed cloud transmission guarantee, and terminal, network, user and service management.

The teaching video cloud platform is further accumulating high-quality resources to support students' independent learning. In Sichuan, targeting problems such as inadequate teaching resources and a large gap in educational quality between urban and rural areas, the platform provides high-quality classroom teaching livestreams for schools and students. As of October 2024, it had accumulated more than 200,000 high-quality educational resources, benefiting more than 1,600 under-resourced schools and over 430,000 students in regions such as Ganzi, Aba and Liangshan prefectures.



China Telecom empowers safe campuses through AI

 CASE

In 2024, the "Xingchen Large Model All-in-One Machine (anti-bullying version)" was introduced to a primary school in the mountainous area of Songtao Miao Autonomous County, Tongren City, Guizhou Province. For the blind spots on campus or the areas where bullying incidents frequently occur, such as dormitories, restrooms and corridors, the Xingchen Large Model All-in-One Machine (anti-bullying version) intelligently upgraded video surveillance, improved the efficiency of video utilization, and installed AI-enabled terminals with one-touch alarm, sound pickup and intercom features, providing support through intelligent analysis and audio analysis. Ultimately, it enabled campus-wide AI analysis of videos and voice-based bullying warning in blind spots, comprehensively improving the efficiency of campus safety management and safeguarding the healthy growth of left-behind children.

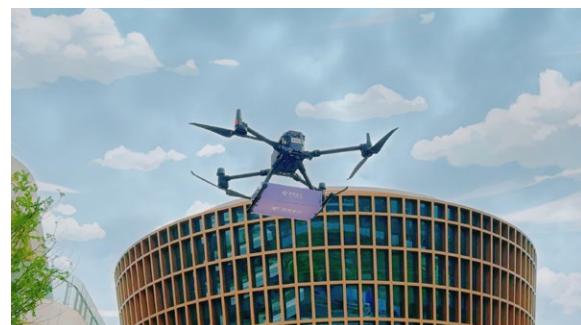


SMART TRANSPORTATION

Building the “drone + logistics” express delivery model to forge a new frontier in low-altitude economy

 CASE

In Hebei, based on the "drone + smart industrial park" pilot project built in China Telecom Smart Industrial Park, China Telecom Digital City Technology Co., Ltd. carried out trial flights of drone express delivery. Low-altitude logistics is a new business model of "low-altitude economy + logistics". Speedy and flexible, it is emerging as a major direction for advancing the logistics industry towards automation and intelligence. China Telecom has been actively optimizing the 5G-A network in the Xiongan New Area, to accelerate the development of the low-altitude economy in the area.



Empowering Rizhao Port through automated logistics

 CASE

Relying on advanced 5G technology, China Telecom's Rizhao Branch collaborated with companies including Rizhao Port and successfully built a 5G+ driverless container truck system, enabling intelligent and unmanned logistics operations, and helping Rizhao Port become the world's first open-type alongshore fully automated container terminal.

Built on cutting-edge technologies such as 5G, edge computing and the V2X system, the full automation project of Rizhao Port enabled automated, intelligent and digitised operations at the terminal. It significantly improved loading, unloading, and logistics efficiency, with logistics efficiency surging by 18%; it shortened the turnover cycle of goods and slashed the overall operating costs of the port; it greatly reduced tail gas and dust pollution, significantly cut the emissions of carbon dioxide and sulphur dioxide during operation and production, and lowered the overall energy consumption by 19%, with the carbon dioxide emissions reduced by 9%.



● SMART CULTURE AND TOURISM

Digital Panda “Su Lin” drives cultural and tourism innovation

 CASE

“Su Lin”, the 3D digital panda built by China Telecom's Sichuan Branch and TeleAI under the support of “TeleTrip—Xingchen Tourism” and piloted in Aba Prefecture, Sichuan Province, was included into several authoritative reports, including the *China Digital Human Development Report (2024)* and the *China Digital Human Industry Ecosystem Map (2024)*, becoming a typical case of the application of digital humans.

“Su Lin” can communicate fluently not only in Mandarin but also in several Sichuan dialects, demonstrating the charm of AI technology and serving as an innovative platform for promoting ethnic culture and tourism resources.

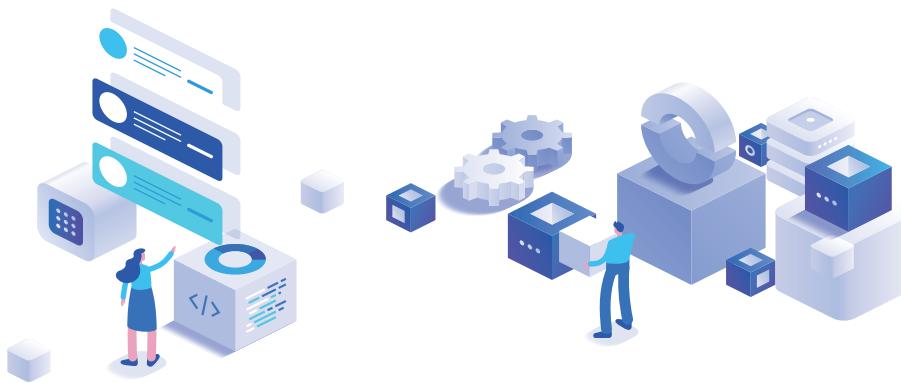
In a hyper-realistic wild habitat environment built with edge-cloud technology, visitors can interact with “Su Lin” via smartphones for personalised travel suggestions. “Su Lin” can provide considerate services from scenic spot introductions and food recommendations to traffic guide and cultural storytelling, ensuring richer and more personalised travel experience for visitors, and driving the high-quality development of tourism across Sichuan.



“Booth Life Festival” enriches street art

 CASE

During the Shanghai International Tourism Festival and the Shanghai International Light Festival, China Telecom's Shanghai Branch launched the “Booth Life Festival”. It not only opened the smallest roadside wine booth on Changle Road, but also built many distinctive Hello Old Friends Booths. The booths not only provide convenient services such as face-scanning car-hailing, appointment for medical treatment, pension inquiry, free charging, and AI photographing, but also add a cultural touch to the urban streets, enriching the City Walk experience for global tourists in Shanghai.



Digital society

The Company adapts to the new trend of full integration of digital technologies into social interactions and daily lives, and constantly enhances the capabilities of digital products to build a better digital life for the whole society.

Upgrade of digital homes

Focusing on users' growing needs for a better life, the Company built the "Beautiful Home" brand for the digital home business, upgrading the product system of "one all-fibre network + one intelligent cloud + one beautiful home". Based on fully upgraded FTTR, the home network provides users with faster, safer, greener and more intelligent home network services. Empowered by AI, IPTV e-Surfing HD, based on the Xingchen large model, delivers users with more than 30 services such as natural language interaction for on-demand viewing, livestreams, audio and video services, as well as new scenarios like AI healthcare and AI education. The Company created intelligent products such as the AI home monitor, AI door lock, and one-touch emergency call, empowering the whole home with digital life scenarios, and upgraded the connection between digital homes, smart communities and digital villages, further enhancing the experience of home users.

"China Telecom Creates Beautiful Home"



In April 2024, the release conference for the Smart Home Cooperation Alliance of China Telecom's Nanjing Branch, themed "China Telecom Creates Beautiful Home", was held at the China Telecom Future Information Museum.

The Nanjing Branch, in collaboration with 19 leading enterprises, including smart home providers, decoration companies, hotels, and real estate developers, established the "Smart Home Cooperation Alliance". The Nanjing Branch released a smart home product and service system marked by three independent capabilities, i.e. "independent design, independent delivery, and independent maintenance", fully demonstrating its four major advantages known as "one-point access, quality assurance, reassuring price, and central-enterprise service". It also released an online service access to help citizens quickly achieve the intelligent upgrade of their homes.



Upgrade of smart communities

The Company is committed to building e-Surfing smart communities. For grass-roots governance units such as sub-districts and communities, it launched sub-district cloud products, providing applications like video aggregation, grid management, and emergency notifications, to safeguard the peace of homes with the “cloud”. For property management companies, it provided intelligent tools like smart access control systems, AI monitoring, and property fee payment services, building smart homes with “AI” at the core. For residents, it offered services such as 15-minute life circle and community smart eyes, making life easier and happier for residents.

Smart communities make digital life easily accessible

 CASE

China Telecom's Yunnan Branch fully leveraged 5G, IoT and AI, among other technologies, to promote the construction of smart communities. It facilitated the building of Lihui Apartment Community in the Ancient Town of Lijiang, the first fully AI-powered smart community in the province, providing residents with intelligent and convenient services such as intelligent recognition, intelligent safety monitoring, and one-touch emergency calls for all.

As of the end of 2024, more than 3,000 smart communities had been built across Yunnan Province, integrating smart security, smart property management, and smart home systems, among other services. Moreover, products like “Community Smart Eyes” and “15-minute Life Circle” were developed based on community needs, truly bringing digital life to thousands of households.



● Full AI-powered upgrade of e-Surfing Internet of Video Things (IoVT)

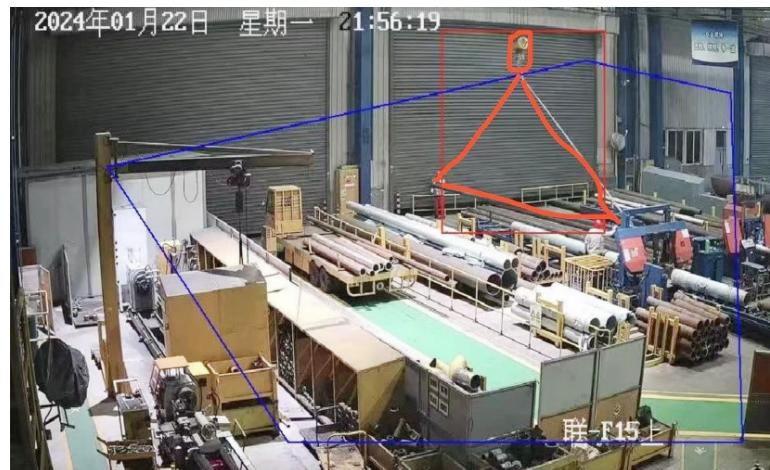
The Company scaled up IoVT, and built applications for more than 100 “AI+IoVT” scenarios including smart safety monitoring, smart kitchen monitoring, and smart business, as well as innovative applications including green power and green network solutions, smart bio-security monitoring platform and fire warning platform, covering more than 300 prefectures across 31 provinces nationwide, recording over 100 million users, and connecting more than 74 million terminals. All video data were connected across the urban IoVT, forming one network for one city and one network for one industry, building a visual brain for cities, and empowering the construction of urban governance system and the modernisation of governance capabilities.

“AI+IoVT” changes “manual check” into “real-time monitoring”

 CASE

In large workshops, violations by workers, such as not wearing safety helmets, smoking, making phone calls, and standing under suspended loads, often occur. Manual monitoring of operations can lead to omissions and low efficiency, posing huge potential hazards to production safety.

In 2024, the Hangzhou Branch empowered the original monitoring system through the IoVT platform and the AI + visual sub-platform, enhancing the functions of the existing monitoring system, enabling the access to monitoring footage and image data, and facilitating analysis and comparison based on visual models. Hangzhou Boiler Group used the system to detect non-standard operations and high-altitude operations, etc., and provided reminders and alarms accordingly, achieving effective monitoring and management, enhancing supervision efficiency, and reducing the risk of production accidents.



Model name: Personnel detection under suspended load

Monitoring device name: Header workshop-2_F15 right

Alarm information: Personnel detected under suspended load

Alarm time: 2024-01-22 21:57:34

Department name: Header Workshop

White Paper on IoVT Cloud Technology officially released, offering a blueprint for AI+IoVT development

 CASE

On May 24, 2024, IoVT Forum was successfully hosted in Fuzhou during the 7th Digital China Summit Intelligent Computing Cloud Ecosystem Conference. The forum focused on the strategic goal of building a new state-level digital platform of video services to support economic and social development, and unveiled the *China Telecom White Paper on IoVT Cloud Technology* and Xingchen Haina IoVT large model. Also, the event witnessed the full upgrade of e-Surfing IoVT ecosystem, launch of e-Surfing IoVT product series, and announcement of China Telecom IoVT Ecosystem Alliance.



Digital government administration

The Company integrated quality products capabilities in the field of government administration, and participated in the construction of major digital government administration projects across the country, empowering governments at all levels through intelligence. It built industry-leading digital technology foundations, government administration data service systems, core platforms and industry-specific applications, gave play to its advantages in consulting and planning services and operation capabilities, and forged a full-stack capability system for digital governments. The Company independently developed the Xinghai · integrated digital resources management platform, Xingchen · government administration large model, Yizhi · intelligent city hub platform and Yiwaxiang · holistic data element platform, among other core products, and customised solutions for vertical industries including smart organizational work, smart drug supervision and smart elderly care, empowering the digital transformation of governments at all levels in an all-around way.

Driving the improvements in the quality and efficiency of government administration services



The Huizhou Branch leveraged the cloud computing capability foundation and built a “1+N+M” unified cloud platform for “digital government”, addressing problems like data silos and operation isolation in government systems, and effectively realizing resources integration, separation between management and operation, data integration, and business connection.

The Huizhou Branch used the Big Data from the 12345 hotline, and applied intelligent technologies including intelligent robots, intelligent customer service assistance, intelligent work order allocation, and intelligent follow-up, to government hotline service. This enabled calls to be answered faster, work orders to allocated more precisely and the matters to be resolved more effectively.



STRENGTHENING SCI-TECH INNOVATION



In line with the strategies of building China into a cyberpower and a scientific & technological powerhouse, the Company beefed up supply of high-quality technology, increased presence in the areas of technology with nationally strategic significance, stepped up input in sci-tech innovation, strengthened the cultivation, introduction and use of talents, expanded industry-academia-research collaboration, and intensified the integration of innovation resources across the industrial chain. The Company achieved new headway in driving high-quality development through innovation, and took a solid step towards building itself into a technology-oriented enterprise.

Self-reliance and strength in science and technology

The Company vigorously advanced the self-reliance and strength in science and technology at a higher level, sustained the growth in R&D input, introduced and cultivated top-notch scientific research experts, and fostered a number of tech companies with market competitiveness, with the aim to build itself into a tech enterprise with independent control of critical and core technologies, a top-notch sci-tech innovation enterprise in China, and a technology leader and a strategic technology force for the country.

The Company actively served national major strategies, assumed many national breakthrough projects and key R&D projects, and forged state-level innovation platforms with high standards, staying at the forefront of central enterprises in terms of the construction of innovation platforms, and playing a growing role in the national innovation system. With the focus on four fundamental technology directions of network, cloud and cloud-network integration, artificial intelligence and quantum/security, the Company continued to facilitate breakthroughs in critical and core technologies, drove industrial innovation through sci-tech innovation, and fully completed the deployment in seven strategic emerging industries, including cloud computing and computing power, next-generation information communication, Big Data, AI, security, quantum, and digital platforms. The Company further implemented the project of promoting corporate strength through talents, strengthened the building of its talent team, and introduced and cultivated top-notch scientific research experts, initially forming a echelon pattern of sci-tech talents.

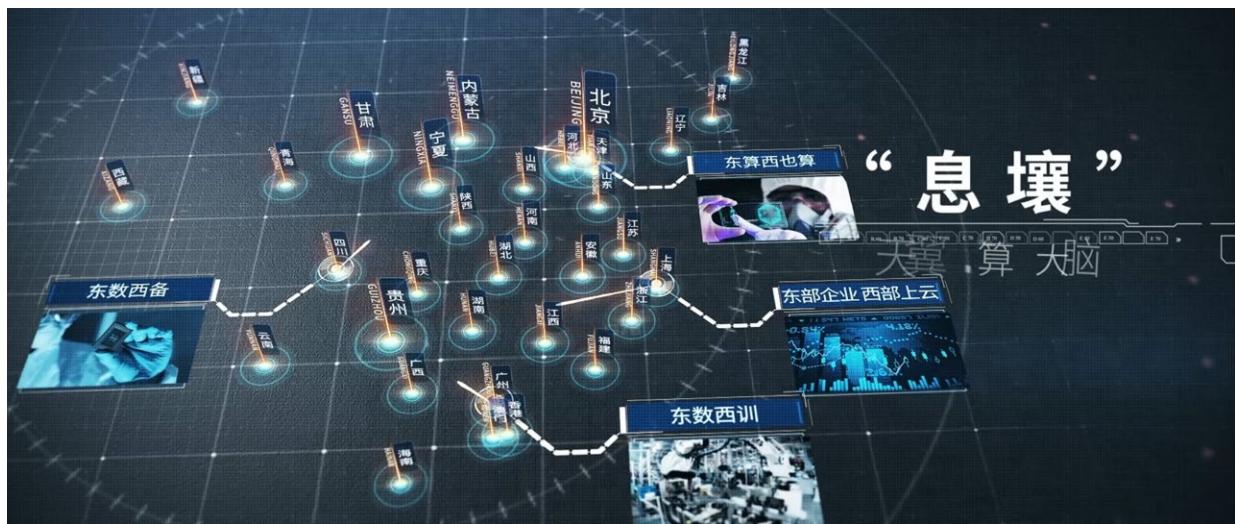
The Company established a R&D system for sci-tech innovation featuring the coordination of R (applied and basic research), D (applied technology R&D) and O (operation-oriented development), and formed an enterprise R&D system characterised by horizontal linkage, vertical integration, clear positioning and complementary capabilities. The parent company released management policies including the *R&D Project Management Measures of China Telecom* and the *National Scientific Research Project Management Measures of China Telecommunications Corporation*, further standardised management of R&D activities, optimised the systems and mechanisms for enterprise R&D management, established the objective and outcome-oriented assessment and incentive mechanism, carried out organised R&D, built products for mass application, and developed replicable solutions.

“Xirang” integrated intelligent computing service system provides the industry with secure and controllable intelligent computing power foundation



In 2024, China Telecom Cloud drove continuous breakthroughs in the core technologies of cloud computing, constantly upgraded the capabilities of the “Xirang” integrated intelligent computing system, connected to partner resources and brought the computing power to 27EFLOPS, fully establishing the framework as a national cloud and ushering in a new stage for the development of intelligent cloud.

The “Xirang” integrated intelligent computing platform took the lead to complete the in-depth adaptation of domestic computing power to DeepSeek-R1/V3 large model series, becoming the first operator-level cloud platform at home to realise the full-stack localised reasoning of DeepSeek models, and collaborating with industrial peers to take economic and social Intelligence to a new height.



Releasing “Tianyan” quantum computing cloud platform, the largest quantum computing cluster in China

 CASE

In December 2024, China Telecom officially released “Tianyan-504”, the superconducting quantum computer with the biggest number of bits per unit in China. It will be connected to the “Tianyan” quantum computing cloud platform, the world’s first platform that demonstrates quantum supremacy, and be opened to the public.

China Telecom’s “Tianyan” quantum computing cloud platform realised upgrading in both the scale and type of computing power, marked the largest-ever quantum computing cluster at home consisting of one 24-bit, two 176-bit and one 504-bit quantum computers, and provided five types of world-class high-performance simulators and the Cqlib quantum programming framework, representing another leap forward in China’s quantum computing capabilities.



Industry-academia-research cooperation

The Company continued to expand industry-academia-research cooperation and cooperation with partners in the international ecosystem, strengthened integration of innovation resources across the industrial chain, deeply engaged in international standard organizations, facilitated the building of international organizations, and diversified the paths for industrial cooperation.

Leveraging its dominant role, China Telecom established an integrated industry-academia-research innovation consortium, and formed a “4+1+N” collaboration framework with four national laboratories, the Chinese Academy of Sciences (CAS), and over a dozen leading universities, including Tsinghua University and Peking University, to facilitate joint research and accelerate the application of major breakthroughs. Seizing the opportunities arising from global digital transformation, the Company accelerated the building of the World Broadband Association (WBBA), which now boasts 160 members spanning nearly 50 countries and regions, and aims to be an international cooperation and exchange platform for cloud-network technology innovation.

WBBA Broadband Development Congress 2024 held in Paris

 CASE

On October 8, 2024, WBBA Broadband Development Congress was successfully held in Paris.

Under the theme of “Commercialization of the Next-Generation Cloud-Network Broadband: Influence of AI on Future Cloud-Network Broadband Development”, the congress invited partners across the global industrial chain, experts and scholars to jointly explore the transformative role of AI in the evolution of cloud-network broadband and kickstart a new chapter of industrial development. In addition, the 2024 WBBA Global Broadband Excellence Award was also presented at the event, to commend the organizations with outstanding contribution to the development of the global cloud-network broadband industry as well as associated technological innovation and application.



Ethics of science and technology

During technological R&D and application, the Company strictly adhered to the science and technology ethics, and observed the due values, social responsibilities and codes of conduct. It fully evaluates the potential impacts and reliability of new fields and new technologies, and actively tapped the positive effects of science and technology. In combination with the R&D of AI, Big Data, and the security of Artificial Intelligence Generated Content (AIGC), the Company strictly implemented relevant regulatory opinions such as the Opinions on Strengthening the Governance of Science and Technology Ethics issued by the General Office of the CPC Central Committee and the General Office of the State Council, and the Measures for the Review of Science and Technology Ethics (for Trial Implementation) issued by the Ministry of Science and Technology.

The Company established a strict review and verification mechanism for AIGC, clarified the responsibility mechanism of business departments, enhanced the awareness of copyright and intellectual property protection, and clearly defined the ownership of the intellectual property rights of generated contents. It conducted comprehensive ethical risk assessment and monitoring, and embedded ethical judgment in the content generation process through ethical reasoning and automated decision-making tools, to prevent adverse social impacts and ethical risks. Relying on the integrated media matrix and the popular science brand "Love Science Together", the Company carried out publicity campaigns centred on topics of public concern, such as AI, low carbon and cybersecurity, to enhance the predictability of risks associated with science and technology ethics.

Enhancing the predictability of risks associated with science and technology ethics through integrated media matrix publicity



Centring on the hot topics of public concern, including low carbon, AI and cybersecurity, the Company conducted research on the status quo of science and technology ethics in relevant fields and expert views, and carried out extensive publicity relying on its integrated media matrix, to raise the ability of science and technology workers and their communities to predict risk associated with science and technology ethics.

In scientific research and technological development, the Company guided relevant personnel to follow the values and codes of conduct, with the aim to promote technology for good, enhance peoples' well-being, and drive the healthy development of science and technology endeavours.

小创聊科技

人工智能是新一轮科技革命和产业变革的重要驱动力量。我们欣喜地看到中国AI产业不断发展，人工智能的应用场景越来越丰富，用户群体越来越庞大，产业需求也越来越旺盛。不仅需要根据科技发展趋势和规律，而且对未来的科技研发可能出现的负面影响进行分析。

量子计算

量子计算作为一种前沿的计算技术，随着广泛的应用，虽然提供了一定的隐私保护方案，但仍然存在黑客先进技术的攻击、信息进入的被窃听、攻击和数据被篡改的风险，造成大量的个人数据和隐私信息将会被收集和传播；随着信息的大规模传播和存储，可能会导致信息过载和泛滥的问题，甚至还可能引起道德问题，如信息篡改、歧视等。

量子通信

人工智能作为新一轮科技革命和产业变革的重要驱动力量，我们欣喜地看到中国AI产业不断发展，人工智能的应用场景越来越丰富，用户群体越来越庞大，产业需求也越来越旺盛。不仅需要根据科技发展趋势和规律，而且对未来的科技研发可能出现的负面影响进行分析。



PROVIDING HEARTFELT SERVICES TO CUSTOMERS

China Telecom pressed ahead with the building of a comprehensive service system, upheld the philosophy of "Customer First, Service Foremost", and provided customers with satisfactory services with guaranteeing and improving customer perception as the starting point and ultimate goal.

Product and service quality management

The Company continued to strengthen the construction of the quality management and assessment system for the entire product lifecycle, improved relevant management measures and implementation rules, and clarified the requirements for product quality assessment and management in processes such as product R&D, launch, operation, and withdrawal from market. It built a product quality assessment model from the customer perspective, covering 30 assessment indicators in five dimensions including scenario satisfaction, function integrity, user friendliness, performance stability, and touchpoint smoothness. Internal testing by all and sampling quality inspection were carried out before product launch; experience benchmarking was conducted regularly during operation, and problems were continuously followed up for closed-loop resolution. In 2024, seven product quality assessments were carried out, and more than 160 problems and demands were included in the closed-loop follow-up process. The Company also built a product health assessment model, assessing product effectiveness based on their existing performance and growth potential, taking targeted measures, and developing requirements for closed-loop management. In 2024, health assessments were carried out for 468 intensive products, resulting in the first batch of 100 products to be addressed with three types of measures including elimination, downgrade or withdrawal from market.

The Company firmly adhered to the customer-centric development concept, deepened the service evaluation mechanism of "All Customers' Say", addressed the urgent and pressing concerns of customers, and effectively improved the customer experience.



- The Company deepened the construction of a comprehensive service system featuring coordination between the front and back offices, and carried out the "New Work Style Campaign". With the focus on the urgent and pressing concerns of customers, it enhanced service quality at all touchpoints throughout the product lifecycle through network construction and maintenance, product rule design, marketing standardisation, and after-sales service experience improvement.



- All types of businesses and fees plans must pass the service review before launched. The one-vote veto system will apply if they do not comply with service specifications or relevant management regulations, or are likely to trigger disputes with users.
- Upon service launch, a red-flag suspension mechanism will be triggered for any business operations or sales agent channels that generate excessive user complaints, spark significant public backlash or severely damage customer perception.



- The Company unveiled six service initiatives, including Digital Freedom, Network Freedom, Convenience Freedom, Care Freedom, Spending Freedom, and Security Freedom.
- The Company proactively addressed emerging customer needs and made public undertakings, to deliver new benefits to the public, which include "Speed Connectivity Guarantee", "7-Day No-Penalty Subscription Cancellation", smart home services and "Caring Stations" for elderly support.



- The Company launched the "Red China Telecom Serves the People" campaign, where the "General Manager Service Lectures" were held for the leadership; themed Party day activities were organised for middle management; role models were selected and best practices were promoted through the solicitation of essays among frontline employees, to promote the establishment of the people-centric core values and development outlook among all employees.

The Company creatively launched digital human, video customer service and other multi-modal access services, continuously optimised the process of coordinated online and offline services, and expanded online service and intelligent service scenarios, enhancing user interactive experience and service efficiency.



Digital human customer service

- Integrated AI capabilities including intelligent response, identity verification and OCR, and deliver multimodal services fusing texts, speech and images.
- Launched a total of 316 complex service scenarios across 31 provinces, handling an average of 1.5 million user requests per month, and providing users with round-the-clock integrated self-service solutions.



Remote video customer service

- Conducted identity verification through videos, with the support from other digital means including shared whiteboard, graphic & text presentation, and digital signature, delivering in-person service experience without leaving home.
- Annually handled more than 10 million customer requests, with the customer satisfaction rate reaching 98%.



Coordinated online and offline services

- Introduce new features, such as broadband termination, transparent progress tracking, and one-click multi-fault diagnosis, to China Telecom's APP, enabling handling of all services via the online channel and making it unnecessary for users to visit offline outlets.
- Further streamline service processes at business outlets, enabling offline services with easy access to be completed in just one trip for users.

Launching one-click diagnosis section



In 2024, based on the existing eight one-click diagnosis capabilities, ten more one-click diagnosis capabilities were introduced, such as data package inquiry and cancellation, package change, data package recommendation, value-added service inquiry and cancellation, and one-click push of electronic invoices, having interfaces accessible to all 31 provinces, and realizing a one-click automated loading rate of 100% in China Telecom APP. The service handled an average of 7.18 million requests per month, with the sub-scenario manual intervention rate reduced by 25.6 percentage points, effectively enabling closed-loop self-service resolution.



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网速等



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户条件

升级5G条件

判断是否能够升
级5G



积分兑换检测

积分余额、到期
积分



Protecting the rights and interests of customers

The Company earnestly implemented the relevant laws and regulations, such as the *Civil Code of the People's Republic of China*, the *Law of the People's Republic of China on Protection of Consumer Rights and Interests*, the *Personal Information Protection Law of the People's Republic of China*, the *Advertising Law of the People's Republic of China* and the *Law of the People's Republic of China on Combating Telecom and Online Fraud*, and provided products and services in compliance with laws and regulations. The Company regulated tariff management, continuously optimised the service registration form displayed to customers, enhanced the integrated review and approval procedure relating to the price of goods, and made prompt response to market and customers' demands. Meanwhile, it further strengthened the compliance management of advertising and publicity, and stepped up investigations, supervision and accountability of improper conducts, such as violating advertisement management, infringing upon consumers' rights, going against public order and good custom, and false publicity, thus effectively protecting rights and interest of customers.

The Company pressed ahead with business compliance initiatives, advanced the stratified and classified control over unsolicited commercial electronic messages including harassing calls and spam text messages, and continuously improved technical protection capabilities. It continued to allow users to set interception service according to their personal preferences, and based on the "do not disturb" service for incoming calls, launched the "do not disturb" service for text messages, intercepting a total of 3.84 billion harassing calls and 4.05 billion spam text messages throughout the year. The "Do Not Disturb Service for Incoming Calls and Text Messages – e-Surfing Anti-Harassment" recorded 381 million users. The Company performed relatively well in the industry in terms of governing unsolicited commercial electronic messages. The Company took solid steps to prevent communication and Internet frauds, continuously enhanced technical protection capabilities, and strengthened supervision over key businesses, blocking 117,000 fraudulent IP addresses and shutting down 28,000 involved numbers in the year. The Company conducted publicity both online and offline, with the views of anti-fraud publicity videos exceeding more than 100 million times.

The Company constantly enriched service handling channels, and enhanced the capabilities of fast and properly addressing customer complaints.



Keeping compliant channels accessible

The Company provided channels, including China Telecom APP, the WeChat account of "China Telecom Customer Service", the WeChat mini program of "China Telecom Complaint Platform", and the 10000 hotline of provincial branches, to handle customer complaints.



Refining handling standards

The Company responded to customer complaints the first time within two hours, communicated with the customers within 48 hours, and developed solutions based on customer demands to properly handle customer complaints.



Strengthening traceability governance

Based on customer complaints, the Company conducted in-depth analysis of the root causes of the problems, advanced effective governance of the problems, deepened the traceability of typical cases, and established a red-light mechanism for pre-service review and product complaints, to advance the resolution of one type of problems by handling one complaint.

Building an outstanding brand

In 2024, the Company further implemented the brand-led action, constantly enhanced brand operation and management, and expanded brand influence. Upholding the goal of building an outstanding brand with more refined management, greater values and a more solid position in the industry, it consolidated the foundation of quality and forged brand reputation; strengthened brand operation capabilities and built differentiated advantages; enriched brand connotation and raised its profile as a service-oriented, technology-oriented, and secured enterprise and advanced the internationalization process and expanded into global markets.

Brand leading

- Organised the implementation of the brand-led action, intensified the coordination between the headquarters and provincial branches, and published special reports in major media outlets including CCTV, People's Daily and Xinhuanet.
- Further tapped the values of major projects, important outcomes and typical cases, fostered brand culture with the red spirit of China Telecom at the core, and deepened cultural brand building.

Brand management

- Improved the brand system, and accelerated the deployment of strategic emerging business brands.
- Promoted the handset direct-to-satellite service, unveiled the e-Surfing AI brand, standardised the Xingchen large model, Xinghai Big Data, Xirang computing power scheduling, among other AI capability foundation brands; launched upgraded basic business brands including Cloud Broadband and Beautiful Home; accelerated the building of new digital consumer brands and initially formed enterprise brand, business brand and capability brand clusters.

Key factors affecting brands

- Hosted the 3rd Intelligent Computing Ecosystem Conference and the 2024 Digital Technology Ecosystem Conference, actively spoke at events including the World Artificial Intelligence Conference, and PT Expo China, etc., and participated in 510 China Brand Day, showcasing its strategies and technological innovation outcomes in an all-round way.
- Demonstrated its image as a tech enterprise leveraging sports events including Olympic Games, Asian Games and Thomas and Uber Cup and conducted nationwide promotion of China Telecom Cloud, 5G, cloud broadband and AI+ products, among other key businesses and brands, through the "event + brand + product" model.

Brand internationalisation

- Optimised its overseas social media communication matrix, to continuously enhance brand influence
- Drove brand internationalization, participated in the Mobile World Congress, held the handset direct-to-satellite launch event, and strengthened the overseas media communication matrix.

Launching e-Surfing AI brand



Focusing on its four technological directions, including network, cloud and cloud-network integration, AI, quantum/security, as well as its strategic plan for the deployment of seven strategic emerging businesses, China Telecom launched the e-Surfing AI brand, which formed a strategic emerging business brand cluster with China Telecom Cloud and Bestpay to forge brand synergy. The connotation of the e-Surfing AI brand includes i) All in AI, which means AI empowers Tele and every industry and everything; ii) Originality, which highlights independent research and breakthroughs in key technologies; iii) Security, which underscores adherence to core values and the bottom line of AI security.



Unveiling the all-new digital home brand “Beautiful Home”



Centring on security, health, entertainment, low carbon, and intelligence, among other home scenarios, the “Beautiful Home” brand introduced numerous products and applications connected to countless types of intelligent terminals, delivering a rich diversity of whole-home smart integrated solutions and making every corner of home beautiful. Shaped like a house, the brand logo is a visual symbol of warm home. The AI mark represents empowerment by AI, indicating AI elements present in every scenario at home. The logo colour blends gradient red and purple, or is dominated by pure red, implying a warm, vibrant and caring home atmosphere.



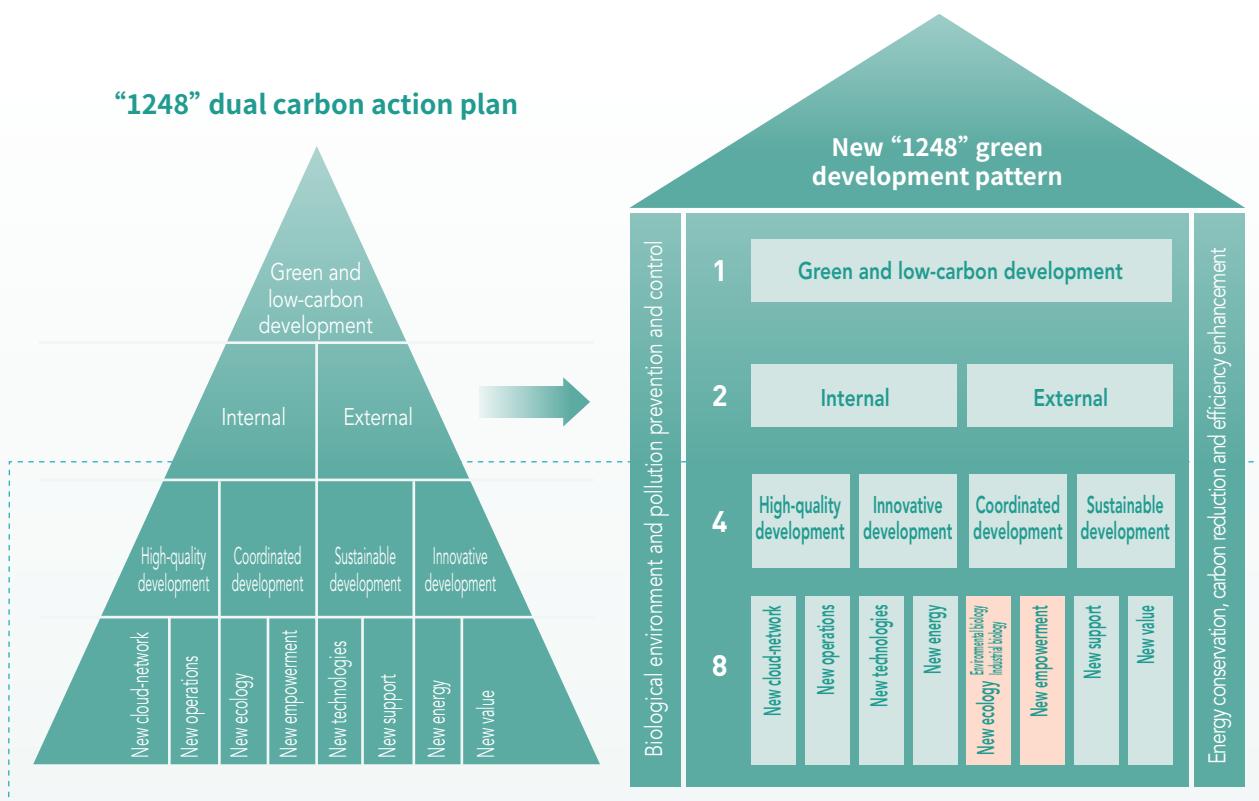
GREEN DEVELOPMENT



China Telecom actively implements the national “dual carbon goals” and the green and low-carbon requirements of the industry, and steadfastly pursues a high-quality development path that prioritizes ecological protection and green transformation. The Company continuously optimises the “1248” green development pattern, integrates green and low-carbon concepts into the whole construction and operation process of new types of digital infrastructures, accelerates energy structure transformation, and expands green products and services, contributing to green transformation across society.

PRACTICING “DUAL CARBON” STRATEGY

The Company actively implements the Opinions on Completely, Accurately, and Comprehensively Implementing the New Development Concept and Achieving Carbon Dioxide Peaking and Carbon Neutrality, the Action Plan for Carbon Dioxide Peaking by 2030, the Opinions on Promoting the Gradual Shift from Dual Control of Energy Consumption to Dual Control of Carbon Emissions, the Opinions of the CPC Central Committee and the State Council on Comprehensively Promoting the Construction of a Beautiful Country, the Opinions on Accelerating Comprehensive Green transformation during Economic and Social Development and other policy documents of relevant ministries and commissions, and keeps improving the “1248” green development pattern, integrating green and low-carbon concepts into the whole process of corporate production and operation.



Governance Structure

The Company has set up a three-level governance structure comprising decision-making level, management level and implementation level.

Governance level	Accountable department	Main responsibilities
Decision-making level 	"Carbon Dioxide Peaking and Carbon Neutrality" leadership group	Promote the implementation of the Company's green and low-carbon strategy, lead the Company's green development efforts, and study and make decisions for important issues in the management of "Carbon Dioxide Peaking and Carbon Neutrality".
Management level 	The office of the "Carbon Dioxide Peaking and Carbon Neutrality" leadership group	Implement and promote the arrangements of superior departments and the leadership group for "Carbon Dioxide Peaking and Carbon Neutrality" efforts, study important issues in the work, supervise the implementation of specific work tasks, regularly evaluate the progress of work and report to the leadership group.
Implementation level 	The departments responsible for green development and related business departments of each subordinate unit	Track climate change-related risks and opportunities in real-time, and provide recommendations to management and decision-making levels based on practical experience

The Company places high priority on green development and climate change-related topics, and continuously strengthens capacity building for green development and transformation and climate change response at the level of the Board of Directors. In 2024, the Company organized 11 training sessions with participation from 6 directors.

The Company establishes green development assessment and incentive mechanisms, which includes key green development performance indicators into the Chairman's performance assessment and links them with remuneration. The Company formulated the *Notification on Issuing Green Development Work Assessment Rules of China Telecom in 2024*, incorporating the key work of green development into the operational performance assessment system for persons in charge of provincial branches and professional companies.

The Company continues to improve its organizational structure for green development efforts. A green development division under the cloud-network development department/the international department was set, while it maintained the original operational mode of green development taskforce to deepen overall green development efforts through horizontal departmental coordination and vertical "top-down" task implementation mechanisms.

Achievements and goals

In 2024, the Company achieved favourable results in energy conservation and carbon reduction. Through multi-pronged measures such as co-building and co-sharing, green renovation of facility rooms, and AI energy saving, it reduced greenhouse gas emissions by more than 15 million tons this year, the comprehensive energy consumption per unit of total volume of telecommunications services decreased by 12.5% year on year, and the greenhouse gas emissions per unit of total volume of telecommunications services decreased by 19.2% year on year. During the 14th Five-Year Plan period, the Company has reduced its greenhouse gas emissions by more than 45 million tons through co-building and co-sharing and various energy-saving measures, completing ahead of schedule the emissions reduction target set for the 14th Five-year Plan period. The Company promises to continue to reduce comprehensive energy consumption intensity and greenhouse gas emissions intensity in 2025.

Strategy and Risk Management

Climate impact evaluation

The Company is acutely aware that its business activities have or are expected to have a positive or negative impacts on economy, environment and society as well as its stakeholders. In order to fully understand the impacts of its climate-related business activities on its stakeholders, the Company evaluates its climate-related impacts every year, and communicates with its stakeholders to identify its climate-related business activities with major impacts.

Climate-related impact evaluation process

Climate-related impact identification

The Company's "Carbon Dioxide Peaking and Carbon Neutrality" leadership group identifies climate-related strategic planning and business activities by tracking climate-related policy dynamics and sorting out enterprise practices every year, and further analyses positive or negative impacts of its business operation modes and emission reduction plans on stakeholders in the aspects of economic development, environmental protection and social factors.

Impact importance evaluation

Positive impact evaluation

The office under the "Carbon Dioxide Peaking and Carbon Neutrality" leadership group holds a special meeting every year, and invites stakeholders and climate experts to evaluate the importance of the identified climate-related impacts.

The quantitative evaluation is conducted in dimensions of "impact scale", "impact scope" and "possibility", with each dimension rated on a three-level scale (scored 1-3 points), and the final score is the sum of the scores. A higher score means a higher positive impact importance of the business activity.

Negative impact evaluation

The quantitative evaluation is conducted in dimensions of "impact scale", "impact scope", "possibility" and "irremediability", with each dimension rated on a three-level scale (scored 1-3 points), and the final score is the sum of the scores. A higher score means a higher negative impact importance of the business activity.

Impact importance activity analysis and response

The impact importance threshold is set to be 75% or more of the full score. The office of the "Carbon Dioxide Peaking and Carbon Neutrality" leadership group reports the climate-related business activities identified with major impacts to the "Carbon Dioxide Peaking and Carbon Neutrality" leadership group. Then the Board of Directors makes decisions and develops response measures.

Impact importance activity disclosure

The process and results of the climate-related impact evaluation are disclosed in the annual sustainability report (i.e. the ESG Report) to respond to the concerns of stakeholders.

China Telecom's climate-related impact evaluation results

In 2024, the Company comprehensively identified and evaluated the impacts of its specific activities related to business operations, business modes and development strategies on the economy, environment and society through the above process, including the water and power consumptions of communication facility rooms, base stations, datacentres and other equipment in stable operation within the scope of China Telecom's main business, the negative impact of scrapped network equipment, hardware waste and other electronic waste and business activities on stakeholders, as well as the positive impact of actively implementing energy-saving and emission reduction measures, intelligent transformation and upgrading, expanding the application of renewable energy and other business activities. According to the evaluation results, the Company did not have any climate-related business activities with major negative impacts, and its climate-related business activities with major positive impacts and its impacts on economy, environment and society are detailed in the table below.

China Telecom's climate-related business activities with major impacts

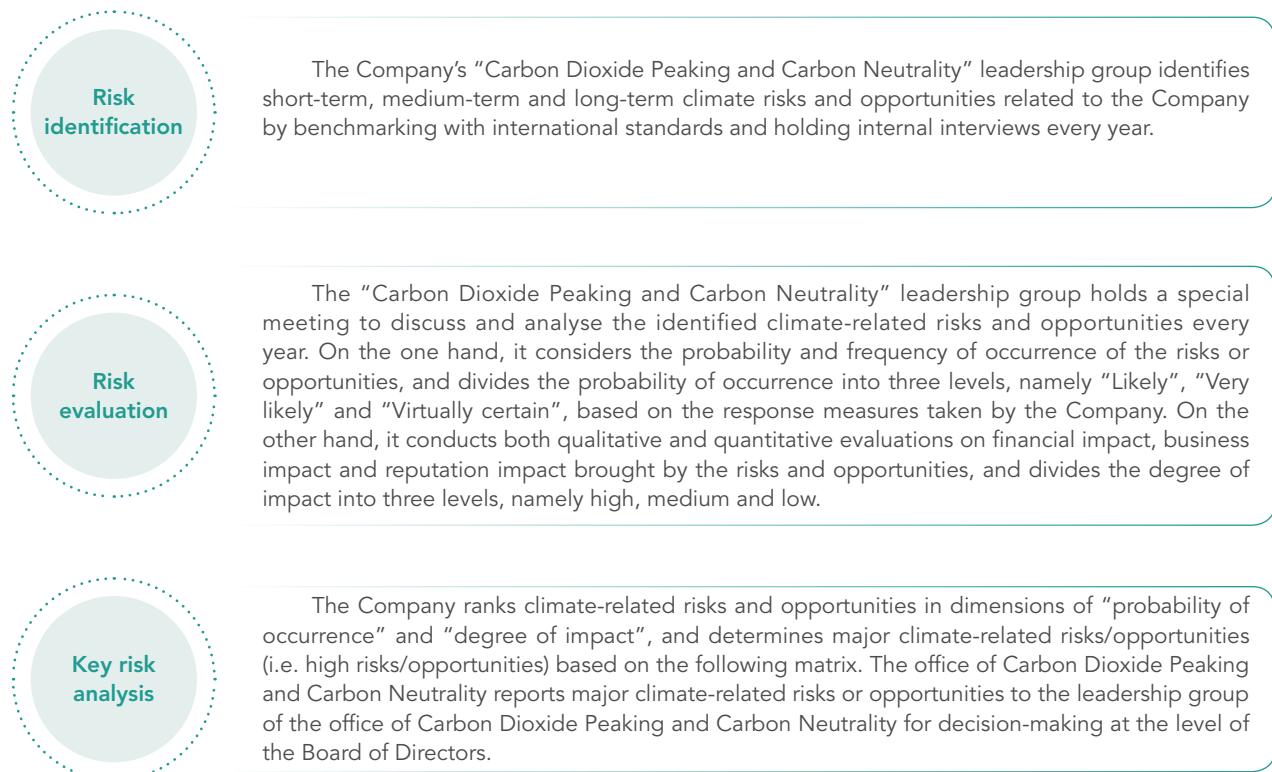
Category	No.	Business activities	Climate-related performance	Impacts on economy, environment and society	Stakeholders affected
Positive impact	1	Upgrade facility rooms into intelligent ones, promote the application of AI-powered energy-saving technologies.	Indirectly reduce carbon dioxide emissions	<p>Economy: Improve the return on investment. Environment: Effectively avoid excessive cooling or excessive heating, reduce energy consumption, and mitigate global climate change.</p>	Natural ecology, social public
Positive impact	2	Develop renewable energy and forestry carbon sink projects in cooperation with clean energy enterprises and integrated energy service enterprises based on "dual carbon goals".	Indirectly reduce carbon dioxide emissions	<p>Economy:</p> <ol style="list-style-type: none"> Promote innovation and market-based development of renewable energy technologies, boost the structural adjustment of the energy industry, and reduce dependence on fossil fuels and energy costs. Forestry carbon sink projects may lead to carbon credit quota, which can be traded on the carbon trading market, contributing to the development of global carbon markets. <p>Environment:</p> <ol style="list-style-type: none"> Mitigate global climate change. Forestry carbon sink projects improves the ecological environment, restores damaged ecosystems and increases biodiversity by means of afforestation and ecological restoration. <p>Society:</p> <ol style="list-style-type: none"> Raise public awareness of renewable energy and low-carbon life. Drive the sustainable development of local economy, especially clean energy projects and ecological restoration projects in the western region, contributing to the balanced development of society. 	Energy industry, social public, natural ecology
Positive impact	3	Outsource green electricity and build distributed photovoltaic power generators to increase the use ratio of green electricity gradually and call for increasing the use ratio of renewable energy in the energy use structure of the whole supply chain.	Indirectly reduce carbon dioxide emissions	<p>Economy:</p> <ol style="list-style-type: none"> Play an exemplary role to encourage other industries and companies to adopt similar green energy strategies, further promoting large-scale green transformation. Use and expand renewable energy to promote the vigorous development of related industries, such as photovoltaic equipment manufacturing, energy storage technology, smart grid industries, driving economic growth and industrial innovation. <p>Environment:</p> <ol style="list-style-type: none"> Green power (such as wind power and photovoltaic power) produces almost no carbon emissions, which can effectively reduce pollution to air, water and soil. Reduce the dependence on non-renewable resources such as coal. 	Upstream and downstream supply chains, natural ecology

Category	No.	Business activities	Climate-related performance	Impacts on economy, environment and society	Stakeholders affected
Positive impact	4	Strengthen the innovative application of digital information technologies, and use cloud computing, IoT and other technologies to provide customers with new types of digital solutions, such as energy efficiency and carbon reduction, pollution prevention and control, and ecosystem protection.	1. Indirectly reduce carbon dioxide emissions 2. Provide green digital solutions	<p>Economy: Promote the low-carbon transformation of downstream customers and promote the process of national carbon neutrality.</p> <p>Environment: Indirectly mitigate the rising global temperature.</p> <p>Society: Effectively enhance the Company's brand image and social influence, and further promote the green consumption trend of the whole society.</p>	Natural ecology, downstream customers, the public

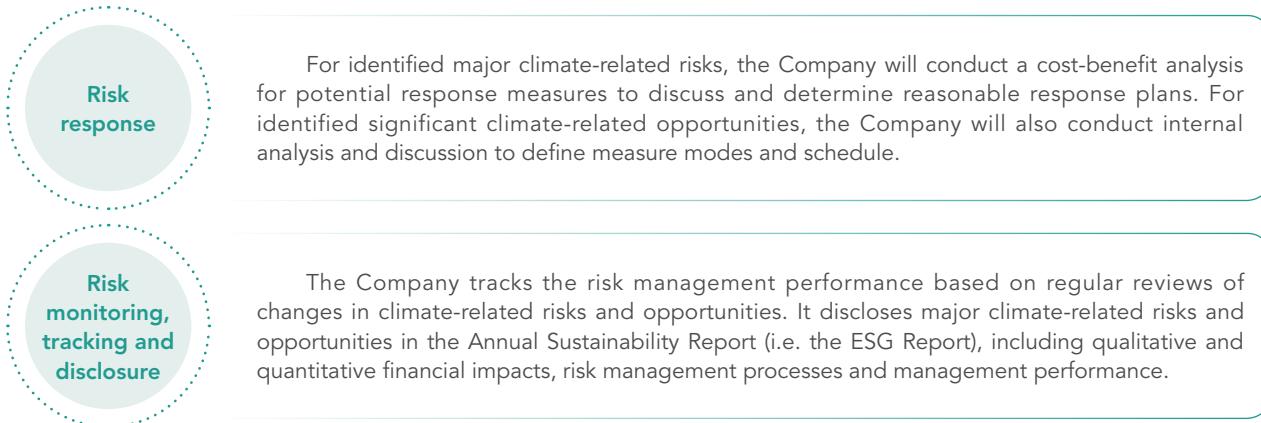
Climate risk management

The Company actively addresses climate change, and includes climate-related risk management into its overall risk management, achieving closed-loop management for risk identification, risk evaluation, key risk analysis, risk response, and risk monitoring, tracking and disclosure.

Climate-related risk and opportunity management process of China Telecom



Probability of occurrence	Degree of impact		
	High	Medium	Low
Virtually certain	High risk/opportunity	Medium-high risk/opportunity	Medium risk/opportunity
Very likely	Medium-high risk/opportunity	Medium risk/opportunity	Medium-low risk/opportunity
Likely	Medium risk/opportunity	Medium-low risk/opportunity	Low risk/opportunity



Time range and definitions

Short term (0-3 years)	Medium term (4-5 years)	Long term (6-10 years)
<p>The Company considers 0-3 years as a short-term period, and evaluates identified climate risks with a higher probability of occurrence in the near future within this time range and their relevant impacts. Short-term financial risk impacts include increase in energy consumption costs and credit risk and adjustment in cash flow forecasts. The Company should strengthen scenario analysis and risk evaluation to ensure accurate financial planning.</p>	<p>The Company develops a comprehensive five-year plan every five years to ensure medium-term stability and sustainable development. In order to achieve environmental goals, the Company defines a path to achieve medium-term goals in its capital expenditure planning, which may involve larger capital expenditures, such as investments in renewable energy or energy efficiency technologies. Financial planning requires careful consideration of the timing and scale of these expenditures to ensure investment decisions in line with the Company's long-term emission reduction goals and sustainable development projects, and maintain operational efficiency and financial stability.</p>	<p>As an operator, the Company considers asset characteristics in long-term financial planning, and adopts a planning period of 6-10 years. During this period, the Company evaluates the results of its climate risk response measures, and make long-term asset planning based on the results, including optimising capital structure and balancing debt and equity financing to support long-term emission reduction and sustainable development projects, ensuring long-term robust financial stability and corporate sustainability.</p>

Results of climate-related risk and opportunity analysis and evaluation

In 2024, the Company identified and evaluated climate-related risks and opportunities through the above process. The matrix below shows risk/opportunity levels for all climate-related risks/opportunities identified in the year. The risk/opportunities identified as high risks/opportunities were conducted a financial impact evaluation.

Climate-related risk importance ranking matrix of China Telecom

		Degree of impact on China Telecom	
		Low	High
		Probability of occurrence	
High	<ul style="list-style-type: none"> Exchanges have mandatory requirements on listed enterprises to disclose their greenhouse gas emissions and other climate-related information (policy and regulatory risks) 	<ul style="list-style-type: none"> National 3060 Carbon Peak and Neutrality Target (policy and regulatory risks) 	<p style="color: red; font-weight: bold;">High risks</p> <ul style="list-style-type: none"> Renewable energy use ratio requirements (policy and regulatory risks) Low-carbon technology innovation, increased R&D costs (technology risk) Extreme weather events damage infrastructures and equipment, leading to disruption of communication services (acute risk)
Low	<ul style="list-style-type: none"> Due to changes in rainfall patterns and water stress, and additional taxes and dues may be collected for cooling water access in the future (chronic risk) 	<ul style="list-style-type: none"> Rising temperature accelerates depreciation of fixed assets (chronic risk) Rising temperature leads to equipment overheating and business interruption (chronic risk) Rising temperature increases electricity and energy consumption (chronic risk) Waste management requirements (policy and regulatory risks) Failure to complete carbon market contract fulfilment impacts enterprise credit rating (policy and regulatory risks) High greenhouse gas emissions lead to environmental penalties/litigation risk (reputation risk) 	<ul style="list-style-type: none"> Extreme weather events lead to disruption of upstream supply chains (acute risk) Extreme weather events damage datacentres' facilities (acute risk) With no energy-saving technologies, datacentres have increasing energy consumption (technology risk)

Climate-related opportunity importance ranking matrix of China Telecom

		Degree of impact on China Telecom	
		Low	High
		Probability of occurrence	
High	<ul style="list-style-type: none"> Complete third-party greenhouse gas certification to increase the sales volume of low-carbon/green products (product and service opportunities) Cooperate with governments and development banks to build 5G or higher-speed network base stations to explore emerging markets (market opportunities) Build base stations in remote areas with a leading the low-carbon transition level to enhance brand reputation (reputation capital opportunities) 	<ul style="list-style-type: none"> Use low-carbon technologies to improve energy efficiency and reduce energy costs, and replace offices and datacentres with more efficient buildings (resource efficiency opportunities) Help consumers with climate transition with green digital solutions to increase the sales volume (product and service opportunities) 	<p style="color: green; font-weight: bold;">High opportunities</p>
Low	<ul style="list-style-type: none"> Reduce the future risk of fossil fuel price rise by increasing the use ratio of renewable energy (energy opportunities) 	<ul style="list-style-type: none"> Use renewable energy and other energy-saving measures to reduce energy consumption, thereby lowering carbon emissions (energy opportunities) 	
Low	<ul style="list-style-type: none"> Use efficient and water-saving cooling systems to reduce water consumption (resource efficiency opportunities) 		

Major climate-related risks faced by China Telecom and its response measures

Type and level of risks	Policy and regulatory risk (High risk)	Technology risk (High risk)	Acute risk (High risk)
Risk description	The national policy requires that the proportion of green electricity in new datacentres in the national hub nodes of "East-to-West Computing Resource Transfer" exceed 80%, and the minimum proportion of renewable energy used in green datacentres in government procurements to reach 30% (for year 2025). The Company will face mandatory requirements for the use of renewable energy in future, which may incur additional operating costs.	In the short term, as scientific and technological innovations, especially research for cutting-edge green and low-carbon technologies, require plenty of time and cost investments, the Company increases resource investments in innovation. This proposes higher requirements on the Company's innovation capabilities. The Company should fully analyse current application and development of green and low-carbon technologies, and promote research and development and application of new technologies.	Extreme weather such as flooding and typhoon may damage our infrastructure and fixed assets, causing network disruption, communication interruptions and resulting in additional operating costs such as asset damage losses, repair fees from communication interruptions and operating cost for resuming communication. In the future, as the severity and frequency of extreme weather increases, the Company's capital expenditure may also increase further.
Major financial impacts	Higher operating costs	Higher operating costs	Higher capital expenditures <i>Quantified financial impacts: In 2024, Hainan, Hubei and Hunan were affected by typhoons and severe convection weather, and suffered heavy freezing and flood, resulting in RMB1.1 billion of asset loss to the Company.</i>
Value chain	Direct operation	Direct operation	Direct operation
Time frame	Mid-term	Short-term	Mid-term
Probability of occurrence	Virtually certain	Virtually certain	Virtually certain
Degree of impact	High	High	High
Response measures	The Company conducts renewable energy surveys to assess the feasibility and cost of renewable energy access. In 2022, the Company clearly regarded energy transformation as a key point in the implementation of carbon peak and carbon neutrality action plan, determined work ideas and overall plans for obtaining green electricity, encouraged provincial branches to develop "provincial policy" for obtaining green electricity based on their own conditions and endowments. Meanwhile, the Company extensively participated in green electricity market-based transactions to actively increase the use ratio of renewable energy.	The Company strengthens the independent research and development, conversion and promotion of energy-saving and carbon reduction technologies, and promotes large-scale application. As a co-founding member of the Carbon Neutral Industry Innovation and Intellectual Property Alliance, the Company actively promotes key technology innovation and green technology development to cope with climate change, takes an active part in international cooperation to share low-carbon development experience, practices ESG concepts to enhance sustainable development capabilities, and participates in standard setting and industry activities, jointly driving green and low-carbon transformation of the industry.	The Company strengthens alert and risk prevention and control of extreme weather, continuously optimises emergency plans for extreme weather, and minimises the cost and losses from disasters. The Company regularly assesses the impact on capital expenditures based on the frequency and scale of extreme weather, and set up special funds for post-disaster reconstruction on this basis.

Major climate-related opportunities faced by China Telecom and its response measures

Type and level of opportunities	Resource efficiency opportunities (High opportunities)	Product and service opportunities (High opportunities)
Opportunity description	Low-carbon technologies are used to improve energy efficiency, or offices and datacentres are replaced with more efficient buildings to improve energy efficiency and lower energy consumption, thereby reducing operating costs.	As green and low-carbon information and communication industry chain is a long-term trend, innovative digital technologies and low-carbon solutions can not only reduce cloud-network costs, but also create new types of information services and products. With the increase of public awareness of climate change, customers will have increasing demands for green consumption.
Major financial impacts	Decreased operating costs <i>Quantified financial impacts:</i> Through the co-construction and co-sharing base stations, the cleaning of old facilities, the green upgrades of facility buildings, the comprehensive promotion of AI technologies and other energy saving measures, the Company is expected to save 27.48 billion kWh of electricity. Calculated based on the average cost of RMB0.63 per kWh of electricity, RMB17.31 billion of operating cost is saved.	Increased product and service demands lead to higher revenue. <i>Quantified financial impacts:</i> In 2024, the Company provided zero-carbon datacentre solutions for automobile and Internet branches and other environmentally sensitive branches in Anhui and Qinghai, and the renewable energy utilization rate of datacentres exceeded 95%, bringing more than RMB400 million of revenue.
Value chain	Direct operation	Direct operation, downstream value chain
Time frame	Long-term	Long-term
Probability of occurrence	Virtually certain	Virtually certain
Degree of impact	High	High
Response measures	The Company enhances energy efficiency and reduces energy consumption through new technology innovation and management improvement. Currently, datacentres have taken energy-saving measures, including AI energy-saving technologies applied in more than 3,200 facility rooms nationwide, temperature monitoring for single equipment in facility rooms and other intelligent transformation and upgrades. In addition, the Company actively carries out green upgrades for facility buildings, and promotes the upgrade project based on the facility room list by means, including "self-investment in upgrades, contract-based energy management, upgrades of over-age facilities and relocation in groups".	With increasing customer demands for digital solutions, the Company empowers low-carbon transformation of the whole society by providing digital solutions. The Company actively strengthens the innovative application of digital information technology, and provides customers with energy conservation and carbon reduction, pollution prevention and control, ecosystem protection and other new types of solutions using cloud computing, IoT and other technologies.

Climate risk scenario analysis

In 2024, the Company further conducted physical climate and transition-based climate scenario analysis to comprehensively evaluate long-term and short-term impacts of climate change on business operations, analyse financial impacts of rising energy costs, reconstruction costs and carbon costs.

Physical climate scenario

RCP (Representative Concentration Pathway): 8.5

Scenario description

Assuming that the existing policies and technological levels remain unchanged, the consumption intensity of fossil fuels (coal, oil and natural gas) remains high, and the application of clean energy is limited, with no significant emission reduction measures, radiative will be forced to rise to 8.5 W/m^2 , and the warming rate will exceed 5°C by the end of the 21st century according to the fifth evaluation of the Intergovernmental Panel on Climate Change.

Key scenario assumptions

- Average temperature:** According to the data on the official website of ISIMIP (Inter-Sectoral Impact Model Intercomparison Project), the global average temperature will rise by 1.5°C , 2°C and 2.5°C under RCP8.5 scenario by 2030, 2045 and 2055, respectively.
- Precipitation:** Compared with reference years (1986-2005), China's precipitation in very humid weather and extremely humid weather will increase by 57% and 162% from 2020 to 2039, respectively. Global warming will lead to an increase in water vapor content, which may cause an increase in precipitation frequency and intensity in the middle and lower reaches of the Yangtze River basin, rising water levels of rivers, lakes and coasts, resulting in waterlogging, causing damages to buildings and equipment, and threatening business operations and asset security in low-lying areas.

Scenario uncertainty

The uncertainty mainly lies in the technical deviations of current climate models in simulating regional precipitation and the complex impacts of large-scale circulation changes of the climate system itself.

Situational application

Potential future financial impacts of chronic physical risks (rising average temperature) and acute physical risks (floods, heavy precipitation) are quantified in this scenario.

- Average temperature rise:** For datacentre operators, the rising average temperature may have a substantial impact on the operating costs of datacentres. Inner Mongolia Cloud Computing Information Park with a high average temperature increase risk was selected for analysis. According to the results, Inner Mongolia Park will have a higher equipment operating power consumption due to rising average temperature by 2030, 2045 and 2055, so the potential impact of increased energy consumption costs will not exceed the substantial risk financial impact threshold.
- Floods and heavy precipitation:** In extreme risk situations, floods may cause damage to the Company's datacentres and base stations, resulting in reconstruction costs. Jiangbei International Datacentre, Changsha Information Park and Zhongnan Intelligent Computing Centre with medium to high flood risk were selected for analysis. The Company faces the potential cost impact of rebuilding the datacentres after floods.

Impact of scenario analysis on strategic decision-making

The Company will focus on the impact of climate change on communication infrastructures, and may incorporate reconstruction costs into budget practices as a risk reserve in the future, in order to take quick actions to minimize damage. Meanwhile, the Company may work with stakeholders in the future to simulate future physical risks in short, medium and long-term time frames based on the location of specific infrastructures and its operational characteristics, so as to prepare targeted emergency plans for different types of infrastructure in advance and better manage climate physical risks through mitigation and adaptation strategies.

Transition-based climate scenarios

B2DS (Beyond 2 Degrees Scenario) of IEA (International Energy Agency)

Scenario description

IEA proposed an energy transition scenario, which aims to explore to control global temperature rise within 2°C and approach the goal of 1.5°C as closely as possible through deep decarbonization of energy systems.



Key scenario assumptions

- **Energy usage:** Electricity becomes the largest ultimate energy carrier, slightly higher than oil.
- **Carbon price:** The carbon price will reach US\$540 per ton of carbon dioxide by 2060.



Scenario uncertainty

The carbon price is predicted largely based on the development and application speed of future clean energy technologies, but the energy efficiency improvement speed is difficult to predict.



Situational application

In transition scenario analysis, carbon price and emission intensity are key parameters for evaluating potential financial impacts. By calculating carbon costs of enterprises, we found that with the reduction of emission factors of State Grid and Southern Power Grid, the electricity emission intensity is expected to be very close to zero by 2060. In the long run, carbon costs are unlikely to have substantial potential financial impacts on the Company. In the short to medium term, however, some subsidiaries and branches included in local carbon markets may still be subject to certain financial impacts.



Impact of scenario analysis on strategic decision-making

The Company will continue to actively increase the consumption of renewable energy, while accelerating the promotion of plans related to the use of green electricity, and encourage provincial branches to develop "provincial policy" for obtaining green electricity based on their own conditions and endowments. By measures of extensive participation in green electricity market-based transactions and independent construction of distributed new energy infrastructures, the Company will further increase the use ratio of renewable energy.

PROMOTING LOW-CARBON OPERATION

Under the guidance of the “1248” dual-carbon action plan, the Company has been promoting green cloud-network, green energy use, green office, recycling, green sci-tech innovation and green management and constantly tapping its own carbon reduction potential.

Green cloud-network

The Company builds green and low-carbon cloud-network infrastructures, accelerates the application of as liquid cooling, AI, indirect evaporative cooling, high-voltage direct current and other green energy-saving technologies, and creates industry-leading green datacentres, including 28 national-level green datacentres, ranking first among all operators. In 2024, the Company carried out green upgrades for more than 600 facility buildings by optimising air flow organization, replacing old high-energy-consuming equipment and applying AI-powered energy-saving technologies. Meanwhile, the Company optimised energy efficiency of base stations, and completed the minimalist transformation for 28,000 base station and the light-stacking construction of base stations, saving 180 million kWh of electricity and reducing 100,000 tons of carbon a year.

2024

Completed green upgrades for more than **600** A and B class facility buildings

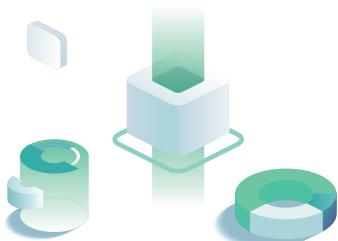
Saved **180** million kWh of electricity a year

Reduced **100,000** tons of carbon a year

Promoting the energy-saving upgrade project for facility rooms



In 2024, on the occasion of the 55th Earth Day, Jiangsu Branch implemented the “dual-carbon” strategy, accelerated the energy-saving upgrade project for facility rooms, promoted AI-powered energy conservation on a large scale, introduced heat pipes, fluorine pumps and other innovative energy-saving technologies, build photovoltaic power generators on idle roofs, and launched energy-saving upgrades for office lighting, enhancing the overall energy efficiency level of infrastructures, and further achieving energy conservation and consumption reduction.



The Company continues to promote AI energy conservation, makes full use of the advantages of cloud-network integration, independently researched and developed the intelligent cloud-network infrastructure energy conservation platform with national integration and cloud-edge synergy based on AI algorithms, Big Data processing, edge computing and other capabilities, achieving precise energy saving for 4/5G base stations, communication facility rooms and datacentres. By the end of 2024, the Company had more than 5 million 4/5G base station sectors, over 3,200 facility rooms, and above 6,000 cloud hosts under management, saved more than 900 million kWh of electricity and reduced over 500,000 tons of greenhouse gas emissions.

By the end
of 2024

- More than **5** million 4/5G base station sectors under management
- Above **6,000** cloud hosts under management
- Reduced over **500,000** tons of greenhouse gas emissions

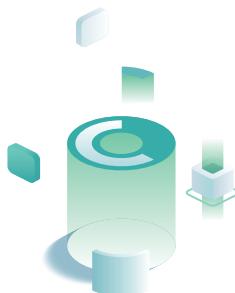
The Company has comprehensively deepened co-building and co-sharing cooperation with China Unicom, reduced duplicate construction of 4/5G base stations and significantly enhanced the utilisation rate of existing base stations, while protecting the natural environment and landscape, and reducing the consumption of land, energy and raw materials. Meanwhile, the Company continued to deepen co-building and co-sharing of infrastructure such as pole lines, pipelines, and optical cables. Over 165,000 5G base stations were newly activated for the two parties. The number of 5G co-built and co-shared base stations in use exceeded 1.375 million, and the number of 4G mid-band co-shared base stations exceeded 2 million. The Company provided more than 13,385 kilometres of co-shared pole line and 1,266 kilometres of co-shared pipelines. 4/5G co-building and co-sharing has led to over RMB370 billion savings in investment, over RMB43 billion in annual operating cost savings, over 23 billion kWh in annual electricity savings accumulatively, and more than 12 million tons of carbon emissions.

In response to concerns in telecommunications engineering construction from the government and the public, such as farmland protection, equipment pollution, construction impact and electromagnetic radiation, the Company has further improved the electromagnetic radiation management system and the risk prevention mechanism, revised the *Administrative Measures for Environmental Protection of Electromagnetic Radiation from Communication Base Stations of China Telecom*, formulated the *Implementation Rules on Environmental Monitoring for Electromagnetic Radiation from 5G Mobile Communication Base Stations of China Telecom*, organized national environmental protection training for electromagnetic radiation from base stations, and taken various proactive environmental protection measures such as environmental monitoring, and communicated with the public actively, effectively preventing environmental risks caused by electromagnetic radiation from base stations. In 2024, the Company had no major environmental incidents.

Scientific understanding of radiation from base stations

 CASE

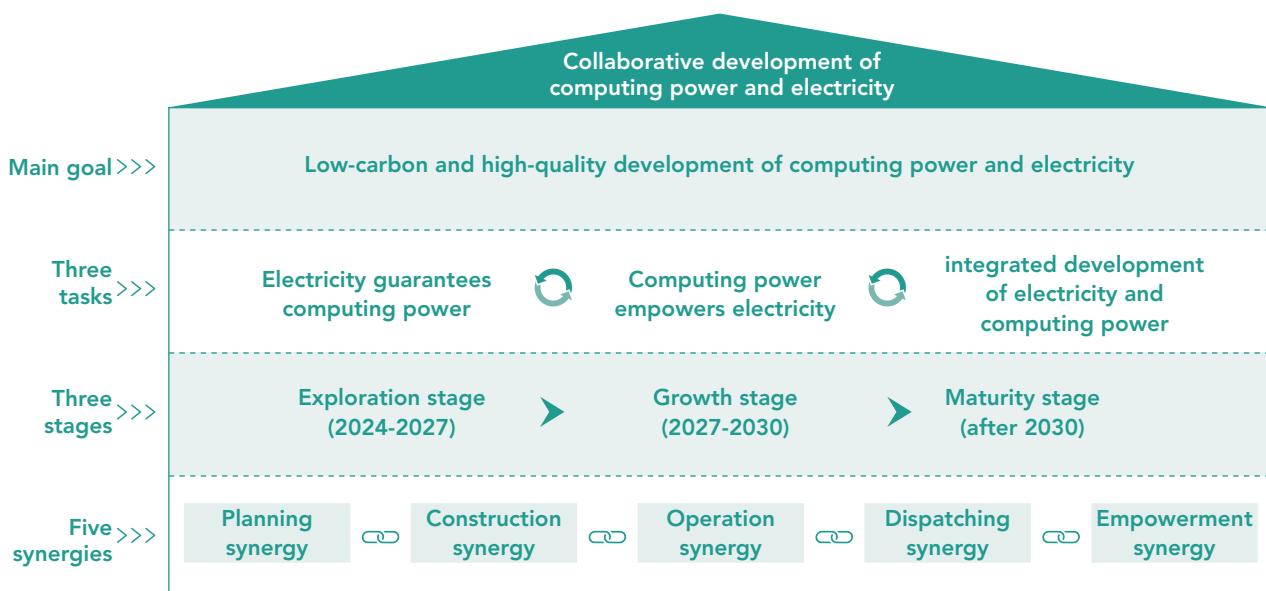
In order to further publicize the knowledge of electromagnetic radiation and guide the public to correctly understand the impact of electromagnetic radiation from communication base stations, Guangxi Guigang Branch worked with China Tower to carry out a publicity activity themed on "Scientific Understanding of Radiation from Base Stations". On the spot of the activity, publicity brochures were distributed to call for a rational perspective on radiation in life.



Green energy usage

The Company continues to promote the transformation of energy use structure. In 2024, it used 2.7 billion kWh of green electricity, an increase of 145% year on year. With efforts in low-carbon and clean energy use, the Company's datacentres led the industry in renewable energy use, and accelerated building low-carbon and zero-carbon computing power infrastructures using green energy, ranking among the best in the industry in terms of renewable energy utilization rate and green power scale. The Company's self-built distributed energy facilities were widely extended to datacenters, base stations, communication buildings, office buildings and other energy use scenes. In Anhui, Guangxi, Qinghai and other provinces, the Company launched the wind-solar complementary power supply system, light storage and light hydrogen storage and other integrated innovative applications, and achieved diversified energy applications, providing more environmentally friendly, low-carbon and sustainable products and services for the society.

The Company carried out prospective research on the collaborative development mechanism of computing power and electricity, published the *White Paper on Collaborative Development of Computing Power and Electricity of China Telecom*, and established the top-level design of "1335", further promoting five synergic paths in planning, construction, operation, dispatching and empowerment.



Building China's first green computing power cluster in high-altitude areas



Sichuan Branch built China's first distributed green computing power cluster in Ganzi Prefecture and other high-altitude areas with rich clean energy, effectively promoting consumption and conversion of local clean energy.

According to the unique geographical environment of the western Sichuan Plateau, the distributed computing power cabin pilot project was carried out in the form of "containers" and flexibly deployed based on the distribution of hydropower stations, effectively reducing power transmission losses. The computing power cabin demonstration project, which is located in Danba County, Ganzi Prefecture, Sichuan Province, consumed local clean energy, and converted green electricity into green computing power, achieving PUE1.12 in operation, consuming about 20 million kWh of electricity, saving RMB10 million of electricity charge, and reducing about 12,000 tons of carbon emissions.



Green office

The Company actively promotes and advocates water conservation by posting reminders regarding water conservation near water facilities and appliances. The Company continuously strengthens the management on water resources usage, carries out sewage discharge and treatment, promotes the reuse of water in production, actively uses reclaimed water as an alternative source of water in place of tap water while meeting the demands for water usage. The Company promotes and popularises the use of water-saving appliances and performs regular checks and repairs on each part of the water supply system to prevent water leakage and wastage. The Company sets the target for year-on-year growth of water consumption per unit operating revenue for 2025 to be no more than 10%.

The Company encourages paper saving by actively advocating double-sided printing of documents, reducing colour printing, accelerating the digital transformation of the procurement supply chain and vigorously promoting the application of electronic procurement and electronic order to realise paperless operation of the whole process of the supply chain. The Company also continuously promoted electronic accounting files management, VAT electronic invoice, e-reimbursement and filing of e-invoice and paperless operation, and boosted the automatic process of tax declaration to reduce paper usage.

Recycling

The Company strictly implements the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Management Measures for Hazardous Waste Transfer* and other national laws and regulations and standards, focusing on safe and compliant disposal requirements. Through system construction and digital platform construction, the Company continue to promote waste and green packaging recycling, boosting the development of circular economy.

In 2024, the Company launched the integrated platform for waste and idle materials disposal to achieve online closed-loop management of the whole process from asset retirement, material inventory withdrawal, auction disposal, contract signing and delivery. Throughout the year, it earned RMB880 million from centralized disposal of waste and idle materials, with a waste recycling rate of about 100%.

Building a base station recycling system to boost green development of circular economy



In response to construction supply and resource recycling due to large-scale replacement of old base stations in the communication industry, Jiangsu Branch designed and built a two-way logistics system for green supply chains to accelerate efficient development of circular economy.

A standardized recycling process from demolition, packaging, coding, transportation, warehousing and reuse was designed based on specific demands for equipment of communication base stations. By the end of 2024, over 14,000 base stations were demolished and recycled in the province, with a base station demolition and logistic distribution rate of 97%, forming a circular logistics system.

The project has the following direct achievements. First, the base station demolition and logistic distribution cycle was shortened from five days to one day, improving the construction efficiency. Second, old base stations were allocated and rebuilt through the recycling system, with a recycling rate of up to 93%.



Waste batteries and other hazardous waste generated during operations are delivered by waste generation departments to purchase and supply departments, stored in temporary hazardous waste storage sites or warehouses in line with national environmental protection standards, and finally disposed by qualified hazardous waste recyclers. Non-hazardous waste is sorted out, collected and stored in classified garbage cans at dining places, while kitchen waste and other garbage are distinguished by labels and colours, sorted out manually, and stored and disposed separately.

In 2025, the Company will continue to strengthen professional waste management in the principle of "recycling as much as possible", promote public auction of waste, and strengthen environmental compliance management, improve income from disposal. The Company will continuously optimise and improve green packaging, carry out the implementation plan of packaging reduction and standardization for key products, and enhance the delicacy management level of packaging carbon reduction, boosting resource utilization and recycling development.

Green sci-tech innovation

The Company strengthens green sci-tech innovation, with its self-developed base stations, intelligent energy-saving technologies for facility rooms and stock resource revitalization technology included in the *Catalogue of Recommended Energy-Saving Technologies and Equipment in the Industrial and Information Fields (2024 Edition)*. The Company expanded the supply based on green evaluation standards, took the lead in special projects for the National Quality Infrastructure (NQI), established a multi-dimensional green datacentre evaluation index system, and published a total of 19 international and industry standards according to "dual carbon goals". Besides, the Company increased industry-university-research institution cooperation, promoted the standardization of liquid cooling technology, and jointly innovated the "wind-liquid integrated cold source" scheme to lead the green development of the industry.

Green management

The Company continues to improve the green development management level, improves management system functions based on "dual carbon goals", and strengthens green development data governance. It built well-established scientific MRV (Monitoring, Reporting and Verification) mechanisms, achieved flexible allocation of the Company's indicators for dual control over the amount and intensity of carbon emissions through internal carbon trading, and provided enterprises with efficient and low-cost carbon reduction means, and facilitated forming cross-level, cross-regional, cross-department and cross-business collaborative management mechanisms, maximize the potential of energy efficiency and carbon reduction in all fields. Meanwhile, the Company established an expert and talent pool based on "dual carbon goals" by means of "rolling in and rolling out" to make up for the shortage of professionals, enhancing the green management level of enterprises in an all-round way.

EMPOWERING GREEN DEVELOPMENT

The Company develops intelligent and green solutions by taking advantage of next-generation digital technologies, such as cloud computing, Big Data, IoT, artificial intelligence and blockchain to facilitate green transformation of all industries, boosting harmonious coexistence between human and nature.

Green economic and social transformation

The Company actively provides green public services to facilitate green and energy-saving transformation of government, enterprises and public institutions, hospitals and schools, hotels and supermarkets, community property management companies and other social institutions. It boosts product innovations by AI and IoT technologies, and launches green energy-saving products, such as green lighting lamps, energy-saving air-conditioners, energy consumption meters, safe electricity controllers and environmental sensors, achieving energy efficiency and carbon reduction. By the end of 2024, the Company upgraded more than 1 million devices in public places in 231 prefecture-level cities of 31 provinces nationwide, saving more than 80 million kWh of electricity and reducing more than 60,000 tons of carbon dioxide emissions a year, which is equivalent to planting 3.44 million trees in the country.

Promoting green lighting nationwide



In Asia No.1 logistics warehouse, the Company replaced mining lamps with green intelligent ones through the green energy-saving IoT cloud platform to monitor equipment and energy consumption, completing green and intelligent transformation of warehouse lighting lamps, and saving 80% of energy.

In the Hong Kong-Zhuhai-Macao Bridge, the Company upgraded indoor and outdoor lighting lamps into intelligent and energy-saving ones to create a safe and comfortable lighting environment at the parking lots of the port, improve the overall image of the port, and reduce energy consumption by 75%, setting a benchmark in green lighting as a national landmark.

In Zhengzhou Xinzheng International Airport, the Company installed intelligent light tubes at underground parking lot, and built the self-developed edge gateway and tidal energy-saving management platform to automatically adjust the illumination, improve the experience, management convenience and driving safety, and greatly reduce the energy consumption of the parking lots, saving more than 80% of energy.



In brief, the Company continues to empower ecological environmental governance, focuses on atmospheric environment supervision and water environment supervision, builds the environmental protection cloud platform and the integrated water environment supervision system based on large models, Big Data, 5G and satellite remote sensing technologies, promoting efficient synergy between environmental protection and government supervision, and providing green and convenient life services for the public.

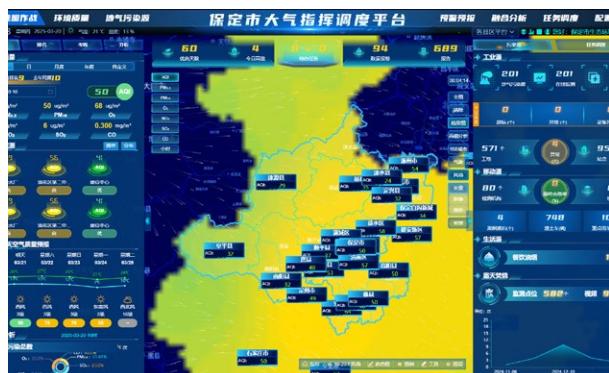
Empowering ecological environment governance by informatization technology

 CASE

In October 2024, the Beijing-Tianjin-Hebei Financial Collaborative Development Conference for Ecological Environment Technology Industry was held in Shijiazhuang. Hebei Branch made its debut at the finance exhibition of governance achievements and technology industry, showcasing its products and solutions, such as "ecological environment Big Data platform", "environmental protection cloud platform", "grand mountain and river model" and "comprehensive digital intelligence environmental protection management platform".

The environmental protection cloud platform gives impetus to environmental traceability. China Telecom supported to build an environmental protection cloud platform (atmospheric command and dispatch platform) in Baoding, Hebei Province, including environmental warning, command and dispatch, and integrated analysis modules based the Xingchen-ecological environment model, and developed an intelligent environmental traceability assistant for targeted tracing of more than 110,000 pollution sources, increasing the traceability efficiency by more than 90%, and offering firm support for pollution prevention and control.

The grand mountain and river model is a large-scale artificial intelligence model independently developed by China Telecom and focusing on the environmental protection industry. With powerful functions, it provides customers with a wide range of intelligent services, including environmental protection industry question and answer, AI law enforcement discretion, AI-assisted decision-making for environmental emergencies, and environmental quality inquiry and analysis, helping customers in solving professional problems in environmental protection, and providing strong support for the fight against pollution.



Ecosystem and biodiversity conservation

In the fields of biodiversity, migratory bird monitoring, forest and grass protection, the Company created an ecological protection monitoring and management system by technologies such as artificial intelligence, Big Data, IoT and cloud computing to provide effective support for scientific management of ecological protection and sustainable development, incorporating intelligent management and control in ecological protection.

Making the “mother river” more beautiful through digital intelligence



Gansu Branch launched the smart Yellow River project by means of “environmental protection + IoT”, Big Data and AI technologies to make water management application more scientific and intelligent, building a delicacy management technology system for aquatic ecosystems.

The system integrates the functions of “monitoring, evaluation, tracing, risk, bearing capacity and early warning”, covering river basin water environment monitoring, daily supervision and other fields. In particular, it develops and builds the Yellow River supervision Big Data platform based on real-time monitoring, alarm tracing, 3D live-action shooting, enterprise VR and other applications, which analyses, determines and traces water pollution problems through automatic water quality monitoring stations and AI-powered cameras, automatically generates analysis conclusions, and provides water quality and water environment integration monitoring and other application functions and governance systems, effectively improving the delicacy management level for water environment of management departments.

Gansu Branch carried out intelligent monitoring for 36 rivers in the whole basin by means of “AI+”

intelligent perception technology, maintaining the water quality of the main stream of the Yellow River beyond the territory reaching the Class II standard. Since coming into operation, the system has detected 182 suspected environmental cases in more than 10 categories, such as floating objects on the river surface, garbage on the river bank and suspected sewage discharge, and sent 698 verification tasks.



Giving impetus to panda protection efforts



In 2024, Shaanxi Foping Branch successfully opened the Liangfengya Base Station in the national-level nature reserve in Longcaoping Village, Changjiaoba Town, Foping County, Hanzhong. This move not only resolved the “last mile” communication difficulty in the hinterland of the Qinling Mountains, but also delivered reliable communication support for science researchers in the nature reserve and workers at the protection station, playing a positive role in promotion panda protection efforts.

Known as the “navel of the Qinling Mountains”, the Liangfengya Base Station is located deep in the Qinling Mountains, which are remote from counties and towns. The area is the core of the panda reserve, possessed with advantaged natural conditions and exceptional biodiversity.

The Liangfengya Base Station offers stable and efficient communication services for science researchers

in the nature reserve and workers at the protection station, and facilitates prompt sharing of the latest progress and research achievements of panda protection efforts, providing robust support for the efforts.



Digital defence of “720 Highland”

 CASE

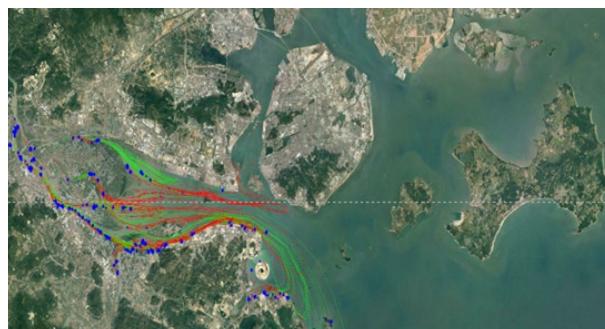
Tiaozini Wetland in Dongtai of Yancheng City is at the core area of a World Natural Heritage site of coastal wetlands, including a bird habitat with a fixed high-tide level that covers 720 mu and hosts over one million of birds in up to 400 species for nesting, breeding and wintering every year. It is the “720 Highland” numbered as MFC720 by a bird protection organisation. Yancheng Branch established a bird monitoring and protection platform to recognise birds by AI-powered algorithms in real-time, learn the activity rules of birds and discover new species in time, providing “Chinese specimens” for wetland biodiversity conservation.



Intelligent defence of marine ecosystems: targeted control of marine debris and protection of marine life

 CASE

CTFF Information Technology Co., Ltd. built a marine supervision platform in Xiamen, which is a comprehensive marine ecosystem management system for “timely problem recognition, intelligent analysis and targeted solutions” to provide unified management of marine environmental monitoring and marine risk sources. By accurately predicting generation, distribution and drift trends of marine debris, it provides strong support for timely cleanup, and effectively reduces marine life habitat destruction caused by marine debris, ensuring security of marine life.



SECURITY DEVELOPMENT



Currently, the rapid development of digital technologies is bringing profound changes to the human society. Along with increasing security risks caused by emerging new technologies, new scenes and new applications, demands for network security risk monitoring and handling, data security and compliance management, and personal information protection are continuously upgrading. China Telecom continues to incorporate security development in the entire chain of its production and operation in all procedures and scenes, and builds a firm network and information security defence line with an improved system, more efficient governance, more reliable core capabilities and better security services.

MAINTAINING NETWORK AND INFORMATION SECURITY

The Company has strictly implemented the requirements of the *Network Security Law of the People's Republic of China* and the *Regulations on the Security Protection of Key Information Infrastructure*, performed its entity responsibility as a key information infrastructure operator, and systematically strengthened the key infrastructure guarantee capability. The Company updated and optimised emergency response plans for extreme scenes, built the enterprise-side platform for industry-wide joint prevention and control and put it into production, ensuring business continuity under extreme conditions. The Company built an in-depth network security defence system, achieving full coverage of protective units of Graded Protection level II and above with security baseline capabilities, covering 1,976 internet-exposed systems with network-based dynamic defence capabilities, and deploying Endpoint Detection and Response (EDR) capabilities on over 1.08 million hosts.

The Company has proactively implemented the requirements of the *Data Security Law of the People's Republic of China*, the *Personal Information Protection Law of the People's Republic of China* and other laws and regulations, and issued the *Notification on Further Strengthening Emergency Response to Data Security Incidents of China Telecom* and the *Personal Information Protection Evaluation Guidelines of China Telecom*, ensuring the security of personal information and data. The Company kept enhancing its data security situational awareness, strengthened 401 data leakage prevention monitoring and warning capabilities, defined the data security operation checklist, and standardized data security production operations. In 2024, the Company was certified for the highest level of data management capability (DCMM5 level), ranking among the best in data management capabilities in China. To strengthen personal information protection, the Company continued to carry out governance on compliance testing and illegal collection and use of personal information by apps, strictly followed the minimum, reasonable and necessary principles, and clearly informed the collection and use of personal information in the privacy policy and obtained consent of users.

PROVIDING SECURITY SERVICES

The Company has established an integrated security defence product and service system for government and enterprise customers, making breakthroughs in "AI + security, endpoint security, boundary security, cloud security, network security and data security". The Company launched a security capability pool covering 150 key cities in 31 provinces, with an anti-distributed denial of service attack (DDoS) capability exceeding 10 Tbps, maintaining the first place in market shares in China, and being selected into the *Summary of Major Scientific and Technological Achievements of Central Enterprises of SASAC* and the *List of Top Service Providers* of Gartner. The Company built a nationwide integrated security datacentre and situational awareness system, with initial security core-platform capabilities and enhanced security incident detection, analysis, and response capabilities. Yunmai SASE products are the first to obtain the excellence level of zero trust capability maturity evaluation and zero trust application maturity evaluation of CAICT and selected into the *Market Guide for Zero-Trust Network Access, China (2024)* of Gartner. Furthermore, the largest operator-level Managed Security Service Provider (MSSP) was built.

e-Surfing Security Brain



Built upon a network security operation platform, China Telecom's e-Surfing Security Brain provides traffic control, intrusion prevention, attack blocking, virus scanning, and network surfing behaviour auditing and other standardized security services for government and enterprise customers, and helps customers build a cloud-network-terminal linkage defence system integrating cloud-based operation analysis, edge-side threat blocking and terminal-side defence.

As a network information security defence service platform integrating "cloud", "management", "terminal" and "service", e-Surfing Security Brain delivers multi-dimensional cutting-edge security solutions. By deploying security devices, it offers two different editions of service packages, namely Defence Edition and Audit Edition, both featuring threat event backtracking, remote manual maintenance, intelligence correlation analysis and other cloud-based services.



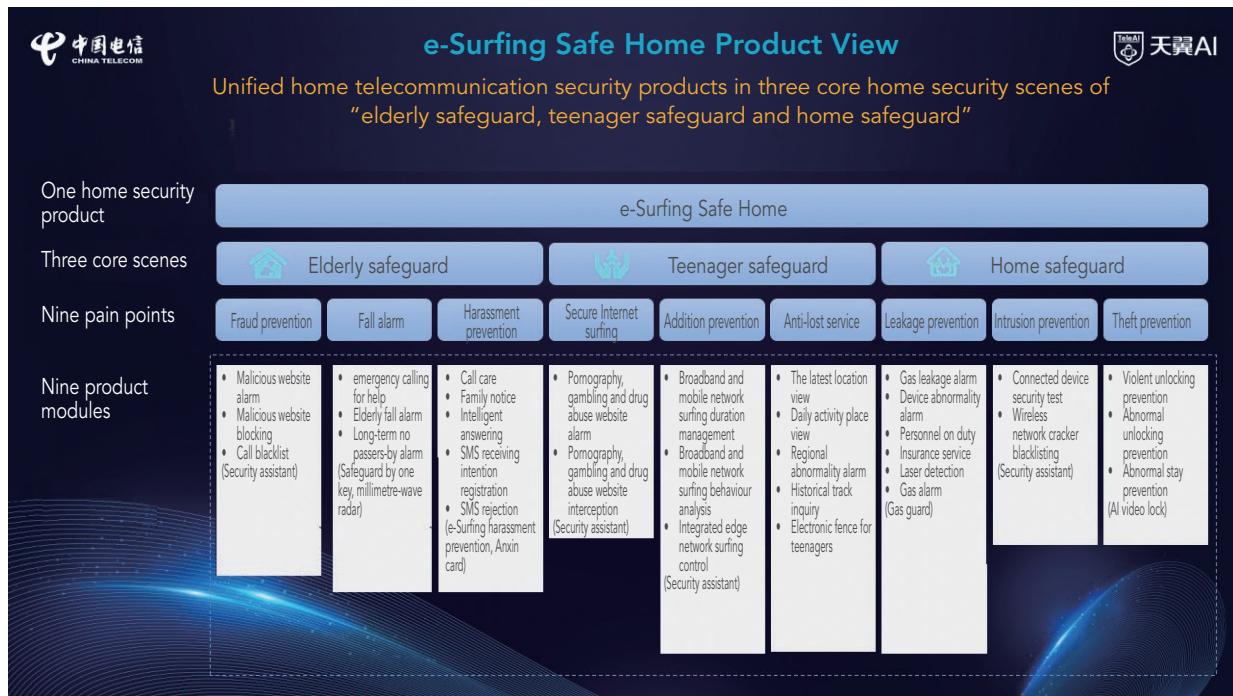
The Company has launched standardized home security products for home customers, providing users with a full range of security services.

e-Surfing Safe Home

 CASE

e-Surfing Safe Home is a home security product focusing on "elderly safeguard, teenager safeguard and home safeguard", providing users with customizable scenario-based options to meet diverse home security demands.

In the scene of elderly safeguard, it offers online fraud prevention, communication harassment prevention and fall monitoring services, creating a secure online environment for elders and safeguarding their personal security. In the scene of teenager safeguard, it provides school-age children's parents with "broadband + mobile" network addiction prevention, secure Internet surfing and outdoor anti-lost services based on home broadband and backbone network resources. In the scene of home security, it ensures 24/7 intelligent security monitoring to defend gas security, home security and network access security for home users.



In terms of quantum security applications, the Company accelerates building a quantum security product system and a full-scene capability system integrating the government-enterprise DICT project and the quantum encryption technology. In "call + quantum", the Company launched the world's first operator-level comprehensive quantum security call solution, with quantum-encrypted message certified with the highest level of "excellence" in the security capability assessment of China Academy of Information and Communications Technology (CAICT). In "network + quantum", the Company built the Hefei Quantum Metropolitan Network, which is the world's largest in scale with the largest number of users and the most complete applications and selected into the first group of "typical cases of Digital China". In "cloud + quantum", the Company created a three-in-one cloud security protection system with "in-cloud, on-cloud and inter-cloud. In "platform + quantum", the Company developed China's first quantum key-based cryptographic solution, pioneering the integration of quantum security technology with commercial cryptographic technology.



Official Release of *Quantum Technology and Industry Development Action Plan of China Telecom by 2030*



In November 2024, the Company officially released the *Quantum Technology and Industry Development Action Plan of China Telecom by 2030* at the Quantum Technology and Industry Conference 2024, including:

- Setting "one goal"**
- ▶ Making breakthroughs in core quantum technologies, building world-leading quantum infrastructures, and accelerating the development of new quality productive forces by the end of the "15th Five-Year Plan" period.

- Launching "five major projects"**
- ▶ The quantum technology innovation project, the quantum infrastructure construction project, the quantum industry development project, the quantum talent gathering project and the quantum cooperation and synergy project.

- Implementing "10 tasks"**
- ▶
 1. Tackling the integrated space-to-ground quantum communication network architecture and application technologies;
 2. Building a new type of cryptographic system integrating quantum key distribution and quantum-resistant cryptographic algorithms;
 3. Tackling key practical technologies for quantum computing;
 4. Building the integrated space-to-ground quantum communication network covering the country;
 5. Promoting the deep integration of quantum security infrastructures with cloud network infrastructure;
 6. Building a new type of self-controllable computing power centre with "four-computing convergence";
 7. Creating the full-scene quantum security capabilities to empower all industries;
 8. Accelerating the commercialization process of quantum computing;
 9. Forging 100 leading quantum talents and 10,000 professionals;
 10. Building a tiered quantum industry ecosystem with synergy and integrated innovation.

ASSURING EMERGENCY COMMUNICATIONS

The Company established a flood control and disaster relief emergency response plan system to ensure rapid and efficient response to sudden natural disasters during the flood season. The emergency response plan system features a multi-layer structure, including the overall plan, special plans and professional plans. The overall plan at the core defines command, dispatching and work organisation for sudden natural disasters during the flood season. The special plans clarify measures for pre-disaster flood prevention and preparedness, disaster relief and emergency response during the disaster, and post-disaster recovery and reconstruction based on specific demands in flood control scenes. The professional plans focus on equipment rooms, optical cables and base stations prone to disasters, traffic scheduling and other key links that will be supported by frontline maintenance personnel. The plan system has been continuously revised and improved, with defined responsibilities and tasks and refined handling procedures, ensuring rapid and accurate response to various natural disasters during the flood season and effective protection of personnel and property safety.

In the face of widespread disaster-stricken areas, severe local damage and significant losses caused by super typhoons during the flood season in 2024, the Company put public communication safety support in the first place, and provided communication support for freezing, rain, snow, flood and typhoon prevention and disaster relief in Fujian, Liaoning, Guangdong, Guangxi, Hainan, Shaanxi, Hunan, Hubei and Guizhou, and post-earthquake communication support in Aksu, Xinjiang. Throughout the year, the Company provided communication support services for 13 major events, including the 14th National Winter Games, Two Sessions, the Third Plenary Session of the 20th CPC Central Committee, the Boao Forum for Asia, Shenzhou manned space missions, the celebration of the 75th anniversary of the Founding of the People's Republic of China, the 7th China International Import Expo (CIIE) and the World Internet Conference. In 2024, the Company dispatched over 450,000 person-times of employees, 90,000 vehicles and 60,000 sets of communication equipment for emergency communication support.

Communication support for disaster relief after Super Typhoon "Yagi"



On September 6, 2024, Super Typhoon "Yagi", the 11th typhoon of the year, made landfall in Wenchang, Hainan Province, and Xuwen County, Zhanjiang, Guangdong Province, causing severe damage to parts of Hainan, Guangdong and Guangxi. Provincial branches of the Company in affected areas developed emergency communication support plans before the disaster, assigned leaders on duty during the disaster, and swiftly organised employees to restore communication services after the disaster.

With concerted efforts, the Company dispatched a total of 429 employees in 114 rescue teams from 16 provinces, including Guangdong, Hunan, Jiangxi, Hubei and Guangxi, and transported 84 repair vehicles, 70 generators, 431 Tiantong satellite terminals, 53 satellite backpack base stations, seven emergency base station vehicles, one tethered UAV and other communication support equipment to Hainan, ensuring rapid telecommunication recovery in disaster-stricken areas.



Global debut of “Vehicles with Direct Satellite Connection” application

 CASE

On April 25, 2024, the Company, together with its cooperative partners, launched “Vehicles with Direct Satellite Connection”, the world’s premiere “satellite + vehicle” application, which provides a more complete means for vehicle communication based on China’s self-developed “Tiantong-1” satellite mobile communication system, empowering vehicles with satellites. In places uncovered by terrestrial mobile networks and fixed networks, satellite networks enable reliable two-way voice calls and two-way SMS communications, ensure that vehicles can access satellite networks on demand, and provide car owners with a more complete communication support, enhancing the active safety capability of vehicles.

Currently, “Vehicles with Direct Satellite Connection” has been applied to three vehicle models, namely BYD Yangwang U8 Off-Road Gamer Edition, Geely Zeekr 001 FR and Zeekr 009 Glory Edition, providing car consumers with ubiquitous, safe and reliable satellite communication services.



STRENGTHENING PRODUCTION SAFETY

The Company has conscientiously and strictly implemented the *Production Safety Law of the People's Republic of China* and other relevant laws and regulations to effectively fulfil the production safety responsibility, and improved the production safety management system by revising the *Administrative Measures for Production Safety* and formulating the safety management responsibility system for building leaders and the dual prevention mechanisms for hierarchical safety risk control and potential hazard investigation and management and other internal systems, in order to further standardise production safety management. The Company carried out the three-year production safety control and rectification action (2024-2026) by strengthening safety risk warning prompts and potential hazard investigations and rectifications, promoting the application of artificial intelligence in production safety, emphasizing potential hazard analysis and notification and process-based assessment, organising production safety publicity, education and training, and building potential safety hazard reporting and reward mechanisms, for the purpose of dynamic clearing of various potential accident hazards. In 2024, there were no general or major production safety liability accidents.

Clarification of Production Safety Responsibility

- The Company signed the *Production Safety Responsibility Letter* with provincial branches and promoted units at all levels to sign the responsibility letter.
- As the Company isn’t involved in any high-risk industries mandated by national laws and regulations to take out the production safety liability insurance, we strengthened safety supervision over outsourcers and subcontractors according to business characteristics, and clearly required telecommunication engineering construction units (contractors) to either take out the production safety liability insurance or provide the accident injury insurance for all frontline construction workers at construction sites, offering an effective safety guarantee for frontline construction workers.
- The Company formulated the *Implementation Rules for Production Safety Assessment and Accountability of China Telecom (Trial)* and the *Production Safety Management Evaluation Measures of China Telecom (Trial)* to further define the production safety responsibility of all employees, and established supervision, interview and pre-score deduction mechanisms to strengthen the assessment, especially the process-based assessment.

Institutional Improvement

- The Company formulated internal systems, such as the *Guidelines on Building Dual Prevention Mechanisms for Hierarchical Production Safety Risk Control and Potential Hazard Investigation and Management of China Telecom (Trial)*, the *Regulations on Fire-Related Construction Operation Safety Management of China Telecom (Trial)* and the *Measures for Implementing Safety Management Responsibility System for Building Leaders (Trial)*.

Potential Hazard Investigation and Remediation

- The Company organised special investigations and rectifications for overall production safety at key sites and locations, electric bicycle parking and charging places, hazardous chemical storages and construction buildings, achieving dynamic clearing of various potential safety hazards.
- The Company carried out a potential hazard identification activity, with nearly 40,000 employees participating, and offered cash awards of more than RMB1.76 million.

Inspection, Supervision and Warning Notification

- The Company carried out the safety inspections and supervision with "no notification, no notice, no reporting, no reception, and going straight to grassroots units and sites". A total of 161 inspection teams were dispatched throughout the year, covering all provincial and prefecture-level branches.
- The Company regularly reported safety inspections throughout the Company to promote the closed-loop rectification of problems and potential hazards. Safety risk warning prompts and meteorological disaster warning notices based on previous cases were printed and issued to urge and guide units at all levels to draw lessons from cases, implement all kinds of safety prevention measures for dangerous operations, and ensure production safety.

Education, Training and Emergency Drills

- The Company organised "Safety Production Month" and "Fire Safety Publicity Month" activities to urge and guide units at all levels to carry out publicity activities and emergency drills, and a total of 540,000 employees participated in the drills.
- The Company organised production safety and labour competition for quantitatively scoring the attendance of production safety work and activities, such as the production safety team building, potential hazard investigation and rectification, publicity, education and trainings, knowledge competitions, warning education and emergency drills, and selecting the winning units and outstanding individuals.

Digital Construction

- The Company issued the *Notification on Accelerating Application of Artificial Intelligence in Fire Safety*, with smoke and fire identification, smoker identification, fire engine access occupation identification, illegal electric vehicle parking identification and fire control room personnel absence identification as key AI + fire safety applications, encouraging all units to actively explore applications. As of the fourth quarter of 2024, there were more than two applications in the first and second provincial-level communication hub buildings.
- The Company continuously improved and optimised its building fire safety management system.
- The Company continued to promote "fire safety cloud" construction.

INCLUSIVE DEVELOPMENT



China Telecom upholds the philosophy of openness, cooperation, inclusiveness and co-sharing, working with stakeholders to share the fruits of development and promote sustainable economic and social progress through inclusive development. Adhering to the people-oriented principle, the Company strives for mutual growth with employees, co-builds industrial ecosystems with partners, enhances digital inclusion, supports rural revitalisation and promotes public welfare. In its overseas development, China Telecom facilitates global network interconnection, supports local community development and actively fulfils its responsibilities in digital development, environmental protection, public welfare, and vocational training, contributing to the achievement of the United Nations Sustainable Development Goals (SDGs) and demonstrating the sense of responsibility of Chinese enterprises.

CO-CREATING A HOME FOR EMPLOYEES

China Telecom protects employees' rights in accordance with the law, builds a comprehensive employee care system, continuously improves institutional safeguards and provides professional development pathways—working together to create a home for employees.

Protecting employees' rights and interests

The Company gives full consideration to the diversity of talents and equality of opportunities, respects labour, knowledge, talent and creation, and it continues to enhance the benefits and well-being of all employees.

Equal employment

The Company upholds employees' labour rights in accordance with the law and strengthens labour management to ensure legal and standardised employment practices. Adhering to the principles of equality, free will, and mutual agreement, it signs written labour contracts with employees in accordance with laws and regulations including the *Labour Law of the People's Republic of China*, the *Law of the People's Republic of China on Labour Contracts*, and the *Trade Union Law of the People's Republic of China*. The labour contracts clearly define the conditions for termination and are executed in compliance with legal requirements, safeguarding employees' fundamental rights. Additionally, the Company implements national regulations on labour management, improves working conditions and protections and enhances the protection of employee rights and interests. It has established mechanisms such as joint meetings on petition and complaint handling and supervision of key petition and complaint cases to properly resolve labour disputes. It clarifies employment forms for various positions, continuously refines job requirements for dispatched positions, standardises agreements with labour dispatch agencies and ensures that these agencies sign labour contracts with dispatched workers and pay salaries and make social insurance contributions on time.

China Telecom recruits talents from the whole society with full compliance with the *Employment Promotion Law of the People's Republic of China*, making job opportunity information available on its website, third-party recruitment websites and other channels with due respect to fairness, openness and impartiality to solicit various outstanding talents through multiple channels and diversified recruiting approaches. The Company offers equal opportunities to all applicants in its recruitment without discrimination against ethnicity, race, gender, age, region, marital or childbearing status and physical condition, and offers suitable jobs to the disabled according to their individual characteristics. The Company adheres to equal pay for equal work and provides employees with promotion in their positions and smooth career development paths. The Company handles and uses its employees' personal information in compliance with laws and firmly protects their privacy and security of related information.

China Telecom strictly implements the relevant requirements of the *Regulations on the Prohibition of Child Labour*, prohibits child labour and prevents forced labour in accordance with laws, and it specifies the age requirements of candidates in accordance with the recruitment management measures to avoid child labour. No instances of child labour or forced labour were found during the year. Any situation of child labour or forced labour identified will be addressed according to laws and regulations and corresponding remedial measures will be taken.

Remuneration and benefits

The Company ensures the timely and full payment of employee salaries and the statutory contributions to social insurance. It implements a paid leave system, clearly defines working hours, rest and leave, and safeguards employees' lawful rights and interests. The Company continuously optimises and refines its total payroll management mechanism with a market-oriented approach, applying precise classification and differentiated allocation across various units. It also advances internal income distribution reforms, directing compensation towards research and development personnel, business units, front-line staff, and those in demanding or hazardous roles.

Occupational health

The Company prioritises the management of employees' occupational health. Complying with the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* and other occupational health and safety related regulations, it has established and refined internal systems on occupational health and labour protection, including special protections for female employees. China Telecom also implements an Employee Assistance Programme (EAP) to safeguard employees' occupational safety and physical and mental well-being.

Democratic management

China Telecom encourages employee participation in corporate management. Since the inaugural employee representative congress in 2017, the congress has become an institutional arrangement, providing a platform for employee representatives to offer suggestions and engage in corporate governance. In December 2024, the Company held the third session of its second employee representative congress, where it reviewed reports on the congress's work, key thematic initiatives and the performance of employee directors. The Company received 108 high-quality proposals from employee representatives and facilitated face-to-face discussions among relevant departments at the headquarters, specialised subsidiaries and employee representatives. These efforts further strengthened employees' sense of ownership, harnessed collective wisdom, built reform consensus, and fostered a harmonious atmosphere, generating strong momentum for the Company's high-quality development.

China Telecom's Karamay branch organising employee representatives to submit proposals



From 28 March to 1 April 2024, the labour union of the Karamay branch organised its grassroots trade unions to collect proposals from employee representatives. The initiative focused on areas such as enterprise transformation and upgrading, empowering Xinjiang, cloudification and digital transformation, business development, and promoting the development of "Four Smalls" facilities. A total of 12 proposals were collected.



Caring for employees

The Company continues to strengthen communication with employees, understand their needs and proactively address their urgent concerns and difficulties. It also carries out ongoing care and support initiatives to promote employees' physical and mental well-being, enhance their sense of fulfilment, happiness and security and foster a harmonious and positive workplace atmosphere.

Strengthening communication with employees

- The Company launched the "100 seminars" research and the "employees' voice" questionnaire survey to gain a comprehensive understanding of employees' thoughts and concerns.
- It optimised the operation of the "Bridge Connecting Hearts" platform to better understand employee needs, and actively promoted the use of two caring QR codes—one for expressing concerns and one for mental health support—making it easy for employees to scan and use.
- A visual analysis platform for employees' concerns was established. The platform integrated data from "Yingyanyuqing", surveys and forums and then reported the data to management to promote the resolution of pressing employee concerns.

Enhancing employees' well-being

- The Company launched the "AI assistant for employees' well-being", offering four key functions: AI mental health companion, intelligent health assistant, smart medical examination report, and Snapshot Happiness Index. The platform helps relieve work-related stress and provides round-the-clock (24/7) consultation services.
- It also organised mental health seminars and trained front-line psychological support personnel to help promote employees' mental well-being.

Strengthening employee care and support

- The Company continued to advance the high-quality development of the "Four Smalls" initiative, which originally referred to canteens, bathrooms, toilets, and recreational rooms and now broadly encompasses efforts to improve front-line working conditions and living environments.
- It coordinated the implementation of four key employee care programmes: "Physical and Mental Health Care Programme", "Telecom Family", "Love in Telecom", and "Bridge Connecting Hearts". Each provincial unit carried out at least five practical care initiatives.
- The Company refined its focus on key employee groups to deliver targeted support, with intensified care measures for role models, scientific and technical talents, employees in need, those stationed overseas, and front-line production and operations staff.
- It also organised themed care initiatives such as "Warmth for the Holidays" for holiday sessions, "Summer Coolness" in summer vacations and special visits during key moments of the Cybersecurity Protection campaign. Additional efforts included disaster relief and targeted support for employees in remote or challenging regions, ensuring the implementation of sustained and meaningful engagement with a dedicated theme each month.

Enriching employees' cultural life

- The Company organised a variety of cultural and recreational activities, including the "e-Surfing Cup" badminton and inflatable volleyball competitions and the Spring Festival Cloud Gala. It also launched "Talent Showcase" cultural activities, including employee reading events, photography exhibitions, AI poster design, micro-drama creation, and short video contests, highlighting the dedication and spirit of front-line employees.
- It also launched programmes such as the "e-Surfing Talent Show", "Most Beautiful Telecom Worker" and "Women Worker Themed Month", using inspiring stories from colleagues in daily work to encourage employees to learn from role models and strive for excellence.

China Telecom's 2024 Spring Festival Cloud Gala successfully held

 CASE

On 2 February 2024, China Telecom successfully held its 2024 Spring Festival Cloud Gala. Themed "Soaring Dragon in the Cloud, Spreading Wings to the Future" and centred on "Infusing the Revolutionary Heritage of China Telecom, Celebrating the Spring Festival with Artistic Brilliance", the gala was entirely created, directed and performed by employees. It creatively applied China Telecom's self-developed capabilities and proprietary products, featuring virtual reality filming technology and metaverse-based interactive live streaming. The event was simultaneously broadcast on seven of China Telecom's own platforms, attracting more than 200,000 views.



Set against a joyful, festive, and harmonious backdrop of the Spring Festival, the Cloud Gala showcased the energetic, optimistic, hardworking and united spirit of China Telecom employees. It offered the entire workforce a culturally rich, artistically refined and excellently produced cloud-based Spring Festival celebration.

Organising a variety of employee care activities

 CASE

In Jilin, the trade union of China Telecom's Changchun branch invited a team of experts from Changchun Hospital of Traditional Chinese Medicine to provide free consultations for its employees. The experts answered health-related questions, offered personalised health preservation advice and treatment plans and performed therapeutic massages for employees suffering from cervical and lumbar spine issues.

In Henan, the Xuchang branch organised the 2024 New Employee Orientation Camp to help new hires quickly integrate into the company, acquire essential skills and embark on a new chapter in their careers.

In Shanghai, the Shanghai branch, together with ten other local units, held the "Love in Telecom" youth social event at the ZoneSports basketball gym in Pudong, attracting over 100 young employees.



Supporting employees' development

The Company believes that talent is the primary resource. It continuously implements the strategy of strengthening the enterprise through talent and deepens reform of the three key institutional mechanisms to comprehensively cultivate, attract and use talent.

Efforts were intensified to appoint technology-oriented executives, with science and technology experts assigned to the leadership teams of professional companies specialising in cloud, payment, Internet of Video

- Things (IoVT), AI, and quantum technologies. All 31 provincial branches now include science and technology experts in their leadership teams, and the majority of executives in tech-focused professional companies possess science and technology backgrounds.

The Company also made significant efforts to recruit top-tier and leading scientific talent, introducing 34 leading

- experts in fields such as cloud computing, AI, Big Data and quantum technologies. At the same time, it vigorously advanced the "Elite Talent Development Programme" to attract outstanding graduates.

The reform of the three key institutional mechanisms made further progress. Adopting the tenure-based and contract-based management model for managerial staff, the Company achieved full coverage of management

- responsibility agreement signed by department heads and deputies at the headquarters, as well as at secondary and tertiary enterprises. Rigid implementation of performance-based pay was enforced based on assessment outcomes. Meanwhile, the Company refined its market-oriented employment system and linked total payroll allocation mechanism to both scale and efficiency improvements.

A company-wide learning campaign was launched, with a particular focus on AI. Online and offline training sessions reached over 1.5 million participations across the Company. Large-scale, tiered training programmes were implemented to develop skilled talent, with particular emphasis on cultivating three key engineering teams in industrial digitalisation, R&D and cloud-network integration. Skill certification exams were conducted across 50 disciplines, covering various business lines and reaching 470,000 participations, further advancing the transformation of skilled personnel into outstanding engineers.

Anhui company launched “Renewal Programme” for industrial digitalisation staff

 | CASE

China Telecom's Anhui company has long been committed to integrated development through training, hands-on practice and competitions for science and technology talents. In May 2024, it officially inaugurated its practical training base for strategic emerging businesses. With an investment of nearly RMB 8 million, the Anhui company established an integrated training facility covering product capabilities across seven strategic emerging business domains, providing a scenario-based empowerment platform tailored to real-world projects for roles supporting industrial digitalisation. Leveraging this training base, the company launched the “Renewal Programme” for industrial digitalisation staff. The programme targeted over 2,600 personnel, including account managers, solution specialists and delivery and operations staff, and it carried out 46 rounds of hands-on training and certification. It significantly enhanced the practical and operational capabilities of front-line staff, enabling them to better support a wide range of industries and contribute to the Digital China construction.



Enriching platforms, grounding in practice, and fostering an atmosphere of deep learning for all

 | CASE

In 2024, China Telecom's Shanghai company launched a comprehensive learning initiative for all cadres employees. Centred on in-depth study and implementation of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the initiative focused on targeted and practical training to strengthen job competencies. It actively embraced the profound transformation brought by AI, aiming to enhance the overall workforce's capabilities to support the development of strategic emerging businesses, promote the growth of new quality productive forces and accelerate the company's transformation into an innovation-driven enterprise.



Hunan company held the e-Surfing Furong Competition Awards Ceremony in celebration of International Women's Day

 CASE

On 5 March 2024, China Telecom's Hunan branch hosted the e-Surfing Furong Competition Awards Ceremony in celebration of International Women's Day. Awards were presented to recipients of "e-Surfing Furong Models", "Hundred e-Surfing Furong Stars", "Harmonious Family" and "Advanced Women Workers' Committee". In addition, six Women's Innovation Studios were officially recognised. The event encouraged female employees to showcase their talents and achieve excellence in advancing the company's high-quality development.



China Telecom vigorously promotes the spirit of model workers, labour and craftsmanship. It has launched the "Pioneering the Future – New Era Model Workers and Craftsmen Development Initiative" and established a system for cultivating exemplary workers. The Company recommends candidates for outstanding team and model worker selections among central SOEs and conducts its own recognition of exemplary teams, model workers, Telecom Craftsmen and "Four Excellence" model innovative teams—those excelling in innovation awareness, innovation activities, innovation atmosphere and innovation achievements. In 2024, the Company received 276 provincial and ministerial-level or higher honours.

The Company proactively cultivates an innovative atmosphere. It organised 22 company-level labour and skills competitions, aligning them with the growth of strategic emerging businesses. It also supported leading professionals and technical experts to establish innovation studios, encouraged cross-disciplinary innovation studio alliances and launched the "Innovation Studios Empowering Strategic Growth" initiative, enhancing grassroots enthusiasm for learning about strategic emerging businesses and engaging in innovation. Additionally, 97 online and offline activities were held, including "Model Workers and Craftsmen Supporting Enterprise Growth", "Model Workers Entering Campus" and "Innovation Studio Achievements Showcase", engaging over 100,000 employees. By sharing inspiring stories of model workers and craftsmen and guiding employee innovation and creation, the Company fostered a culture of innovation and positioned model workers as representatives of a technology-driven enterprise.

Hosting the inaugural Employee New Skills Competition

 CASE

On 30 October 2024, China Telecom held its first Employee New Skills Competition at Zhejiang Post and Telecommunication College by the shores of Hangzhou Bay. Themed "Pioneering the Future", the event featured a comprehensive competition covering four key areas, namely new technologies, new sales, new operations and maintenance and advanced cybersecurity, with a focus on critical capabilities in strategic emerging business sectors. Through inter-provincial competition of strategic emerging skills, the event empowered the by-layer improvement of the employees' strategic emerging skills and fostered a dynamic environment for mutual learning and improvement, driving talent development in relevant business domains.



CO-BUILDING AN INDUSTRY ECOLOGY

China Telecom remains committed to opening up and collaboration, bringing together a digital technology industry ecosystem. Focusing on strategic emerging and future industries, as well as supply chain management, it continuously enhances the resilience of industrial and supply chains. By deepening and broadening cooperation with industry partners across technology, cloud-network integration, data, capital, and next-generation digital information infrastructure, the Company fosters a shared, co-developed and mutually beneficial digital ecosystem.

Responsible supply chain

The Company places great emphasis on the social and environmental impact of its supply chain and integrates sustainability principles throughout its supply chain management. It is committed to building a resilient, secure, value-driven, digitally empowered and eco-friendly supply chain management system that adheres to legal and regulatory requirements. This approach effectively mitigates and addresses various supply chain risks, ensuring supply chain stability and security.

Supply chain management system

The Company advances full-process compliance management in its supply chain. It strictly implements procurement-related laws and regulations, including the *Tendering and Bidding Law of the People's Republic of China*. In 2024, in response to the latest national regulatory guidelines such as the *Opinions on Innovating and Improving Systems and Mechanisms to Promote the Standardised and Healthy Development of the Tendering and Bidding Market* and the *Guiding Opinions on Regulating the Procurement Management of Central State-Owned Enterprises*, the parent company revised and issued policies including the *China Telecom Procurement Management Measures*, the *China Telecom Management Measures for Bid Evaluation Experts and Expert Database*, and the *China Telecom Management Measures for Inquiry and Competitive Comparison Procurement*. These efforts promote an efficient, standardised, fair and open market environment.

The Company continuously enhances supply chain resilience and security. It conducts supply risk assessments and early warnings and thoroughly analyses supply risk factors across the entire industrial chain for key cloud-network products, including raw materials, core components, packaging and testing and production and delivery. Risk ratings are assigned to planned materials, and tailored supply strategies are formulated. Additionally, it reinforces supply chain quality and safety management through product life-cycle quality management, ensuring the secure construction and operation of digital infrastructure.

The Company strengthens the value creation capacity of its supply chain. A two-tier centralised procurement model—at headquarters and provincial levels—has been established to improve economies of scale in procurement. By adopting rational procurement strategies and Total Cost of Ownership (TCO) management, the Company enhances cost efficiency, effectively reducing the overall cost of digital infrastructure development and supporting the high-quality growth of industrial digitalisation services.

The Company accelerates supply chain digital transformation, achieving end-to-end digitalisation and full-process online visibility across sourcing, procurement, decision-making, contracting, delivery and inventory management. It has piloted large-model intelligent-assisted bid evaluation, enhancing evaluation efficiency and management capabilities. Digital compliance management of the supply chain has been strengthened, enabling real-time and precise risk prevention across key business areas such as procurement and tendering through the structuring of procurement documents, ensuring safe, efficient and compliant supply chain operations.

The Company actively promotes a green and low-carbon supply chain. It implements life-cycle energy consumption management for materials, incorporating environmental impact factors into the evaluation system for bidding procurement projects. Green procurement has been fully adopted, with digital platforms enabling remote and online bid evaluation. For products with potential environmental risks in their production processes, the Company has incorporated requirements such as ISO 14000 environmental management certification, government environmental assessment reports and the Ministry of Industry and Information Technology's "Green Factory" list into bidding procurement projects. These initiatives ensure full coverage of green indicators while increasing the procurement, deployment and application of energy-efficient and low-carbon products, effectively reducing network energy consumption and emissions.

China Telecom rated A-Class in central SOE procurement and supply chain management benchmarking assessment

 CASE

On 13 September 2024, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) announced the results of the 2024 central SOE procurement and supply chain management benchmarking assessment. China Telecom received an A rating, ranking fourth among central SOEs. The assessment covered five major categories and 64 indicators, including organisational mechanisms, operational control, supply chain ecosystem development, intelligent supply chain, and supply chain security. China Telecom supply chain excelled in areas such as institutional system, resilience security and intelligent supply chain development. Notably, its achievements of AI applications in supply chain management were recognised as a benchmark case for central SOEs and were widely promoted across all central SOEs by SASAC.



Supplier management and cooperation

The Company continues to advance its supplier management system. The parent company has revised and issued the *China Telecom Supplier Management Measures* and the *China Telecom Supplier Misconduct Management Measures*, applying misconduct management to all suppliers. By combining positive incentives with disciplinary actions, the Company deepens long-term, stable cooperation with high-quality suppliers, refines the misconduct management mechanism and works actively with its suppliers to build a responsible supply chain.

To strengthen supplier misconduct management, the Company requires its suppliers to sign a *Letter of Commitment to Integrity in Bidding* during the bidding process and integrates misconduct alerts into the procurement workflow, ensuring the effective enforcement of disciplinary measures. Additionally, it continues to share information on non-compliant and dishonest suppliers with major telecommunications operators in China, fostering a competitive and well-regulated ecosystem. In 2024, the Company addressed 411 cases of supplier misconduct involving 384 suppliers, implementing measures such as temporary bans or market share adjustments in accordance with regulations.

Opening up, cooperation and win-win

National cloud ecology

The Company leverages its strengths to focus on strategic emerging industries and future industries, coordinating high-level opening up and cooperation across the industrial chain while maintaining its role as an industry leader. During the 7th Digital China Summit Cloud Ecological Conference, it launched the Computing Power Partnership for Shared Success Programme and the Model Partnership Prosperity Programme, inviting industry partners to co-develop computing power and model ecosystems. Under the guidance of the State-owned Assets Supervision and Administration Commission, the Company collaborated with over 50 innovation entities to initiate the "Cloud Innovation Hub" (雲創智匯) cloud computing innovation consortium. These ecosystem partnership initiatives demonstrated how state-owned enterprises drive industrial transformation and reinforce industry leadership through technological innovation and garnered widespread industry recognition.

Central Node of the State-Owned Assets Regulatory Cloud & the Central SOE Intelligent Computing Cloud Scheduling Management Platform launched



From 23 to 27 May 2024, the 7th Digital China Summit Cloud Ecological Conference was held in Fuzhou. During the event, the Central Node of the State-Owned Assets Regulatory Cloud & the Central SOE Intelligent Computing Cloud Scheduling Management Platform was launched. Built upon the "Xirang" platform, this initiative establishes a unified computing power network for central SOEs, strongly supporting the construction of SOE cloud system, i.e., the "1+N+M" cloud system, which system comprises one public cloud for central SOEs, N industry-specific public clouds, and M enterprise-specific private clouds.



Jointly building the "Xirang" integrated intelligent computing service system with upstream and downstream industry partners



China Telecom Cloud showcased the newly upgraded "Xirang" integrated intelligent computing service system. This system includes a computing power interconnection scheduling platform, an integrated computing acceleration platform and a one-stop intelligent computing service platform, highlighting the strength of Chinese cloud in intelligent computing. In the ecosystem partners section, China Telecom Cloud collaborated with key partners to display their digital intelligence achievements and future plans. Partners included Huawei and ZTE from the intelligent computing power ecosystem and iFLYTEK and Baichuan AI from the intelligent computing large model ecosystem. Together with industry chain partners, China Telecom Cloud is building an intelligent computing ecosystem, driving industry transformation through innovation and intelligence.



Digital technology ecology

To drive deep integration between technological innovation and industrial innovation, expand strategic emerging industries, proactively plan for future industries and develop new quality productive forces, China Telecom hosted the 2024 Digital Technology Ecosystem Conference under the theme "AI Empowerment: Building a New Digital Ecosystem Together" in collaboration with ecosystem partners. The event focused on next-generation information infrastructure, new industrialisation, and strategic emerging industries such as AI, quantum security and the low-altitude economy. It brought together government officials, central SOE executives, experts, industry leaders and institutional representatives to explore new pathways for digital technology advancement.

At the event, China Telecom unveiled six major technological innovations: the "Kunlun" cloud-network capability open platform, the "Xirang" integrated intelligent computing platform and its applications, the upgraded "Xingchen" large model and its applications, the upgraded "Xinghai" Big Data platform and its applications, the e-Surfing AI mobile phone and the upgraded "Tianyan" quantum computer and its applications. Additionally, in collaboration with the SASAC, relevant central SOEs, and industry partners, the Company launched the China Telecom Mobile Payment Modern Industrial Chain Public Chain Initiative.

Under the theme "Data Convergence for a Smarter Future", the Company also hosted the Data Element Cooperation Forum, showcasing data element application achievements and exploring innovative practices in data elements. To strengthen its data element service capability system, China Telecom launched the upgraded "Xinghai" Big Data brand system, developed a data element platform and enhanced data scenario services, empowering public data element operations, enterprise data element governance and cross-border data flows. The Company further enriched group-level "Xinghai" Big Data products. In public data operations, it has grown from one province (Hainan) to 36 locations nationwide (7 provinces and 29 cities), securing the top market share in China. Its data intelligence platform now serves over 150 clients, including government agencies and central SOEs.

Joining hands with data management institutions to launch the Public Data Element Resource Collaborative Development Initiative



China Telecom, together with provincial and municipal data management institutions including Shanghai Municipal Data Bureau, Tianjin Municipal Data Bureau, Jilin Provincial Government Service and Digital Development Administration and Hainan Provincial Development and Reform Commission (Hainan Data Bureau), as well as data industry groups and ecosystem enterprises, jointly launched the China Telecom Public Data Element Resource Collaborative Development Initiative.



Capital cooperation

The Company actively advances its strategic planning with a focus on strategic emerging industries and future industries. It has completed the strategic acquisition of QuantumCTek, and accelerated professional integration to establish itself as a leading enterprise in quantum communication and quantum computing. Additionally, China Telecom is actively expanding in AI, security, cloud computing and computing power, Big Data, digital platforms and next-generation information and communications technology, accelerating the development of new quality productive forces. It strengthens capital operations in key business segments, systematically advancing equity financing for professional companies while exploring external capital infusion to enhance market-oriented operations and governance capabilities.

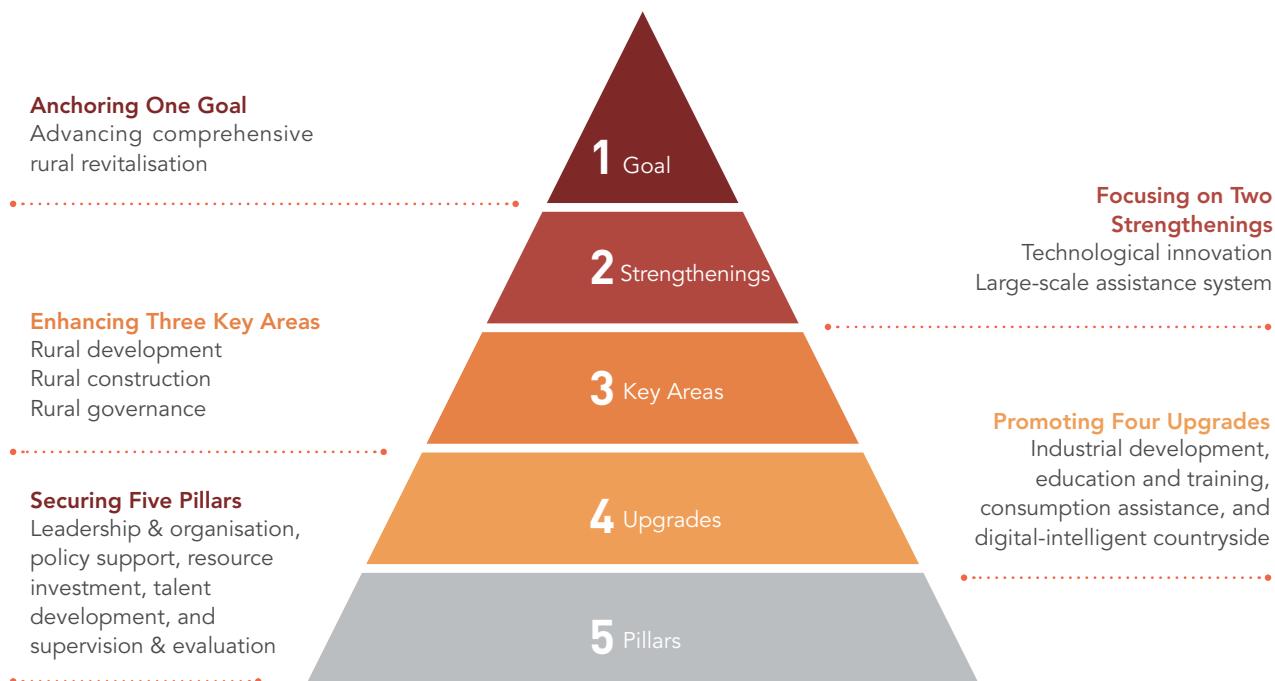
On 3 December 2024, the Company hosted the Capital Ecosystem Cooperation Forum under the theme "Capital Empowerment, Open Cooperation for a Shared Future". The forum served as an efficient platform for partner exchanges, promoting enterprise-investor synergy and fostering cooperation with capital ecosystem enterprises in business, products and technological innovation. By leveraging capital strength, the Company drives coordinated industrial and investment development, reinforcing its strategy for high-level opening up and cooperation.

CO-SHARING DEVELOPMENT ACHIEVEMENTS

China Telecom continues to harness digital information infrastructure to drive economic and social development, bridge the "digital divide" and enhance digital inclusiveness, ensuring that people from all backgrounds benefit from digital advancements.

Serving rural revitalisation

The Company integrates the consolidation and expansion of poverty alleviation achievements and the advancement of comprehensive rural revitalisation into its strategic planning. Drawing on the experience of the "Thousand Villages Demonstration and Ten Thousand Villages Renovation Project" and leveraging its strengths in digitalisation, it effectively integrates supporting resources and proposes the "12345" rural revitalisation framework (see the diagram below), to accelerate the development of livable, business-friendly and beautiful countryside and drive comprehensive rural revitalisation with impactful Telecom solutions.



In 2024, China Telecom undertook assistance tasks across 12 counties, 46 townships and 1,312 villages nationwide, deploying a total of 3,621 full-time and part-time rural revitalisation officers. It invested over RMB 3 billion in the "Broadband Borderland" special network construction project and provided RMB 8.7 billion in telecommunications fee reductions. Through the "Workwear Aid for Xinjiang" initiative, it procured RMB 50.12 million worth of Xinjiang-made clothing. Additionally, the Company continued its targeted support for the four targeted poverty alleviation counties and two targeted support counties (collectively referred to as the "4+2" poverty alleviation counties), investing RMB 417 million in repayable assistance funds and introducing RMB 89.01 million in non-repayable assistance funds and RMB 438 million in repayable assistance funds. Moreover, it trained 119,700 grassroots officials, rural revitalisation leaders and technical professionals and directly purchased or facilitated the sale of agricultural products worth RMB 773 million.

China Telecom Chairman Ke Ruiwen conducted in-depth research on rural revitalisation in Shufu County, Xinjiang

 CASE

In August 2024, a delegation led by China Telecom Chairman Ke Ruiwen visited Xinjiang to investigate rural revitalisation efforts. They conducted an in-depth inspection of the Company's designated assistance projects in Shufu County, Kashgar, met with front-line employees, and engaged with local Party and government officials to explore ways to effectively integrate poverty alleviation achievements with rural revitalisation initiatives.

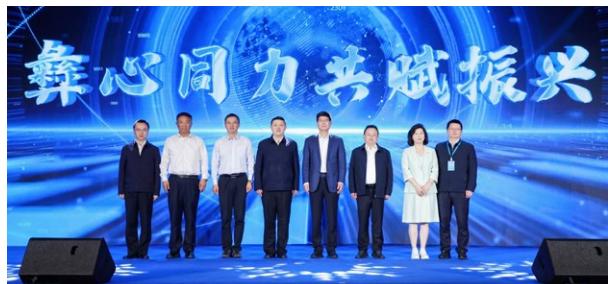


The Company has consistently prioritised consumption assistance as a key approach to enhance the quality, efficiency and sustainable development of featured industries in poverty-alleviated areas. It actively participated in the SASAC's "Central SOEs' Cohesion Action on Consumption Assistance" and "Central SOEs' Week for Consumption Assistance and Agricultural Revitalisation", directly purchasing RMB 330 million worth of agricultural products from poverty-alleviated areas and facilitating the sale of an additional RMB 443 million in agricultural products from these regions.

Hosting the China Telecom New Consumption Platform Shopping Festival

 CASE

In April 2024, under the guidance of the Bureau of Social Responsibility of the SASAC, China Telecom, in collaboration with fellow central SOEs, hosted the "Yi United for Revitalisation" shopping festival in Liangshan, Sichuan Province. As part of the Central SOEs' Cohesion Action on Consumption Assistance, the event brought together representatives from central ministries and commissions, over 20 central SOEs, and more than 100 suppliers from assisted counties, showcasing thousands of local agricultural and specialty products. During the event, purchases and sales of agricultural and sideline products exceeded RMB 80 million.



Leveraging its strengths in cloud-network integration, AI, cybersecurity and information security, the Company continues to advance digital village construction, covering over 439,000 administrative villages with a coverage rate of 89.7%, serving more than 100 million rural residents. Meanwhile, it remains focused on smart education, smart healthcare and social governance, continuously satisfying the aspiration of people in poverty-alleviated areas for a better and more convenient digital and intelligent lifestyle.

Supporting the construction of the 5G remote medical consultation centre in Yanyuan County, Sichuan Province

 CASE

China Telecom donated haemodialysis equipment and developed a dynamic real-time ECG monitoring system and a medical informatisation system at Yanyuan County People's Hospital. This led to the successful deployment of the county's first "China Telecom Trolley-Based Remote Diagnosis Device" and the establishment of a "5G Remote Medical Consultation Centre" at the hospital. The centre provides a face-to-face remote consultation channel between Yanyuan County People's Hospital and provincial medical experts, significantly improving local healthcare conditions.



Supporting the smart campus construction at the Third Primary School of Shufu County, Xinjiang



China Telecom funded the construction of a teaching building, a playground, an AI maker classroom, a live-streaming and recording classroom, and a modern audio-visual digital library at the Third Primary School in Shufu County, Xinjiang, along with donations of books and electronic equipment. The study of programming and AI applications enhances students' engineering design and computational thinking, benefiting all 3,500 students at the school.



The Company is committed to enhancing telecommunications infrastructure in border and rural areas. It has implemented the 9th and 10th phases of the universal telecom service project and advanced the "Broadband Borderland" initiative to bridge the "digital divide", promote economic prosperity, and strengthen the stability and security of border regions, thereby supporting rural revitalisation. Additionally, the Company continues to expand co-building and co-sharing efforts. In collaboration with China Unicom, it has launched and successfully validated a pilot project for 4/5G access network sharing with full-network compatibility in Guangxi's regions including Fangchenggang and Baise. This initiative provides technical solutions for expanding construction methods in rural and border areas and achieving the coverage target faster.

Improving telecommunications infrastructure in border and rural areas



In Hubei

The Hubei branch collaborated with China Unicom to develop rural digital infrastructure, designing a "low-frequency shared mobile network" tailored for rural areas. This initiative has significantly improved the communication experience for hundreds of thousands of telecom users in the remote mountainous regions of Enshi, Hubei Province. A total of 2,985 900M network cells have been deployed, effectively covering 469 signal blind spots, greatly enhancing signal availability and addressing weak coverage issues in rural areas.

In Fujian

The Putian branch focused on building wireless networks for remote islands, achieving full 5G signal coverage on islands such as Luci Island, Gaobei Island and Xiaori Island. Additionally, it constructed the province's first offshore wind turbine base station, addressing weak signal coverage in offshore regions. In response to challenges posed by complex weather conditions and long-distance signal transmission loss, it upgraded 4G 800M to 5G 800M, enabling 115 base stations with ultra-long coverage and boosting power in 306 cells, thereby achieving "wide coverage" for maritime wireless networks.

In Xinjiang

In response to natural disasters and emergencies, the Xinjiang branch has leveraged the advantages of the Tiantong satellite system to provide robust support for emergency communications. Currently, the number of its direct-to-satellite mobile users has exceeded 60,000. When extreme weather disrupts ground communications, satellite phones become a "lifeline" for rescue operations, offering critical support for search-and-rescue efforts and effectively safeguarding public safety.



Promoting care for the elderly

The Company actively promotes the traditional virtues of filial piety and respect for the elderly while upholding China Telecom's revolutionary heritage. It is committed to helping the elderly bridge the "digital divide" by advancing the implementation of policies and measures that safeguard their rights and interests. The Company strives to provide more convenient, user-friendly and high-quality integrated smart information services to effectively address the challenges elderly individuals face in using smart technology and enhance their access to digital products and services.

In 2024, China Telecom's 10000 hotline provided over 18 million instances of direct access to elderly caring attendants for customers aged 65 and above. For elderly individuals and other groups with mobility difficulties, the Company facilitated over 160,000 transactions via face-to-face, one-on-one remote counter video services. Through its "Caring Station+" initiative, China Telecom offered tailored assistance to elderly users, guiding them in using WeChat, e-commerce platforms, online appointment booking, online payments and cloud storage services. Additionally, in collaboration with the China Medicine Education Association and the Beijing University of Science and Technology for the Aged, the Company organised health-focused online courses and elderly health knowledge competitions. Throughout the year, China Telecom held 170,000 elderly support service activities, benefiting 3.88 million people. The "Caring Service Counters" were deployed across 22,000 self-operated outlets, achieving a 99.8% deployment rate, with over 9,400 outlets providing barrier-free services. Furthermore, the China Telecom APP underwent a comprehensive transformation focusing on service capability enhancement and AI-powered elderly assistance. The caring version has been further enhanced, with six elderly-friendly feature upgrades completed throughout the year, ensuring it is on par with the standard version in terms of functionality. Meanwhile, AI-driven digital assistants' capabilities were expanded, integrating customer service and search functionalities for a more seamless user experience.



China Telecom APP caring version



The Company continues to enhance the core functionality of its elderly-friendly section. Since the introduction of elderly-friendly services, China Telecom has implemented modifications to 22 service features, ensuring information is displayed in a manner that aligns with elderly users' reading habits. Key information is extracted and presented within a single screen for easier access. Additionally, each query page is equipped with an intelligent assistant and voice broadcast service. For elderly users with poor eyesight, the system provides one-click voice broadcast of usage information. Instead of mechanically reading out page content, this feature delivers carefully designed voice feedback, enabling elderly users to quickly obtain the information they need without waiting long.

Furthermore, the Company has enhanced the AI digital assistant's capabilities. Elderly users can press and hold to voice their requests, which are quickly recognised by AI to display the corresponding content cards. The system is also equipped with a voice broadcast function, allowing elderly users to complete most operations simply by speaking.



Enthusiastically participating in social welfare

The Company balances business development with social responsibility. It actively engages in various charitable and public welfare activities, demonstrating its commitment to corporate social responsibility through tangible actions. Through its "Love from e-Surfing" volunteer service team, the Company continuously carries out public welfare projects and volunteer services, encouraging employees to embrace the spirit of dedication, friendship, mutual assistance and progress. It promotes the institutionalisation and normalisation of volunteer services, actively fostering a civilised, harmonious, united and enterprising atmosphere.

Organising science popularisation volunteer activities CASE

In 2024, China Telecom's Science and Technology Association, in collaboration with the China Telecom Research Institute and the China Telecommunications Museum, held the "China Telecom Science Popularisation Volunteers Supporting Youth Technology Enlightenment" event in Beijing. Through AI-themed live science popularisation lectures, the event connected with Yanyuan County Ethnic Middle School and Ganhai Middle School in Liangshan Prefecture, Sichuan, and Xinzhuang Town Central School in Datong Hui and Tu Autonomous County, Xining, Qinghai, guiding young people to explore AI and listen to stories of technological innovation.



"Love from e-Surfing" volunteer service activities CASE

In 2024, Liaoning Panjin branch organised "Love from e-Surfing" volunteer service activities, where volunteers worked alongside community staff to provide public convenience services, such as providing free on-site broadband speed tests and repairs for users, organizing residential household information boxes, installing routers and guiding elderly users on how to use smartphones. These efforts provided high-quality, efficient information services to the public, spreading the spirit of Lei Feng in the new era.



The Company continuously upgrades its Caring Stations, offering compassionate services to vulnerable social groups and promoting a positive image of China Telecom that addresses people's concerns with tangible actions. It revamped the "Caring Station" service measures, launching the "Caring for the Elderly and Children" initiative, and organising the "Exploring the Secrets of Communications" classrooms for young people across 29 provinces and 104 cities in collaboration with the China Telecommunications Museum, as and holding other public welfare activities such as "Love without Barriers" and "Respect for the Elderly on the Double Ninth Festival". The Company's public welfare services expanded to 90,000 urban and rural business outlets, hosting 180,000 charitable activities throughout the year, benefiting over 18 million people, including outdoor workers, the elderly and youth. Additionally, the Company innovated digital and intelligent volunteer services and launched the "Smart Trade Union Service Station" solution with intelligent monitoring and voice technologies, serving over 3,400 stations. The volunteer service teams at the "Caring Stations" have grown to 570, and employees have contributed 20,000 hours of volunteer service. The Company's nationwide "Labour Union Service Stations" network contributed the largest scale, and it was recognised by the All-China Federation of Trade Unions as a "Significant Contribution Unit in the Dual 15 Project". The Caring Stations' elderly care volunteer services won the National Bronze Award in the 7th China Youth Volunteer Service Project Competition. Additionally, relevant service cases of the Caring Stations were selected among the top ten cases in the Social Responsibility Blue Book of Central SOEs (2024) by the SASAC.

Focusing on life and health, China Telecom launched first aid e-learning stations



Through August-September 2024, China Telecom, in partnership with the Chinese Red Cross Foundation, launched the Red Cross-Caring Station First-aid e-learning Station in Beijing, Shanghai, Guangzhou, Wuhan and Yinchuan. These stations offer training on CPR, AED usage and other emergency rescue skills to sanitation workers and community residents. This initiative aims to spread health and emergency rescue knowledge across a broader community, enhancing public self-rescue and mutual rescue capabilities.



Caring ice chests



In September 2024, Chongqing experienced an intense late-summer heatwave. To show care and appreciation for outdoor workers, China Telecom Chongqing's Caring Station set up ice chests outside its outlets at Nanping, Daping, Shapingba and other locations. These ice chests were stocked with bottled water, cold drinks and other refreshing beverages, offering heat relief to sanitation workers, couriers, food delivery riders and other outdoor workers.



CO-WRITING THE OVERSEAS CHAPTER

China Telecom upholds the principles of win-win cooperation and shared development, actively participating in the high-quality advancement of the Belt and Road Initiative (BRI) to foster the high-quality economic and social development of countries along the BRI while effectively fulfilling its overseas responsibilities. Committed to strengthening international cooperation in the information and communications sector, the Company continuously enhances its global cloud-network infrastructure and collaborates with international telecom operators to enhance interconnectivity in global communications infrastructure and drive the development of digital information infrastructure worldwide. In its overseas expansion, the Company emphasises localisation, supports local community development, creates employment opportunities and cares for vulnerable groups. Additionally, it promotes environmental sustainability, actively gives back to society, and fulfils its overseas public welfare commitments.

Improving international communications service capabilities

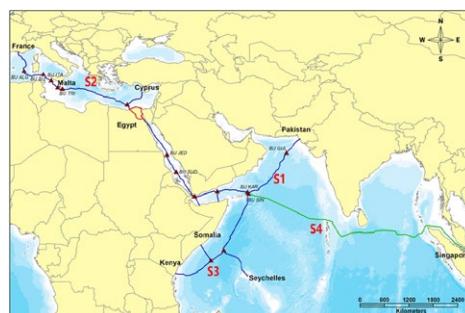
The Company has strategically invested in the Asia-Pacific region and countries and regions along the BRI, establishing a large-scale global network and forming a differentiated development pattern, with a focus on the Asia-Pacific region alongside Africa and Middle East, Europe and the Americas. By the end of 2024, China Telecom had participated in the investment and construction of over 50 international submarine cables, with international and Hong Kong-Macau-Taiwan backbone transmission relay capacity exceeding 100T, including over 50T in the BRI regions. It also operates 254 overseas points-of-presence (POPs).

Additionally, the Company continues to enhance its international communications service capabilities to meet the cross-border communications needs of both corporate and individual customers, extending its global operations across key markets. It serves Chinese enterprises expanding overseas and foreign enterprises investing in China by offering international network connectivity services such as voice, dedicated lines and internet access, as well as digital information and communications technology (DICT) services, including data centres, cloud computing, and integrated information services. Moreover, China Telecom continuously optimises international, Hong Kong, Macau and Taiwan roaming fees while improving user experience. In 2024, its data roaming services covered 245 countries and regions worldwide, with a "mobile data capped day-pass" offering available in all locations where data roaming is provided. Furthermore, the Company actively responds to emergency incidents in overseas regions, issuing timely public alerts, establishing traveller assistance hotlines and delivering high-quality services.

PEACE Asia-Europe submarine cable delivery



At the end of 2024, China Telecom completed the Phase II spectrum delivery of the PEACE submarine cable project between Singapore and Marseille, France, significantly enhancing the backbone capacity between Asia and Europe. This delivery will meet the growing demand for international broadband connectivity in the Asia-Europe region, further advancing the development and upgrade of global digital infrastructure and injecting new momentum into the digital economy of countries along the route.



China Telecom launched direct-to-phone satellite connectivity in Hong Kong

 CASE

In May 2024, China Telecom held a launch event in Hong Kong to announce the introduction of direct-to-phone satellite connectivity service relying on the Tiantong satellite system. This marked the official deployment of the service in Hong Kong, serving as a new starting point to promote the Tiantong satellite system and extend its services to the BRI countries and regions, contributing to their economic and social development.

In July 2024, China Telecom, in partnership with Hong Kong Telecommunications (HKT), began offering Tiantong satellite two-way voice calling and SMS services to local users in Hong Kong. This service meets the rigid demand for satellite mobile communications in cellular communications blind spots, providing users with aerial-ground integrated communication services.



Supporting local community development

The Company remains committed to local community development. It actively contributes its resources, builds a sustainable governance framework and fosters collaboration between governments, businesses, and society. These efforts help create more vibrant, green, and inclusive communities.

China Telecom (Macau) promoted cross-border convenience services in the Guangdong-Macao In-Depth Cooperation Zone

 CASE

In October 2024, the 24-hour self-service centre for Macau government affairs was launched as part of the Macau New Neighbourhood project in Hengqin. The centre's remote service counters utilised China Telecom (Macau)'s 5G Bay Area Connect product, enabling secure cross-border networking and fostering deeper cooperation between Guangdong and Macau, contributing to the prosperity of the Greater Bay Area.

The remote service counters allow Hengqin residents to connect with Macau government officials via video and complete various government procedures remotely, providing convenient cross-border services for Macau residents working, studying, living, and developing in the Guangdong-Macao In-Depth Cooperation Zone.



China Telecom (Africa and Middle East) supported remote consultation, enhancing healthcare services in Africa



China Telecom (Africa and Middle East) supported the remote traditional Chinese medicine (TCM) consultation services launched by the Ningxia Health Commission and a China-assisted hospital in Benin, Africa.

China Telecom provided an end-to-end remote consultation solution for the initiative. The TCM consultation platform is deployed on China Telecom Cloud nodes, integrating digital TCM physiological data collection hardware with advanced imaging technologies, including an 18-megapixel professional DSLR lens, tongue and pulse analysis and AI-powered facial feature recognition. On the network transmission side, the platform adopts accelerated network channels and a dual 4G plus Wi-Fi hotspot redundancy and optimisation mechanism. It dynamically selects international carrier networks, thus cutting network latency by half to ensure real-time consultations.

This innovative network technology overcomes multiple challenges in cross-border remote consultations, enabling remote medical consultations between China and Africa, thereby improving healthcare services in Africa.



China Telecom (South Africa) provided skills training to enhance local employment competitiveness



China Telecom (South Africa) actively responds to the South African government's "Skill Development Plan" for the ICT industry by offering vocational skills training and development opportunities to local youth. Under this programme, the Company collaborates with the local training platform, Black Points Training Solutions, to continuously provide skills training and guidance related to its businesses, helping local youth to acquire professional knowledge and skills and improve their employment competitiveness.



Fulfilling overseas public welfare responsibilities

The Company actively participates in overseas public welfare initiatives, and engages with local communities. It supports local communities, cares for vulnerable groups, promotes environmental sustainability, gives back to society and fosters cultural exchange, fulfilling its overseas public welfare responsibilities.

Actively participating in charity run



In June 2024, China Telecom's German company organised its employees to take part in the 2024 J.P. Morgan Corporate Challenge. Five employees successfully registered and completed the entire race. The event took place along the Main River, where China Telecom's Frankfurt data centre is located. As the world's largest corporate charity run event, the J.P. Morgan Corporate Challenge upholds the principles of "fitness, friendly competition, and fun". All proceeds from the event will be donated to nonprofit charitable organisations across the 15 host cities worldwide.



China Telecom (Asia Pacific) actively participated in Singapore's Earth Day tree-planting initiative



In June 2024, aligned with Earth Day initiatives, China Telecom (Asia Pacific) organised a tree-planting activity. All of its employees actively took part in the activity, planting 50 saplings to support a better environment and promote sustainable development.



In the future, China Telecom will continue to align its overseas development with the United Nations Sustainable Development Goals (SDGs), actively fulfilling its responsibilities in areas such as digital development, environmental sustainability, social welfare and employment training.

MODERN GOVERNANCE



China Telecom continuously improves corporate governance and comprehensively deepens reforms, achieving new progress in organisational structure, process mechanisms and talent development. The Company remains committed to lawful and compliant operations, enhancing risk prevention capabilities and laying a solid foundation for high-quality development.

REFINING CORPORATE GOVERNANCE

China Telecom continuously enhances its corporate governance methodology, standardises its operations, strengthens its internal control mechanism and implements sound governance and disclosure measures, to ensure that its operations align with the long-term interests of the Company and its shareholders as a whole. In 2024, the shareholders' meeting, the Board and the Supervisory Committee operated soundly and efficiently. The Company is dedicated to lean management while ensuring stable and healthy operation and elevates its high-quality development to a new level, while continuously optimising its internal control system and comprehensive risk management in order to effectively ensure steady operation. In 2024, the Company convened 13 Board meetings, 10 Audit Committee meetings, one Remuneration Committee meeting, two Nomination Committee meetings, and five special meetings for independent directors. Its governance capabilities continued to improve, safeguarding the best long-term interests of its shareholders.

As of 31 December 2024, the Board of the Company consisted of 11 Directors with six Executive Directors, one Non-Executive Director and four Independent Non-Executive Directors. There is no relationship (including financial, business, family or other material or relevant relationship) among the Board members. The Audit Committee, Remuneration Committee and Nomination Committee under the Board consist solely of Independent Non-Executive Directors, which ensures that the committees are able to provide sufficient checks and balances and make independent judgement effectively to protect the interests of the shareholders and the Company as a whole.



China Telecom continuously implements the Board Diversity Policy. It strongly believes that board diversity will contribute significantly to enhancing its overall performance. In determining the composition of the Board, the Company takes into account diversity of the Board from a number of perspectives, including but not limited to gender, age, educational background, professional experience, skills, knowledge, duration of service and time commitment, etc. All appointments made or to be made by the Board are merit-based, and candidates are selected based on objective criteria taking full consideration of board diversity. Final decisions are comprehensively made based on each candidate's attributes and the consideration for his/her valuable contributions that can be made to the Board. The Nomination Committee oversees the implementation of the Board Diversity Policy, reviews the existing policy as and when appropriate, and recommends proposals for revisions for the Board's approval. Currently, the Board comprises experts from diversified professions such as telecommunications, accounting, finance, law, banking, regulatory, compliance, management and economy with one female director on the Board, with diversification in terms of gender, age, duration of service, etc., which in turn advanced the enhancement of management standard and the further standardisation of corporate governance practices, resulting in a more comprehensive and balanced Board structure and decision-making process.

To enhance the modernisation of corporate governance, the Company actively promotes its subsidiaries to establish a board of directors or a one-director governance structure as appropriate to their business characteristics and development stages. By the end of 2024, 63 subsidiaries had established boards of directors, all of which had a majority of external directors, resulting in a more standardised and efficient governance structure. All subsidiaries have developed and refined an institutional framework centered on their articles of association, prioritizing the appointment of professionals with legal, financial, or relevant expertise to support the board of directors and the directors in fulfilling their duties. This strengthens support for directors in performing their duties and ensures the effective exercise of managerial authority. Additionally, the subsidiaries leverage digital tools to optimise governance processes and improve decision-making efficiency. A structured system has been implemented across subsidiaries, whereby the board of directors delegates authority to the management, and the management reports back to the board, thereby stimulating operational vitality and improving business efficiency. The Company has also expanded the delegation of authority to subsidiaries, further unlocking business dynamism and driving growth, resulting in a significantly optimised governance structure and enhanced effectiveness.

COMPREHENSIVELY DEEPENING REFORM

The Company comprehensively deepens and enhances the state-owned enterprise reform, with technological innovation at the core and reforms in key areas as priorities. It accelerates the establishment of production relations that align with new quality productive forces and enhances the innovative allocation of various resource elements. These efforts have continuously strengthened its core functions and core competitiveness, earning an A rating for three consecutive years in the assessment of key reform tasks for central SOEs by the SASAC.

The Company has deepened reforms in the technological innovation system and mechanism by establishing specialised research institutes in cloud computing, AI, and quantum technology, along with the Singapore Innovation Research Institute. Additionally, it has set up a cloud-network operating system R&D centre, refined a package of innovation support policies and advanced original and pioneering breakthroughs to enhance the efficiency of technology transformation.

The Company has also deepened reforms in strategic emerging businesses, with ongoing improvements in professional and industry-focused subsidiaries. It established a satellite subsidiary and a publicity and communications company, and acquired QuantumCTek. Through market-oriented integration of high-quality internal and external resources, it has reinforced its early advantages in satellite communications and quantum technology while enhancing the supply of high-quality digital platforms and products. Moreover, China Telecom drives the optimisation of core business processes with the cloud-based middle platform as the hub, strengthens provincial and municipal talent teams in solutions, secondary development, delivery and operations and improves collaboration mechanisms between provincial branches and professional subsidiaries. It accelerates the deployment and promotion of self-developed products and capabilities to drive the large-scale development of strategic emerging businesses.

Additionally, the Company has deepened market-oriented operational reforms by maintaining a balance between responsibilities, authorities and interests, with an equal emphasis on incentives and constraints. It has expanded and enhanced tenure-based management and contract-based management, improved corporate governance capabilities at all levels, optimised assessment and incentive mechanisms and activated the high-quality development potential of various business units.

RISK PREVENTION IN COMPLIANCE WITH LAWS AND REGULATIONS

China Telecom adheres to lawful and honest operations, complying with national laws and regulations, regulatory requirements, industry standards, as well as its *Articles of Association* and internal rules. It strengthens compliance management, enhances intellectual property protection and upholds fair competition principles. Anti-corruption and integrity building, tax management, financial and audit supervision are seamlessly integrated into corporate operations and reforms. The Company conducts comprehensive risk identification and assessment, and strengthens risk monitoring and control. It maintained stable operations and controlled risk exposure throughout the year, with no major risk incidents.

Compliance management

China Telecom continues to advance lawful and compliant operations, constantly enhancing compliance management capabilities and standards. Committed to the principle of "compliance by everyone, in everything and every moment", it continuously improves the compliance management system. The Company strengthens organisational leadership, promoting coordinated and systematic development of legal affairs, compliance, internal control and risk management. It ensures horizontal collaboration and vertical integration to support compliant operations and risk prevention. To reinforce its institutional construction, the parent company has issued the *Articles of Association Guidelines for China Telecom's Subsidiaries*, the *China Telecom Procurement Management Measures*, and the *White Paper on Data Compliance for Strategic Emerging Businesses*, among other documents to enhance policy and regulatory reviews. Additionally, the Company refines its operational mechanisms to improve compliance risk identification and early warning capabilities, strengthens compliance reviews, conducts compliance inspections and evaluations of compliance management effectiveness, and promotes the institutionalisation, proceduralisation, systematisation, and digitalisation of compliance management. It also strengthens workforce development and continuously conducts training and awareness programmes to foster a compliance culture. Moreover, it prioritises compliance in key areas, reinforcing compliance management in cybersecurity, anti-monopoly and overseas operations. By integrating compliance management into business operations, China Telecom safeguards high-quality corporate development.

Intellectual property protection

The Company implements the national strategy of building an intellectual property powerhouse by continuously enhancing its intellectual property management and protection efforts. Focusing on strategic emerging industries and future industries, it continues to develop high-value invention patents, accelerate patent approvals, promote patent commercialisation and optimise patent portfolio planning. Aligning with international standards, key product development standards and product-related patent output, the Company enhances overseas patent portfolio planning and applications to strengthen its international influence and competitiveness in intellectual property.

China Telecom has issued guidelines for key areas of strategic emerging businesses to further standardise intellectual property compliance requirements in relevant fields. It continues to strengthen brand protection efforts and advance trademark registration and protection. Valuing intellectual property education and cultural development, the Company hosted the second China Telecom Intellectual Property Forum during the National Intellectual Property Publicity Week, promoting corporate brand culture and enhancing brand influence and recognition.

Participation in the first Intellectual Property Culture Carnival (Renmin University Station)

 CASE

In April 2024, during the National Intellectual Property Publicity Week, China Telecom participated in the first Intellectual Property Culture Carnival (Renmin University Station) as an exhibitor. The Company showcased its cutting-edge self-developed products and key corporate identifiers, highlighting China Telecom's intellectual property achievements. Through the event, it aimed to enhance its brand influence and recognition among university communities, foster collaboration in innovation between academia, government and enterprises and drive high-quality development in intellectual property initiatives.



Anti-monopoly and fair competition

The Company strictly adheres to the *Anti-Monopoly Law of the People's Republic of China*, the *Anti-Unfair Competition Law of the People's Republic of China*, and other laws, regulations and regulatory requirements. It upholds the principle of fair competition, operates in accordance with the law, protects consumer rights and interests and promotes the healthy development of the industry. China Telecom continuously strengthens corporate self-discipline, actively participates in and drives the improvement of self-regulation mechanisms for market conduct, resists unfair competition, maintains fair competition order and protects users' legitimate rights and interests. Focusing on competition compliance, it has issued marketing service standards such as the *Self-Regulatory Standards for Mobile Number Portability Services*, strictly prevents unfair competition practices such as false advertising and restricting user choices and continuously improves service quality. To enhance anti-monopoly training and publicity, the Company conducts training sessions on compliance, internal control and risk management and incorporates anti-monopoly compliance management into the curriculum.

Continuous antitrust learning themed “Together for Compliance with China Telecom”

In 2024, the Company compiled the *China Telecom Antitrust Compliance Guidelines for Business Interactions with Competitors* to prevent and mitigate antitrust risks in its operations. Antitrust-related content has been incorporated into the list of Party regulations and national laws that its leaders must be familiar with. China Telecom Online University's legal education section, *China Telecom Legal Academy*, has launched a dedicated antitrust learning initiative titled “Together for Compliance with China Telecom”. The initiative features a series of video courses, Antitrust Law awareness micro-videos from relevant units and related laws, regulations and guidelines, promoting thematic learning.



Anti-corruption and integrity building

The Company earnestly enforces the *Supervision Law of the People's Republic of China* and other anti-corruption laws and regulations and maintains a zero-tolerance policy towards corruption. It has established and refined five key mechanisms: anti-corruption education and prevention, institutional supervision, accountability enforcement, fault tolerance and correction and inspections and audits, to strictly prevent issues such as bribery, extortion, fraud, and money laundering.

To strengthen integrity risk prevention and control, the parent company has issued the *Notice on Further Strengthening the Integrity Risk Control Mechanism*, reinforcing primary responsibilities, improving work mechanisms, enhancing risk assessments and strengthening dynamic monitoring. The headquarters conducted key integrity risk assessments, identifying and analysing risks in critical areas, strengthening root cause analysis and implementing targeted risk prevention measures. All secondary units have developed and refined integrity risk control mechanisms tailored to their operations, ensuring comprehensive coverage. In 2024, various business lines issued over 70 policies and regulations, including the *Business Entertainment Management Measures* and the *Supplier Misconduct Management Measures*, to continuously enhance integrity risk management across professional domains.

China Telecom provides integrity and disciplinary & legal education for management and employees. It regularly holds warning education conferences to publicly disclose typical cases, using them as lessons to raise awareness, drive corrective actions and strengthen governance. Through the "China Telecom with Integrity" official account, it regularly promotes integrity education and reminders. Efforts to reinforce corporate integrity culture continue, fostering a clean and upright development environment. The Company distributes anti-corruption and anti-bribery legal and regulatory training materials to all directors. It has strictly and effectively completed the target tasks during the designated central inspection rectification period, continuously deepened long-term rectification efforts, disclosed progress as required and remained open to supervision from leadership, employees and the public. The Company maintains a strict approach and ensures high-quality internal inspections and audits.

China Telecom has set up a whistle-blowing postal mailbox and hotline to handle reports and accusations against its personnel, appeals regarding related decisions, as well as criticisms, opinions and suggestions concerning integrity building and anti-corruption efforts. The Company strictly implements the *Work Rules for Discipline and Supervision Organs in Handling Reports and Accusations*, ensuring that relevant accusations and charges are handled in accordance with the rules, disciplines and regulations, while strictly maintaining confidentiality to protect the rights of whistle-blowers.

Tax management

China Telecom strictly abides by tax laws and regulations, pays taxes in accordance with the law, operates with integrity and strengthens tax risk management, ensuring the efficient and compliant tax management.

- Firmly establishing legal awareness and bottom-line thinking, effectively implementing tax policies in line with industry characteristics and corporate realities and fully coordinating with risk assessments.
- Deepening the integration of business and taxation, strengthening tax process control and embedding tax management requirements at the business source to promote compliant operations.
- Promptly following up on tax policies and organising training and awareness programmes across multiple scenarios and levels.
- Accelerating the implementation of fully digitalised electronic invoice to enhance efficiency and support the Company's digital transformation.



Financial and audit supervision

The Company continues to enhance its internal control management system. In response to changes in internal and external environments and corporate management requirements, it focuses on addressing internal control deficiencies identified through central inspections, national audits, the Ministry of Industry and Information Technology's efforts to improve industry conduct and rectify malpractice, special internal control rectifications for information security and internal inspections and audits. The internal control manual and authorisation list have been updated promptly to improve the effectiveness of internal control measures.

To strengthen the digital capabilities of financial supervision, China Telecom has established a financial shared service center, enhancing the analysis, monitoring, and evaluation of accounting information quality while monitoring and preventing related financial risks, thereby enabling top-down, transparent financial supervision. Leveraging treasury management and Big Data-driven risk prevention systems, the Company has built a closed-loop management system, strengthened its data foundation, deepened the integration of business and finance and continuously optimised and expanded the application of risk control models to enhance the quality and effectiveness of financial supervision.

Efforts are also focused on improving audit supervision efficiency. The Company has conducted audits around priorities in major strategic decisions, management challenges, and reform bottlenecks to ensure the effective implementation of major strategies and the mitigation of significant risks across all levels of the organisation.

Deepen audit supervision

- Throughout the year, 240,000 audit projects were conducted, resulting in 2,054 management recommendations and the improvement of 1,985 institutional processes, safeguarding the Company's high-quality development.

Strengthen issue rectification and accountability

- Establish a long-term rectification mechanism to drive coordinated audit rectification and address common issues at their root.
- Enforce strict accountability measures for irregular business operations and investments, reinforcing deterrence through warnings.

Accelerate the digital-intelligent transformation of auditing

- Launch the general audit model along with intelligent query functions for audit workpapers and documents, enhancing digital-intelligent auditing capabilities.
- Improve the regular risk monitoring system, while conducting risk scans and dispatching tasks for key areas, ensuring precise and effective risk management.

TABLE OF THE INDICATORS

Issues	No.	Name of Indicators	Unit	2024	2023
Emissions	1.	Scope 1: Direct greenhouse gas emissions ¹	million tons CO ₂ e	0.14	0.17
	2.	Scope 2: Indirect greenhouse gas emissions ¹	million tons CO ₂ e	14.21	15.00
	3.	Total greenhouse gas emissions ¹	million tons CO ₂ e	14.35	15.17
	4.	Greenhouse gas emissions per unit of information flow	tons CO ₂ e/TB	0.0114	0.0139
	5.	Greenhouse gas emissions per unit of total volume of telecommunications services ¹	tons CO ₂ e/RMB million	18.64	23.06
	6.	Greenhouse gas emission reductions	million tons CO ₂ e	15.30	–
	7.	Sewage emissions ²	million tons	30.83	34.06
	8.	SO ₂ emissions ³	tons	21.15	10.54
	9.	Non-hazardous waste produced ⁴	tons	23,232.06	23,118.74
	10.	Non-hazardous waste produced per unit of operating revenue	tons/RMB million	0.0439	0.0450
	11.	Hazardous waste produced ⁴	tons	25,571.57	21,633.22
	12.	Hazardous waste produced per unit operating revenue	tons/RMB million	0.0483	0.0421
	13.	Electronic waste produced ⁴	tons	38,362.77	26,098.87
	14.	Electronic waste produced per unit operating revenue	tons/RMB million	0.0725	0.0508
Use of Resources	15.	Electricity consumption ⁵	MWh	27,992,222.94	27,191,355.63
			tce	3,440,244.20	3,341,817.61
	16.	Green electricity consumption ⁶	MWh	2,705,784.08	1,105,484.46
			tce	332,540.86	135,864.04
	17.	Proportion of green electricity consumption	%	9.67	4.07
	18.	Natural gas consumption ⁵	MWh	91,073.71	113,514.70
			tce	11,187.07	13,943.62
	19.	Coal consumption ⁵	MWh	8,967.78	5,633.10
			tce	1,101.58	691.94
	20.	Gasoline consumption ⁵	MWh	332,023.18	426,994.44
			tce	40,783.32	52,448.91

Issues	No.	Name of Indicators	Unit	2024	2023
Use of Resources	21.	Diesel consumption ⁵	MWh	136,346.98	152,007.74
			tce	16,747.83	18,671.48
	22.	Purchased heat consumption amount ⁵	MWh	325,360.90	305,545.00
			tce	39,964.73	37,530.70
	23.	Overall energy consumption	MWh	28,885,995.49	28,195,050.61
			tce	3,550,028.73	3,465,104.26
	24.	Overall energy consumption per unit of information flow	MWh/TB	0.0230	0.0258
			tce/TB	0.0028	0.0032
	25.	Overall energy consumption per unit of total volume of telecommunications services	MWh/RMB million	37.51	42.85
			tce/RMB million	4.61	5.27
The Environmental and Natural Resources	26.	Power consumption per carrier frequency at base stations	kWh/carrier frequency	1,289.77	1,549.03
	27.	Water consumption ⁷	million tons	36.27	40.07
	28.	Water consumption per unit operating revenue	tons/RMB million	68.52	78.03
	29.	Reclaimed water consumption ⁷	tons	293,694.64	293,973.65
	30.	Investment in energy saving and environmental conservation ⁸	RMB million	2,153.15	2,497.81
Product Responsibility	31.	Countries and regions of mobile data international roaming and roaming in Hong Kong, Macau and Taiwan	-	245	251
	32.	Domestic administrative village fibre broadband coverage	%	98	98
	33.	Domestic administrative village mobile network coverage ⁹	%	99	98
	34.	Internet backbone network interconnection bandwidth	Gbps	61,280.00	42,820.00
	35.	International interconnection bandwidth	Gbps	15,163.09	12,363.66
	36.	Call drop rate of mobile communication ¹⁰	%	0.03	0.03
	37.	Call completion rate of mobile communication network ¹⁰	%	99.34	99.30
	38.	Call completion rate for access line	%	89.19	89.13
	39.	Packet loss rate of broadband Internet ChinaNet backbone network	%	0.03	0.03
	40.	Mobile service satisfaction ¹¹	points	81.82	-

Issues	No.	Name of Indicators	Unit	2024	2023
Product Responsibility	41.	Fixed broadband satisfaction ¹¹	points	82.09	–
	42.	Wireline voice satisfaction ¹¹	points	91.14	–
	43.	Percentage of in-time response to international customer repair reports ¹²	%	99.58	99.55
	44.	International customer satisfaction ¹³	points	93.80	93.69
	45.	Number of new patents granted	–	2,561	1,187
	46.	Number of new invention patents granted	–	2,494	1,155
	47.	R&D investment amount	RMB million	17,792.11	–
	48.	Proportion of R&D investment in main business revenue	%	3.71	–
	49.	Number of R&D personnel	–	43,255	–
	50.	Proportion of R&D personnel	%	15.58	–
	51.	Number of fraudulent IPs blocked ¹⁴	–	117,408	160,886
	52.	Number of customer complaints and reports ¹⁵	person-times	844,244	–
	53.	Customer complaint and report rate ¹⁵	person-times/million users	1,132.9	–
Anti-corruption	54.	Number of corruption cases ¹⁶	–	3	1
	55.	Number of directors receiving anti-bribery and anti-corruption training ²⁴	–	11	–
	56.	Proportion of directors receiving anti-bribery and anti-corruption training ²⁴	%	100	–
	57.	Number of management personnel receiving anti-bribery and anti-corruption training ²⁴	–	6	–
	58.	Proportion of management personnel receiving anti-bribery and anti-corruption training ²⁴	%	100	–
	59.	Number of employees receiving anti-bribery and anti-corruption training ²⁴	–	265,330	–
	60.	Proportion of employees receiving anti-bribery and anti-corruption training ²⁴	%	97.55	–
Supplier	61.	Total number of suppliers ¹⁷	–	28,976	27,002
	62.	Number of suppliers in Mainland China ¹⁷	–	28,416	26,447
	63.	Number of suppliers in regions of Hong Kong, Macau and Taiwan of China ¹⁷	–	218	222
	64.	Number of suppliers from other countries and regions ¹⁷	–	342	333
	65.	Amount of overdue outstanding payments	RMB10,000	0	–

Issues	No.	Name of Indicators	Unit	2024	2023
Employment	66.	Proportion of female managers	%	22.25	21.94
	67.	Total number of employees ¹⁸	–	277,674	278,539
	68.	Number of full-time employees ¹⁸	–	272,385	272,582
	69.	Number of part-time employees ¹⁸	–	5,289	5,957
	70.	Number of employees under the age of 30	–	46,542	44,536
	71.	Number of employees aged 30–49	–	153,393	160,273
	72.	Number of employees aged 50 and above	–	77,739	73,730
	73.	Number of male employees	–	191,083	190,870
	74.	Number of female employees	–	86,591	87,669
	75.	Number of employees in Mainland China	–	275,518	276,444
	76.	Number of employees in Hong Kong, Macau, Taiwan and overseas branches	–	2,156	2,095
	77.	Percentage of ethnic minority employees	%	7.07	7.03
	78.	Number of new employees ¹⁸	–	12,026	12,402
	79.	Percentage of female among new employees ¹⁸	%	29.98	31.76
	80.	Turnover rate of employees under the age of 30 ¹⁹	%	2.77	3.46
	81.	Turnover rate of employees aged 30–49 ¹⁹	%	0.73	0.88
	82.	Turnover rate of employees aged 50 and above ¹⁹	%	0.28	1.06
	83.	Turnover rate of female employees ¹⁹	%	0.97	1.36
	84.	Turnover rate of male employees ¹⁹	%	0.93	1.33
	85.	Turnover rate of employees in Mainland China ¹⁹	%	0.90	1.33
	86.	Turnover rate of employees in Hong Kong, Macau, Taiwan and overseas branches ¹⁹	%	7.00	14.61
	87.	Signing rate of employment contract ¹⁸	%	100	100
	88.	Coverage rate of social insurance ¹⁸	%	100	100

Issues	No.	Name of Indicators	Unit	2024	2023
Safety and Health	89.	Amount of investment in work-related injury insurance	RMB 10,000	17,752.02	–
	90.	Coverage rate of work-related injury insurance ¹⁸	%	100	–
	91.	Serious injury rate per 1,000 employees ²⁰	number of serious injuries/thousand	0	0
	92.	Loss of working days due to work-related injury ²⁰	days	0	0
	93.	Number of participants in safety emergency drills	person-times	541,685	485,870
	94.	Number of participants in health and safety trainings	person-times	599,594	609,745
	95.	Participation rate of employee health checkup ¹⁸	%	94.31	89.26
	96.	Number of work-related fatalities ²⁰	–	0	0
	97.	Fatality rate per 1,000 employees ²⁰	number of deaths/thousand	0	0
Training and Development ²¹	98.	Training expenses per employee	RMB/person	3,954.22	3,682.69
	99.	Number of internal trainers	–	14,729	14,817
	100.	Total number of participants trained	10,000 person-times	159.80	88.57
	101.	Number of senior management trained	person-times	2,513	1,615
	102.	Number of middle-level management trained	person-times	264,167	124,547
	103.	Number of general employees trained	person-times	1,331,328	759,509
	104.	Number of male employees trained	person-times	1,074,830	592,279
	105.	Number of female employees trained	person-times	523,178	293,392
	106.	Number of employees passed skill certification exams	person-times	59,649	46,759
	107.	Average training time per employee	hours/person	101.67	75.11
	108.	Average training time per senior management	hours/person	146.81	168.22
	109.	Average training time per middle-level management	hours/person	153.21	94.49

Issues	No.	Name of Indicators	Unit	2024	2023
Training and Development ²¹	110.	Average training time per general employee	hours/person	94.56	72.32
	111.	Average training time per male employee	hours/person	103.19	76.89
	112.	Average training time per female employee	hours/person	98.25	71.13
	113.	Proportion of senior management participating in training	%	99.54	95.80
	114.	Proportion of middle-level management participating in training	%	99.50	93.07
	115.	Proportion of general employees participating in training	%	95.89	83.78
	116.	Proportion of male employees participating in training	%	96.02	83.99
	117.	Proportion of female employees participating in training	%	97.02	86.93
Community	118.	Total service time of volunteers	10,000 hours	78.70	65.58
	119.	Number of participants in volunteering activities	10,000 person-times	21.05	16.36
	120.	Number of volunteering activities	sessions	26,149	26,828
	121.	Volunteer service activities input amount	RMB million	17.48	14.62
	122.	Number of participated pole line co-built ²²	kilometres	5,788	2,984
	123.	Number of provided pole line co-shared ²²	kilometres	13,385	8,107
	124.	Number of co-built pipelines participated ²²	kilometres	8,006	8,315
	125.	Number of co-shared pipelines provided ²²	kilometres	1,266	585
	126.	Number of co-built indoor distribution systems participated ²²	-	44,945	38,750
	127.	Personnel involved in emergency communication support	person-times	452,726	768,687
	128.	Number of emergency communication equipment dispatched	set-times	67,915	78,487
	129.	Number of emergency communication vehicles dispatched	vehicle-times	95,738	135,101
	130.	Number of emergency public service messages sent ²³	million pieces	19,443.76	23,556.01

Notes:

1. Greenhouse gas is measured based on the *Greenhouse Gas Protocol — Enterprise Accounting and Reporting Standards* of World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* of Intergovernmental Panel on Climate Change (IPCC) and the *Fourth Assessment Report 2007* of Intergovernmental Panel on Climate Change (IPCC), etc.;

Scope 1: direct greenhouse gas emissions include the greenhouse gas emissions from use of natural gas, coal, gasoline and diesel;

Scope 2: indirect greenhouse gas emissions include the greenhouse gas emissions from purchased electricity and heating power, where the electricity emissions factor shall refer to the national average CO₂ emission factor for electricity in 2021 (0.5568t CO₂/MWh), as disclosed in the *Announcement on the 2021 Electricity CO₂ Emission Factor* (《生態環境部、國家統計局關於發佈2021年電力二氧化碳排放因數的公告》) issued by the Ministry of Ecology and Environment of the People's Republic of China and the National Bureau of Statistics; and the emissions factor for heat shall refer to the *Guidelines for Calculation Methods and Reporting of Greenhouse Gas Emissions from Industrial and Other Industries Enterprises (Trial)* (《工業其他行業企業溫室氣體排放核算方法與報告指南（試行）》) issued by the General Office of National Development and Reform Commission of the People's Republic of China;

Total greenhouse gas emissions shall be the sum of Scope 1 (direct greenhouse gas emissions) and Scope 2 (indirect greenhouse gas emissions);

The total volume of telecommunications services represents the sum of respective indicators of volume of each service multiplied by the corresponding constant unit price, whereas the constant unit price refers to the constant unit price of telecommunications services in 2020 released by the Ministry of Industry and Information Technology.

2. The quantity of sewage emissions is measured based on water consumption, and the wastewater discharge coefficient shall be based on GB50318–2017: *Code of Urban Wastewater Engineering Planning of the National Standards of the People's Republic of China* (《中華人民共和國國家標準城市排水工程規劃規範》) and relevant documents of National Bureau of Statistics of the People's Republic of China.

3. SO₂ emissions refer to the SO₂ emissions arising from coal use. The SO₂ emission coefficient is calculated using the material balance method by reference to GB/T 2589–2020: *the National Standardised General Principles for Calculation of Comprehensive Energy Consumption of the People's Republic of China* (《中華人民共和國國家標準綜合能耗計算通則》) and relevant documents issued by the State-owned Assets Supervision and Administration Commission of the State Council.

4. Non-hazardous waste includes domestic waste. The quantity of domestic waste produced is measured based on the per capita household waste output coefficient, following GB/T 50337-2018 *Standard for Planning of Urban Environment Sanitation Facilities* (《城市環境衛生設施規劃標準》). Hazardous waste only includes the volume of disposed waste batteries. Electronic wastes include waste telecommunications equipment, waste cables, waste terminals, and waste electronic office supplies.

5. Statistics on electricity consumption, natural gas consumption, coal consumption, gasoline consumption, diesel consumption, purchased heat consumption cover the Company's headquarters, 31 provincial branches and professional companies; the conversion coefficient for each energy consumption shall refer to GB/T2589-2020: the *National Standardised General Principles for Calculation of Comprehensive Energy Consumption of the People's Republic of China* (《中華人民共和國國家標準綜合能耗計算通則》);

Electricity consumption refers to non-renewable electricity purchased that was generated by fossil fuels as well as green electricity.

6. Statistics on green electricity consumption covers 31 provincial branches of the Company. The statistical scope encompasses electricity generated from self-built distributed energy facilities as well as green electricity obtained through green certificate transactions and green electricity transactions. Green electricity transactions refer to wind and photovoltaic power generation with "integration of trading of permit and electricity".

7. The water source used by the Company comes from municipal tap water supply or purchased reclaimed water, and there is no problem in obtaining water source.

8. Investment in energy saving and environmental conservation comprises of two categories: the Company's contribution and contractual energy management.

9. Domestic administrative village mobile network coverage rate refers to the consolidated coverage of 4G and 5G networks in domestic administrative villages at the end of the reporting period.

10. VoLTE data was used for call drop rate of mobile communication and call completion rate of mobile communication network.

11. In 2023, the disclosed data source was the Ministry of Industry and Information Technology. Since the Ministry no longer publishes customer satisfaction scores in 2024, the disclosed data for 2024 is based on a third-party evaluation organised by the Company.

12. Percentage of in-time response to international customer repair reports refers to the percentage of work orders which are completed by the global company within the required time limit of service recovery for customers to the total number of work orders.

13. The data sources of international customer satisfaction are from a third-party consultation company, who conducted annual satisfaction surveys on enterprise customers to whom the global company provided services during the survey cycle.

14. Number of fraudulent IPs blocked is the number of fraudulent IPs blocked by the Company during the reporting period in accordance with requirements by the relevant state authorities.

15. The data sources for the number of customer complaints and reports (person-times) and the customer complaint and report rate (person-times/million users) in 2024 are from the Ministry of Industry and Information Technology. The disclosure scope follows a full-caliber statistical approach without exclusions. In 2023, the disclosed indicators were 432,419 customer complaints and reports and a customer complaint and report rate of 593.6 cases per million users, based on statistics excluding duplicate reports, invalid reports, and agent-submitted reports.

16. Number of corruption cases refers to the number of corruption cases filed against the Company or its employees and the judgement of which has been received during the reporting period. This year, three corruption cases have been concluded, with three individuals involved sentenced to fixed-term imprisonment.

17. The total number of suppliers, number of suppliers in Mainland China, number of suppliers in regions of Hong Kong, Macau and Taiwan of China, number of suppliers from other countries and regions refer to the centralised procurement suppliers of China Telecom.

18. The total number of employees includes the number of contract workers, part-time employees, dispatched employees and other employees by the end of the reporting period, of which, contract workers are counted as full-time employees, whereas dispatched employees, part-time employees and other employees are counted as part-time employees.

Number of new employees, percentage of female among new employees, participation rate of employee health checkup, signing rate of employment contract, coverage rate of social insurance, and coverage rate of work-related injury insurance are calculated based on contract employees.

19. Turnover rate of employees = (number of employees turnover during the reporting year/number of employees at the end of the reporting period)*100%.

The statistical calibre of turnover rates of employees by gender and age group and the statistical calibre of turnover rates of employees in Mainland China, Hong Kong, Macau, Taiwan and overseas branches during the reporting period are consistent with those used for the total number of employees.

20. Serious injury rate per 1,000 employees, loss of working days due to work-related injury, number of work-related fatalities and fatality rate per 1,000 employees are the data on injuries and fatalities of on-the-job contract employees resulting from safety liability accidents for which the Company is responsible. According to Appendix C2 *Environmental, Social and Governance Reporting Code* of the Listing Rules of the Hong Kong Stock Exchange, the Company is required to disclose the number and rate of work-related fatalities for each of the past three years (including the reporting year). In 2022, number of work-related fatalities was 0, and the fatality rate per 1,000 employees was 0 deaths per thousand employees.

21. Indicators related to training and development refer to the data of on-the-job contract employees participating in the Company's virtual and physical training during the reporting period.

22. Number of participated pole line co-built, number of provided pole line co-shared, number of co-built pipelines participated, number of co-shared pipelines provided and number of co-built indoor distribution systems participated refer to the number of pole lines, pipelines and indoor distribution systems co-built and co-shared which are participated in or provided by the Company during the reporting period.

23. Emergency public service messages include public service messages in relation to natural disaster warning and important events support.

24. According to the relevant requirements of the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)*, the 2023 disclosure indicators "number of anti-corruption education activities" and "attendance of anti-corruption education and trainings" have been adjusted to "number and proportion of directors, management personnel, and employees receiving anti-bribery and anti-corruption training".

INDEPENDENT PRACTITIONER'S ASSURANCE REPORT

English Translation for Reference Only

Independent Practitioner's Assurance Report

Independent practitioner's assurance report serial no. 2500074

To the board of directors of China Telecom Corporation Limited

Report on selected information in China Telecom Corporation Limited's Sustainability Report 2024 (ESG Report)

Conclusion

We have performed a limited assurance engagement on the following information in China Telecom Corporation Limited's Sustainability Report (ESG Report) as of and for the year ended 31 December 2024 (hereafter referred to as "the assured sustainability information"):

Scope 1: Direct greenhouse gas emissions (million tons CO ₂ e)	Number of employees aged 30-49
Scope 2: Indirect greenhouse gas emissions (million tons CO ₂ e)	Number of employees aged 50 and above
Total greenhouse gas emissions (million tons CO ₂ e)	Number of male employees
Sewage emissions (million tons)	Number of female employees
SO ₂ emissions (tons)	Number of employees in Mainland China
Non-hazardous waste produced (tons)	Number of employees in Hong Kong, Macau, Taiwan and overseas branches
Non-hazardous waste produced per unit of operating revenue (tons/RMB million)	Percentage of ethnic minority employees (%)
Green electricity consumption (MWh, tce)	Number of new employees
Proportion of green electricity consumption (%)	Percentage of female among new employees (%)
Electricity consumption (MWh, tce)	Turnover rate of employees under the age of 30 (%)
Natural gas consumption (MWh, tce)	Turnover rate of employees aged 30-49 (%)
Coal consumption (MWh, tce)	Turnover rate of employees aged 50 and above (%)
Gasoline consumption (MWh, tce)	Turnover rate of female employees (%)
Diesel consumption (MWh, tce)	Turnover rate of male employees (%)
Purchased heat consumption amount (MWh, tce)	Turnover rate of employees in Mainland China (%)
Overall energy consumption (MWh, tce)	Turnover rate of employees in Hong Kong, Macau, Taiwan and overseas branches (%)
Water consumption (million tons)	Signing rate of employment contract (%)
Water consumption per unit operating revenue (tons/RMB million)	Coverage rate of social insurance (%)
Reclaimed water consumption (tons)	Serious injury rate per 1,000 employees (number of serious injuries/thousand)
Countries and regions of mobile data international roaming and roaming in Hong Kong, Macau and Taiwan	Loss of working days due to work-related injury (days)
Internet backbone network interconnection bandwidth (Gbps)	Number of participants in health and safety trainings (person-times)

Mobile service satisfaction (points)	Participation rate of employee health checkup (%)
Fixed broadband satisfaction (points)	Number of work-related fatalities
Wireline voice satisfaction (points)	Fatality rate per 1,000 employees (number of deaths/thousand)
Percentage of in-time response to international customer repair reports (%)	Amount of investment in work-related injury insurance (RMB10,000)
International customer satisfaction (points)	Coverage rate of work-related injury insurance (%)
Number of new patents granted	Training expenses per employee (RMB/person)
Number of new invention patents granted	Number of internal trainers
R&D investment amount (RMB million)	Total number of participants trained (10,000 person-times)
Proportion of R&D investment in main business revenue (%)	Number of senior management trained (person-times)
Number of R&D personnel	Number of middle-level management trained (person-times)
Proportion of R&D personnel (%)	Number of general employees trained (person-times)
Number of fraudulent IPs blocked	Number of male employees trained (person-times)
Number of customer complaints and reports (person-times)	Number of female employees trained (person-times)
Customer complaint and report rate (person-times/million users)	Number of employees passed skill certification exams (person-times)
Number of corruption cases	Average training time per employee (hours/person)
Number of management personnel receiving anti-bribery and anti-corruption training	Average training time per senior management (hours/person)
Proportion of management personnel receiving anti-bribery and anti-corruption training (%)	Average training time per middle-level management (hours/person)
Number of employees receiving anti-bribery and anti-corruption training	Average training time per general employee (hours/person)
Proportion of employees receiving anti-bribery and anti-corruption training (%)	Average training time per male employee (hours/person)
Total number of suppliers	Average training time per female employee (hours/person)
Number of suppliers in Mainland China	Proportion of senior management participating in training (%)
Number of suppliers in regions of Hong Kong, Macau and Taiwan of China	Proportion of middle-level management participating in training (%)
Number of suppliers from other countries and regions	Proportion of general employees participating in training (%)
Proportion of female managers (%)	Proportion of male employees participating in training (%)
Total number of employees	Proportion of female employees participating in training (%)
Number of full-time employees	Number of emergency public service messages sent (million pieces)
Number of part-time employees	Amount of overdue outstanding payments (RMB10,000)
Number of employees under the age of 30	

Based on the procedures performed and evidence obtained, nothing has come to our attention to cause us to believe that the assured sustainability information of China Telecom Corporation Limited is not prepared, in all material respects, in accordance with the *Environmental, Social and Governance Reporting Code* as set out in Appendix C2 to the Listing Rules of the Hong Kong Stock Exchange and the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)*.

Our conclusion on the assured sustainability information does not extend to any other information that accompanies or contains the assured sustainability information and our report (hereafter referred to as "other information"). We have not performed any procedures as part of this engagement with respect to the other information.

Basis for conclusion

We conducted our engagement in accordance with *International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board (IAASB). Our responsibilities under this standard are further described in the "Our responsibilities" section of our report.

We have complied with the independence and other ethical requirements of the *International Code of Ethics for Professional Accountants (including International Independence Standards)* issued by the International Ethics Standards Board for Accountants (IESBA), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies *International Standard on Quality Management (ISQM) 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*, issued by the IAASB. This standard requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Other matter

The assured key data in China Telecom Corporation Limited's Sustainability Report (ESG Report) as of and for the year ended 31 December 2023, was subject to a limited assurance engagement performed by another practitioner with an unmodified conclusion on such information expressed in the assurance report issued on the date of last year's report. Our conclusion is not modified with respect of this matter.

Restriction on use

This report is made solely to you, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Our conclusion is not modified in respect of this matter.

Responsibilities for the assured sustainability information

The management of China Telecom Corporation Limited are responsible for:

- designing, implementing and maintaining internal control relevant to the preparation of the assured sustainability information such that is free from material misstatement, whether due to fraud or error;
- selecting or developing suitable criteria for preparing the assured sustainability information and appropriately referring to or describing the criteria used; and
- preparing the assured sustainability information in accordance with the *Environmental, Social and Governance Reporting Code* as set out in Appendix C2 to the Listing Rules of the Hong Kong Stock Exchange and the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)*.

Those charged with governance are responsible for overseeing the reporting process for China Telecom Corporation Limited's assured sustainability information.

Inherent limitations in preparing the subject matter information

The absence of a recognised system to evaluate and measure non-financial information leads to inconsistent measurement methods and can affect comparability of data between companies.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the assured sustainability information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to you.

Summary of the work we performed as the basis for our conclusion

We exercised professional judgment and maintained professional skepticism throughout the engagement. We designed and performed our procedures to obtain evidence about the assured sustainability information that is sufficient and appropriate to provide a basis for our conclusion. Our procedures selected depended on our understanding of the assured sustainability information and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise. In carrying out our engagement, the procedures we performed primarily consisted of:

- 1) Interviews with employees from relevant departments at the headquarters of the Company involved in providing the assured sustainability information;
- 2) Analytical procedures;
- 3) Sampling inspection;
- 4) Recalculation; and
- 5) Other procedures deemed necessary.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

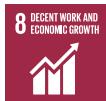
KPMG Huazhen LLP

Beijing, China

25 March 2025

INDEXES

The 2030 Agenda for Sustainable Development of the United Nations – 17 Sustainable Development Goals (SDGs)

SDGs	China's National Plan Regarding SDGs	Location in the Report
	<ul style="list-style-type: none"> Introduce more investments in poverty-relief areas Help other developing countries in economic development, livelihood improvement and poverty alleviation 	Serving Rural Revitalisation Supporting Development of Local Community
	<ul style="list-style-type: none"> Ensure that everyone has safe, nutritious and sufficient food all year Ensure the supply of key agricultural products, increase farmers' income, and achieve sustainable agricultural development 	Serving Rural Revitalisation Industrial Digitisation
	<ul style="list-style-type: none"> Promote equality of and accessibility to basic medical and healthcare services Popularise knowledge of mental health 	Industrial Digitisation Serving Rural Revitalisation Caring for Employees Supporting Development of Local Community
	<ul style="list-style-type: none"> Bridge the gap in education between urban and rural areas at a faster speed Promote information-enabled education and develop distance education Provide short-term education and training for other developing countries 	Industrial Digitisation Serving Rural Revitalisation Enthusiastically Participating in Social Welfare Supporting Development of Local Community
	<ul style="list-style-type: none"> Eliminate all forms of discrimination and bias against women Enhance the working and entrepreneurial capability of women by offering public childcare services 	Protecting Employees' Rights and Interests Caring for Employees Supporting Employees' Development
	<ul style="list-style-type: none"> Comprehensively promote the development of a water-saving society by strengthening the management over water demand and water utilisation process Protect and restore water-related ecosystem 	Green Office Ecosystem and Biodiversity Conservation
	<ul style="list-style-type: none"> Optimise the energy structure by enhancing the utilisation rate of fossil fuel energy and increasing the proportion of clean energy consumption 	Green Energy Use
	<ul style="list-style-type: none"> Improve innovation capabilities and core competitiveness in key areas such as new generation of information technology and biomedicine Safeguard workers' legitimate rights and interests such as labour remuneration, rest and holidays, social insurance, etc. Enhance the employment and entrepreneurial service system, implement a life-long vocational skills training system, and carry out the employment promotion and entrepreneurship leadership plans for college graduates Accelerate the management and control of safety risk levels and the inspection and elimination of hidden hazards, and carry out publicity and education activities about safety culture 	Consolidating Digital Foundation Technological Self-Reliance Protecting Employees' Rights and Interests Supporting Employees' Development Strengthening Production Safety

SDGs	China's National Plan Regarding SDGs	Location in the Report
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	<ul style="list-style-type: none"> Facilitate the upgrading and transformation of traditional industries and advance the quality and efficiency improvement of manufacturing industry Promote low-carbon industrial energy use Establish systematic capabilities for continuous innovation, nurture and gather strategic scientists and leading talents in science and technology Accelerate the promotion and application of high-quality networks and urban and rural coverage 	Industrial Digitisation Green Economic and Social Transformation Supporting Employees' Development Serving Rural Revitalisation
 10 REDUCED INEQUALITIES	<ul style="list-style-type: none"> Attach great importance to providing equal opportunities and ensuring equal rights of participation and development for all employees Consistently promote growth of both resident income and the economy, as well as growth of both salary and work productivity at the same time 	Protecting Employees' Rights and Interests
 11 SUSTAINABLE CITIES AND COMMUNITIES	<ul style="list-style-type: none"> Improve the social governance system, achieve positive interaction between government governance, social adjustment and residents' autonomous governance Strengthen the monitoring and alerting systems of natural disasters as well as project defense capabilities, enhance social mobilisation mechanism in relation to disaster prevention and reduction and establish smooth channels for social participation in disaster prevention and reduction 	Digital Society Digital Government Administration Assuring Emergency Communications Green Economic and Social Transformation
 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	<ul style="list-style-type: none"> Strenuously develop circular economy with significant increase in the recycling of major types of wastes Comprehensively promote the extended producer responsibility system to encourage enterprises to fully implement the concept of sustainable development in their production management 	Recycling Responsible Supply Chain
 13 CLIMATE ACTION	<ul style="list-style-type: none"> Enhance the capacity to withstand and adapt to climate-related and natural disasters. Popularise the knowledge about climate change and low-carbon development concepts with guidance to the general public for active participation in actions against climate change 	Strategy and Risk Management Assuring Emergency Communications Green Economic and Social Transformation
 14 LIFE BELOW WATER	<ul style="list-style-type: none"> Carry out integrated ocean management and put more efforts on the protection of typical ecosystem 	Ecosystem and Biodiversity Conservation

SDGs	China's National Plan Regarding SDGs	Location in the Report
 15 LIFE ON LAND	<ul style="list-style-type: none"> Maintain ecological water levels in key wetlands and estuaries and protect and restore the biological systems in wetlands, rivers, and lakes Restore and expand habitats for endangered animals and plants and strengthen international cooperation on wildlife protection 	Ecosystem and Biodiversity Conservation
 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	<ul style="list-style-type: none"> Implement the Law on the Protection of Minors, and crack down, in accordance with the laws, on the unlawful and criminal acts such as use of child and forced labour Resolutely rectify and investigate malpractices and corruption issues that cause prejudice to the interests of the folks, and take a deeper dive into inspections and on-site supervision 	Protecting Employees' Rights and Interests Anti-corruption and Integrity Building
 17 PARTNERSHIPS FOR THE GOALS	<ul style="list-style-type: none"> Proactively participate in global development and cooperation and promote the establishment of more balanced global partnerships for development Proactively participate in the works in relation to the establishment of mechanisms for enhancing the use of global technology Arrange skill trainings and development experience sharing activities for other developing countries 	Industry-Academia-Research Cooperation Supporting Development of Local Community

**Guidelines No. 14 of Shanghai Stock Exchange for
Self-Regulation of Listed Companies—Sustainability Report (Trial)**

No.	Issue	Impact Materiality Assessment	Financial Materiality Assessment	Location in the Report
1	Climate change tackling	★★★★★	★★★	Practicing "Dual Carbon" Strategy Promoting Low-carbon Operation Green Economic and Social Transformation Table of the Indicators
2	Pollutant discharge	★	★	No significant correlation ²
3	Waste disposal	★★★	★	Recycling Table of the Indicators
4	Ecosystem and biodiversity protection	★★★	★	Ecosystem and Biodiversity Conservation
5	Environmental compliance management	★★★	★	Green Cloud-Network
6	Energy usage	★★★★★	★★	Green Cloud-Network Green Energy Use Table of the Indicators
7	Usage of water resources	★★★	★	Green Office Table of the Indicators
8	Circular economy	★★★	★★	Recycling Green Energy Use Table of the Indicators
9	Rural revitalisation	★★★★★	★	Serving Rural Revitalisation
10	Contributions to the society	★★★	★	Promoting care for the elderly Enthusiastically Participating in Social Welfare Fulfilling Overseas Public Welfare Responsibilities
11	Innovation-driven	★★★★★	★★	Technological Self-Reliance Intellectual Property Protection Table of the Indicators
12	Ethics of science and technology	★★★	★	Ethics of Science and Technology

No.	Issue	Impact Materiality Assessment	Financial Materiality Assessment	Location in the Report
13	Supply chain security	★★★	★★	Responsible Supply Chain Table of the Indicators
14	Equal treatment to small and medium-sized enterprises	★★★	★	Table of the Indicators
15	Safety and quality of products and services	★★★★★	★★	Product and Service Quality Management Protecting the Rights and Interests of Customers Strengthening Production Safety Table of the Indicators
16	Data security and customer privacy protection	★★★★★	★★	Maintaining Network and Information Security Providing Security Services Table of the Indicators
17	Employees	★★★★★	★★	Protecting Employees' Rights and Interests Caring for Employees Supporting Employees' Development Table of the Indicators
18	Due diligence	★★★★★	★	Compliance Management ³
19	Communications with stakeholders	★★★★★	★	Communications with Stakeholders
20	Anti-commercial bribery and anti-corruption	★★★	★	Anti-corruption and Integrity Building Table of the Indicators
21	Anti-unfair competition	★★★	★	Anti-monopoly and Fair Competition
22	Digital information infrastructure development	★★★★★	★★	Consolidating Digital Foundation

No.	Issue	Impact Materiality Assessment	Financial Materiality Assessment	Location in the Report
23	Digital transformation of the economy and society	★★★★★	★★	Empowering Digital Transformation
24	Emergency Communications	★★★★	★	Assuring Emergency Communications
25	Overseas corporate responsibility	★★★	★★	Co-writing the Overseas Chapter

Notes:

1. An assessment result of “★★★” or above indicates impact materiality or financial materiality.
2. Considering that neither the Company nor its subsidiaries are included in the list of enterprises required by law to disclose environmental information, the assessment result for pollutant discharge has neither impact materiality nor financial materiality.
3. Due diligence on negative impacts or risks related to sustainable development is described in the relevant sections addressing specific topics.

Environmental, Social and Governance Reporting Code in Appendix C2 of the Listing Rules of the Hong Kong Stock Exchange

Aspect	Content	Location in the Report
Part B: Mandatory Disclosure Requirements		
	The Statement of the Board of Directors	For details, please refer to "The Statement of the Board of Directors"
	Reporting Principles	For details, please refer to "About the Report"
	Reporting Scope	For details, please refer to "About the Report"
Part C: "Comply or Explain" Provisions		
A1 Emissions	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 air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Practicing "Dual Carbon" Strategy Recycling
	A1.1 The types of emissions and respective emissions data.	Table of the Indicators
	A1.2 Direct (Scope 1) and indirect energy (Scope 2) greenhouse gas emissions (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility). [Repealed 1 January 2025]	Table of the Indicators
	A1.3 Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Table of the Indicators
	A1.4 Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Table of the Indicators
	A1.5 Description of emission target(s) set and steps taken to achieve them.	Achievements and Goals Recycling
	A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Recycling

Aspect	Content	Location in the Report
A2 Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials.	Practicing "Dual Carbon" Strategy Promoting Low-carbon Operation
	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).	Table of the Indicators
	A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Table of the Indicators
	A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.	Achievements and Goals Promoting Low-carbon Operation
	A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Green Office Table of the Indicators
A3 The Environment and Natural Resources	A2.5 Total packaging materials used for finished products (in tons) and, if applicable, with reference to per unit produced.	No significant correlation ¹
	General Disclosure Policies on minimising the issuer's significant impacts on the environment and natural resources.	Green Cloud-Network
	A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Green Cloud-Network
A4 Climate Change	General Disclosure Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer. [Repealed 1 January 2025]	Strategy and Risk Management
	A4.1 Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them. [Repealed 1 January 2025]	Strategy and Risk Management

Aspect	Content	Location in the Report
B1 Employment	<p>General Disclosure Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.</p>	<p>Protecting Employees' Rights and Interests Caring for Employees Supporting Employees' Development</p>
	<p>B1.1 Total workforce by gender, employment type (e.g. full-time or part-time), age group and geographical region.</p>	<p>Table of the Indicators</p>
	<p>B1.2 Employee turnover rate by gender, age group and geographical region.</p>	<p>Table of the Indicators</p>
B2 Health and Safety	<p>General Disclosure Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to providing a safe working environment and protecting employees from occupational hazards.</p>	<p>Protecting Employees' Rights and Interests Caring for Employees Strengthening Production Safety</p>
	<p>B2.1 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.</p>	<p>Table of the Indicators</p>
	<p>B2.2 Lost days due to work injury.</p>	<p>Table of the Indicators</p>
	<p>B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.</p>	<p>Protecting Employees' Rights and Interests Caring for Employees Strengthening Production Safety</p>
B3 Development and Training	<p>Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.</p>	<p>Supporting Employees' Development Strengthening Production Safety Anti-monopoly and Fair Competition</p>
	<p>B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).</p>	<p>Table of the Indicators</p>
	<p>B3.2 The average training hours completed per employee by gender and employee category.</p>	<p>Table of the Indicators</p>
B4 Labour Standards	<p>General Disclosure Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to preventing child and forced labour.</p>	<p>Protecting Employees' Rights and Interests</p>
	<p>B4.1 Description of measures to review employment practices to avoid child and forced labour.</p>	<p>Protecting Employees' Rights and Interests</p>
	<p>B4.2 Description of steps taken to eliminate such practices when discovered.</p>	<p>Protecting Employees' Rights and Interests</p>

Aspect	Content	Location in the Report
B5 Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain.	Responsible Supply Chain Recycling
	B5.1 Number of suppliers by geographical region.	Table of the Indicators
	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.	Responsible Supply Chain
	B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Responsible Supply Chain Recycling
	B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Responsible Supply Chain
B6 Product Responsibility	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 health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Protecting the Rights and Interests of Customers Maintaining Network and Information Security
	B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	No significant correlation ²
	B6.2 Number of products and service related complaints received and how they are dealt with.	Table of the Indicators Protecting the Rights and Interests of Customers
	B6.3 Description of practices relating to observing and Protecting Intellectual Property rights.	Intellectual Property Protection
	B6.4 Description of quality assurance process and recall procedures.	No significant correlation ²
	B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Protecting the Rights and Interests of Customers Maintaining Network and Information Security

Aspect	Content	Location in the Report
B7 Anti-corruption	<p>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 bribery, extortion, fraud and money laundering.</p> <p>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.</p> <p>B7.2 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.</p> <p>B7.3 Description of anti-corruption training provided to directors and staff.</p>	Anti-corruption and Integrity Building Table of the Indicators Anti-corruption and Integrity Building Anti-corruption and Integrity Building
B8 Community Investment	<p>General Disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure that its business activities take into consideration the communities' interests.</p> <p>B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).</p> <p>B8.2 Resources contributed (e.g. money or time) to the focus area.</p>	Co-sharing Development Achievements Co-sharing Development Achievements Table of the Indicators
Part D: Climate-related Disclosures		
D-I Governance	<p>The governance body(s) responsible for oversight of climate- related risks and opportunities.</p> <p>Management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.</p>	Governance Structure Governance Structure
	Climate-related risks and opportunities	Strategy and Risk Management Green Economic and Social Transformation
D-II Strategy	<p>Business model and value chain</p> <p>Strategy and decision-making</p>	Strategy and Risk Management Green Cloud-Network Strategy and Risk Management Green Scientific and Technological Innovation

Aspect	Content	Location in the Report
D-III Risk Management	Financial position, financial performance and cash flows	Strategy and Risk Management
	Climate resilience	Strategy and Risk Management
	The processes and related policies the issuer uses to identify, assess, prioritise and monitor climate-related risks	Strategy and Risk Management
	The processes and related policies the issuer uses to identify, assess, prioritise and monitor climate-related opportunities	Strategy and Risk Management
	The extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the issuer's overall risk management process	Strategy and Risk Management
D-IV Metrics and Targets	Greenhouse gas emissions	Table of the Indicators
	Climate-related transition risks	Strategy and Risk Management
	Climate-related physical risks	Strategy and Risk Management
	Climate-related opportunities	Strategy and Risk Management
	Capital deployment	Strategy and Risk Management
	Internal carbon prices	Green Management
	Remuneration	Governance Structure
	Climate-related targets	Achievements and Goals Green Cloud-Network Green Energy Use Green Economic and Social Transformation

Notes:

1. There is no significant correlation between the indicator of "packaging materials used for the finished products" and the Company's business. Through the identification of material issues, the Company mainly reported the recycling and reusing of the main resources such as storage batteries, cables, terminals that are used in operations and services. For more details, please refer to the "Recycling" section.
2. There is no significant correlation between the indicator of "recalling products" and the Company's business. Through the identification of material issues, the Company mainly reported on customer services and security services. For more details, please refer to the "Protecting the Rights and Interests of Customers" and "Providing Security Services" sections.

ABOUT THE REPORT

Reporting Scope

The Report is a yearly report which covers the policies, measures and performance on the ESG-related issues of the Company and its subsidiaries (branches) for the period from 1 January to 31 December 2024 (the reporting period).

Reporting Principles

The Report proactively complies with the reporting principles of "materiality", "quantitative", "balance" and "consistency" of ESG information disclosure. Based on the materiality principle, the Board of the Company determined the importance of ESG issues, and this Report disclosed our communications with stakeholders, the identification process of the material issues and the materiality matrix. Based on the quantitative principle, the Company strove to quantify its ESG performance indicators as much as possible. The statistical standards, methodology, assumptions and calculation tools, as well as the sources of conversion factors for quantifying the key performance indicators were all disclosed in this Report. Based on the balance principle, this Report strove to provide an unbiased picture of the Company's ESG performance during the reporting period and avoided selection, omissions or presentation formats that may inappropriately influence the decision or judgement of the readers. Based on the consistency principle, the Company kept the statistical methods used for the data disclosed in this Report consistent, and if there was any inconsistency, explanations were made.

Content Description

The Report responds to the main concerns of the Company's stakeholders to the largest extent. The data and cases herein are mainly collected from internal sources while some of the cases refer to public media reports. Unless otherwise stated, all amounts herein are in RMB.

Reference Standards

The Report has been prepared in accordance with the *Environmental, Social and Governance Reporting Code* as set out in Appendix C2 of the Listing Rules of the Hong Kong Stock Exchange and the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)*, as well as with reference to the 2030 Agenda for Sustainable Development of the United Nations, the *Sustainability Reporting Standards* of the Global Reporting Initiative (GRI) and the *Reporting Guidelines for Chinese Corporate Social Responsibility* (CASS-ESG 6.0) issued by the Chinese Academy of Social Sciences.

Reliability Assurance

The Report, the information in which is accurate, strives to give an objective and comprehensive picture of the economic, social and environmental performance of the Company's operation. KMPG Huazhen LLP has been engaged to provide assurance services and issued an independent assurance report.

Ways of Reporting

The Report is published in simplified Chinese, traditional Chinese and English, which is available for downloading at the website (<https://www.chinatelecom-h.com>) of China Telecom Corporation Limited.

Readers Feedback

If you have any suggestion or advice about the Report, please feel free to contact us through:

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