

2022

CHINA MOBILE LIMITED

SUSTAINABILITY REPORT

$$C = \Sigma [E + I + f(E \times I)]$$



**ADVANCING
INFORMATION CIVILIZATION
• EMPOWERING
HIGH-QUALITY DEVELOPMENT**

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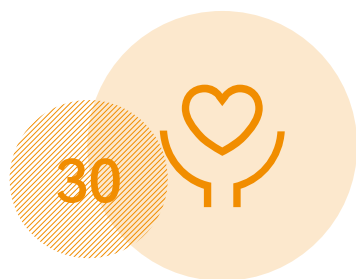


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Chairman's Statement



Yang Jie

Chairman
China Mobile Limited

Grasping the Principles of Information Civilization, Maximizing the Effectiveness of Information Services, and Empowering the Sustainable Development of Society

The year 2022 was an extraordinary and important year. It was also a crucial year for China Mobile to implement the "14th Five-Year Plan" (FYP). With the care and support from all sectors of society, we positioned ourselves as "a world-class company of information services and sci-tech innovation" and consistently practiced the development strategy of becoming a world-class enterprise by building a dynamic "Powerhouse". Adhering to the general principle of making progress while maintaining stability, we remained fully committed to driving new infrastructure, integrating new elements, and instigating new growth momentum. As such, we managed to surmount a series of challenges and make remarkable achievements. In 2022, China Mobile's operating revenue reached new heights, with net profits maintaining favorable growth despite a large base. Our revenue structure became more stable and healthy, significantly enhancing our overall capability to withstand risks, and we continued to deliver more value to the economy, society, and environment.

Taking a broad view and understanding the laws of information civilization development. As we continued to contemplate the major question of "how to realize the sustainable development of society and enterprises", we gained profound insights into the inherent laws of energy and information as the drivers of human civilization by taking a grand view of history and strategy. This could be expressed by the formula: $C = \sum [E + I + f(E \times I)]$, wherein C represents the level of human civilization; E represents the level of humans' ability to acquire and utilize energy; I represents the level of humans' ability to generate and apply information; $E \times I$ represents the innovative integration of energy and information; the growth function $f(\cdot)$ represents the diversity and infinite possibility of innovative integration of energy and information; and the summation symbol \sum indicates that the progress of civilization is the outcome of continuous accumulation and development of energy and information.

With the evolution of human civilization, the means by which we communicate and transmit knowledge have undergone a continual transformation. From the earliest forms of language, symbols, and writing, to the telegraph and telephone of the industrial age, and to the digital technologies of the information age, the carriers of information have continually evolved. Today, information has been deeply integrated into the entire process of energy conversion and utilization, leading to the fusion of "watts × bits". This is propelling humanity into a new era of development dominated by information and characterized by the deep integration of information and energy. The innovation function based on the integration of the two, $f(E \times I)$, has become the main force driving human civilization forward.

Fostering digital intelligence innovation and maximizing the effectiveness of information services. Based on the understanding of the laws of information civilization development, we systematically built a new information infrastructure featuring 5G, computing force network (CFN), and capability middle platforms, and a new information service system integrating "connectivity + computing force + capability" to fully empower the digital intelligence transformation in production, life, and governance across all sectors of society. We maintained an unwavering commitment to innovation-driven development, with a systematic approach to sci-tech innovation. We took the lead in setting 197 international 5G standards and have applied for more than 4,100 5G patents, sustaining our position as a leading global operator. We endeavored to ensure the security of networks, data, communications, and content and played a critical role in providing communications support for major events and during emergencies, including the Luding earthquake, where we provided immediate emergency support. We consistently ramped up security measures, doing our utmost to protect personal data privacy and safeguard users' legitimate rights and interests. By the end of December 2022, China Mobile had deployed 1.285 million 5G base stations, with 272 million households connected to our wireline broadband and a total computing force of 8.0 EFLOPS, and developed over 18,000 5G commercial use cases.

Seeking inclusive growth and sharing the achievements of development with the broader society. We deeply implemented the people-centered development ideology and continuously worked to achieve development that was inclusive of all stakeholders such as employees and customers. We adhered to the long-standing strategy of "Strengthening the Enterprise with Talents" and efficiently nurtured, attracted, gathered and deployed talents. We also constantly improved the systems and mechanisms for democratic management, career development, and the protection of rights and interests, continuing to implement a suite of programs such as "Five Small Spaces", "Happiness 1+1", and employee hardship assistance. We strove to narrow

the digital divide faced by special groups such as people with disabilities, seniors, and those with cultural differences to democratize digital access for all, benefiting more than 37.167 million people. We worked to widely extend the capabilities of information technology and continued to implement the "Seven Assistance Measures," helping 1,442 paired-up counties, townships, and villages consolidate and expand the achievements of poverty alleviation. As a key part of our ongoing work to promote rural revitalization, we deeply implemented the "Seven Rural Digital-Intelligence Projects" and advanced the digital village drive in more than 350,000 remote rural villages. Our steadfast commitment to charity benefitted more than 17.66 million people. We took the initiative to integrate ourselves into major national development strategies and strove to be the "engine of innovation" for coordinated regional development and the "pioneer of responsibilities" for the "Belt and Road Initiative" (BRI), giving major support to the positive interplay between domestic and international circulations.

Pursuing green development and enabling changes in the avenues of growth. We embraced the philosophy that lucid waters and lush mountains are invaluable assets and aimed to create a world where humans live in harmony with nature. We formulated an action plan for carbon peaking and continued to implement the "C² Three Energy - Carbon Peaking and Carbon Neutrality Action Plan". Those efforts led to a steady decline in the consumption of traditional energy and saved 6.43 billion kWh of electricity throughout the year. We actively built a green supply chain, with an energy-saving technology evaluation included in more than 90% of the equipment purchased. We fully leveraged the role of information technologies in carbon reduction to drive the transformation and upgrade of traditional industries such as coal and steel. We promoted online applications in areas such as conferences, office work, medical care, and information consumption, thus facilitating the green and smart development of cities and the transition to a green lifestyle. We provided extensive support in the collection, monitoring, mining, and analysis of environmental data, thereby strengthening the government's environmental monitoring capabilities. Moreover, through participation in a multitude of ecological protection programs such as the "ten-year fishing ban" in the Yangtze River, we played an active part in improving the stability and sustainability of the ecosystem and making our earth a better place to live.

Maintaining advanced governance and continuously building a trustworthy enterprise. In accordance with the requirements of prescribed authority and responsibility, transparent authority and responsibility, coordinated operation, and effective checks and balances, we gave full play to the role of the board of directors and management and continuously improved the corporate governance structure to consolidate the foundation of corporate governance. Committed to being a responsible and trusted enterprise, we continued to deepen reform across the board, improve the market-oriented operation mechanism, prevent and resolve risks, and promote business ethics and anti-corruption efforts. We further embedded ESG considerations in all aspects of corporate governance and built a new pattern of development in which economic value and social value could reinforce each other. The Parent Company has been rated Grade A in the business performance appraisal for the heads of central state-owned enterprises for 18 consecutive years and six terms.

Setting sail on the vast ocean and braving the waves, we are standing at the forefront, ready to chart a new course. Looking forward to 2023, we will continue to align actions with the requirements of strengthening, optimizing, and expanding state-owned capital, state-owned enterprises, and the digital economy. We will accelerate efforts to advance the development of a cyber power, a digital China, and a smart society and to be a world-class enterprise. Securing a firm foothold, we will seek the "best function" for innovation driven by information and energy integration together with our stakeholders and create broader social values. In this way, we will make greater contribution to building a new paradigm of sustainable development in the era of information civilization well suited to the Chinese path to modernization.

March 2023

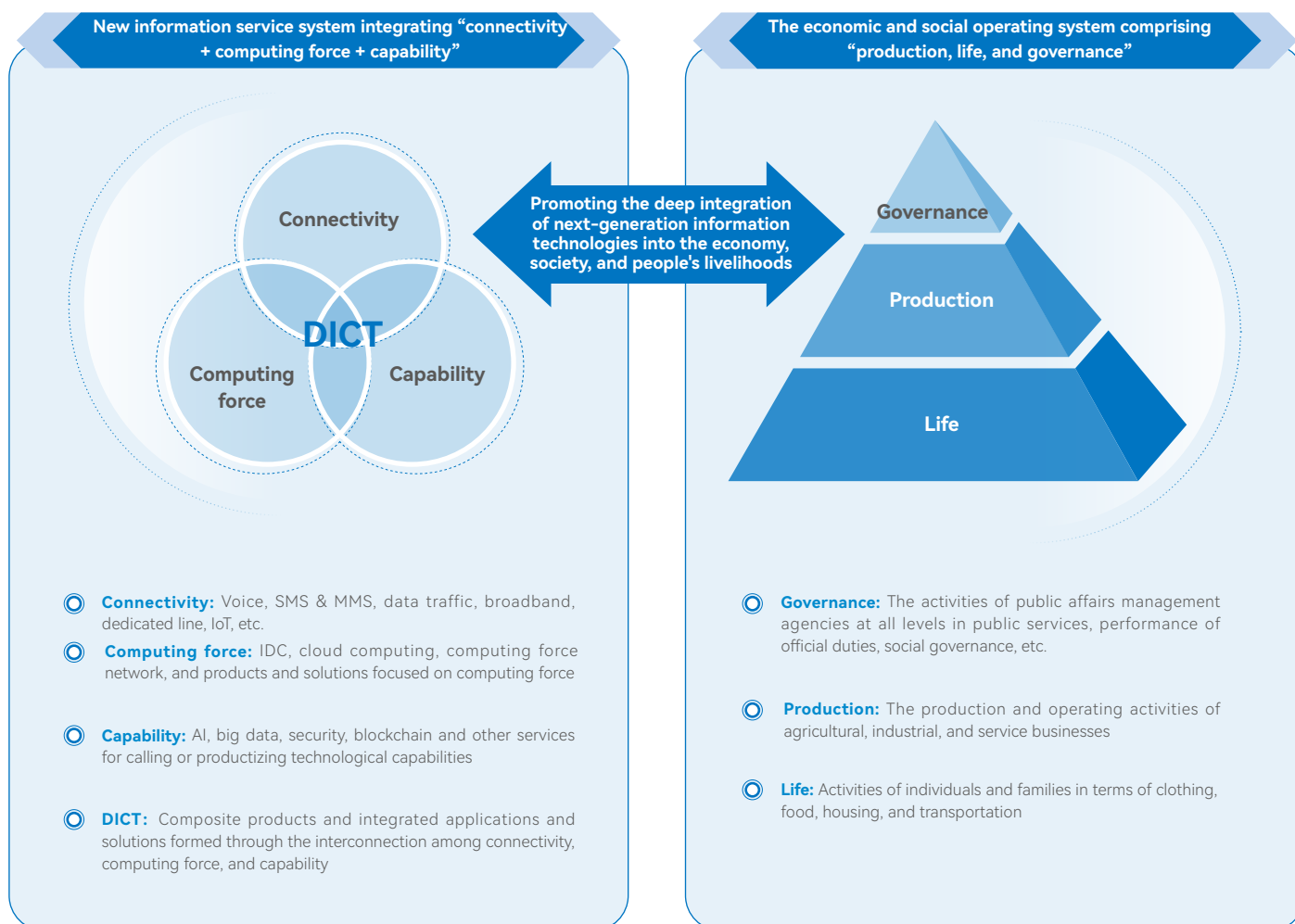
About China Mobile

Company Profile

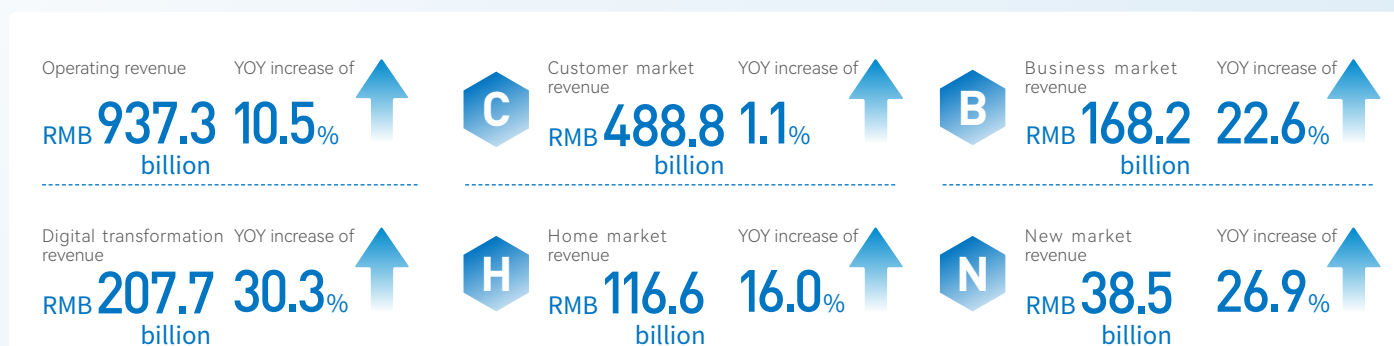
China Mobile Limited (hereinafter referred to as "China Mobile", "the Company" or "we"), was incorporated on September 3, 1997 in Hong Kong, China. The Company went public on the Stock Exchange of Hong Kong Limited ("HKEX") on October 23, 1997. It was the first Chinese central enterprise to be listed overseas. The Company was listed on the Shanghai Stock Exchange ("SSE") on January 5, 2022, making it the first red chip company to make a comeback and get listed on the A-share main board. The Company has wholly-owned subsidiaries and 27 specialized subsidiaries in 31 provinces (autonomous regions, municipalities) throughout the mainland of China and in the Hong Kong SAR and provides international roaming and information services in over 200 countries and regions worldwide. The actual controlling shareholder of the Company is China Mobile Communications Group Co., Ltd. ("CMCC"). As of the end of December 2022, CMCC directly and indirectly held approximately 69.82% of the total issued shares of the Company, with the remaining approximately 30.18% held by other shareholders.

With over two decades of development, China Mobile has become the world's largest telecommunications and information services provider in terms of network scale and customer base and boasts a leading position in brand value and market capitalization. The Company's businesses primarily consist of connectivity services such as mobile voice, SMS & MMS, wireless Internet, wireline broadband, and IoT, as well as computing services such as data centers, cloud computing, content delivery networks, and computing-network integration. The Company also provides platforms, applications, and solutions based on next-generation information technology capabilities such as AI, big data, and security.

China Mobile is committed to becoming a major force in building a cyber power, a digital China, and a smart society. Positioning ourselves as a "world-class company of information services and sci-tech innovation", we will relentlessly pursue excellence in business performance, broaden the horizons of our information services, and continuously build self-reliance to grow into a powerful engine of sci-tech innovation. We have innovatively built a new information service system integrating "connectivity + computing force + capability" and will provide high-quality information services to meet, lead, and drive digital intelligence demands across all scenarios of production, life, and governance. We will promote the deep integration of next-generation information technologies into the economy, society, and people's livelihoods and make greater contributions to social progress and the advancement of civilization.



Performance in Numbers



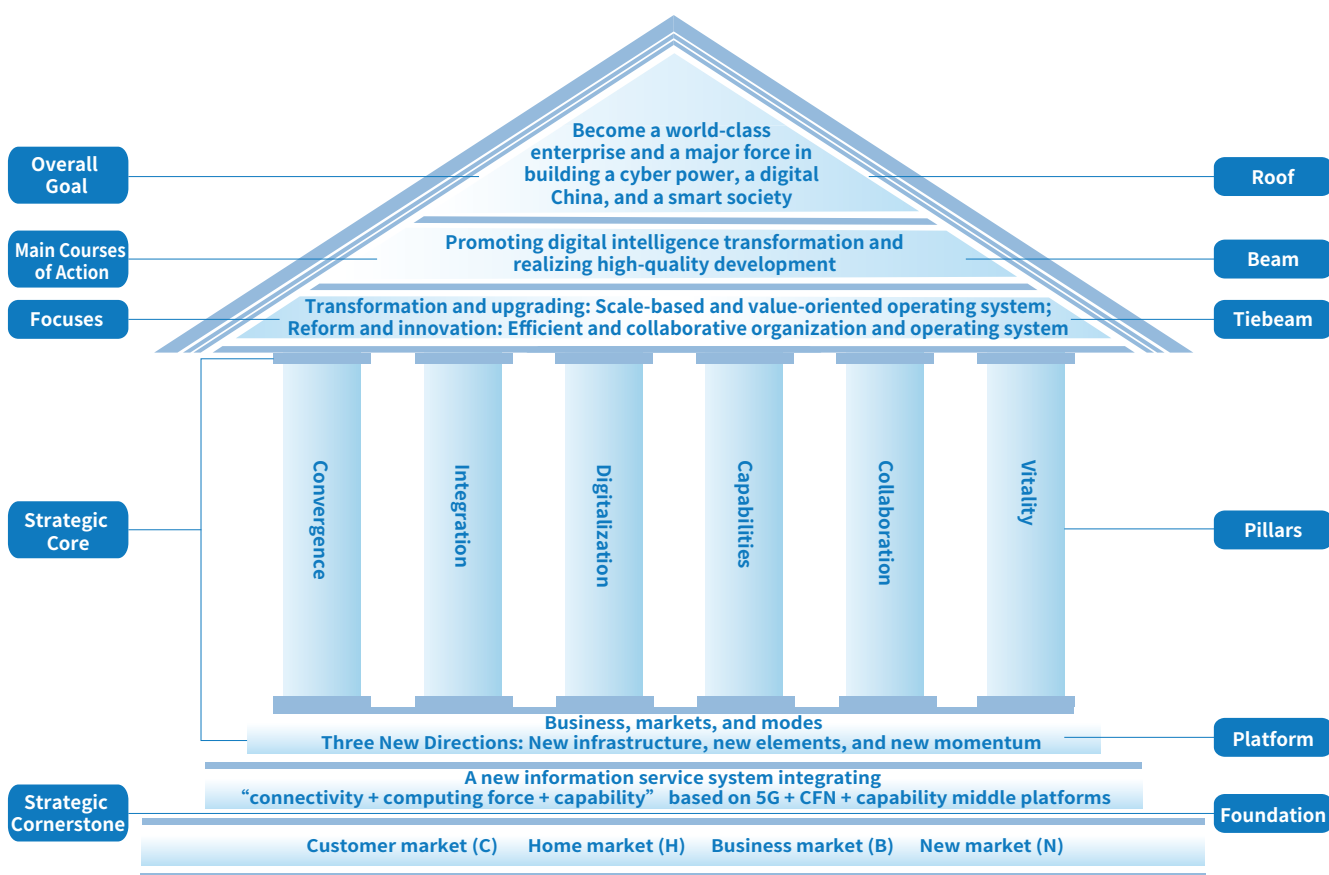
Honors and Awards



Development Strategy

At this new stage of development, we apply the new development philosophy in a complete, accurate, and comprehensive manner and constantly work towards building a new development pattern. Adopting a people-centric approach and seizing the important opportunities brought by the new frontier of "digital economy", we anchor our actions in our positioning as "a world-class company of information service and sci-tech innovation" as we strive towards the goal of "becoming a world-class enterprise and a major force in building a cyber power, a digital China, and a smart society". We gear our efforts toward "promoting digital intelligence transformation and achieving high-quality development". We consistently work to advance the "Two Shifts", prioritize the "Two New Projects", and actively deliver the "Five Dividends" while speeding up the "Three Changes", following the "Three New Directions", reinforcing the "Three Approaches", and strengthening the "Three Forces". We continue to advance the comprehensive and integrated development of our CHBN markets and pursue high-quality and sustainable development. We constantly drive the in-depth integration of the digital economy and the real economy and make great strides toward being a world-class enterprise with excellent products, outstanding brands, leading innovation, and modern governance. Through those measures and more, we play our part in the building of a modern socialist country and in advancing the great rejuvenation of the Chinese nation in an all-round way.

China Mobile's "Powerhouse" Development Strategy



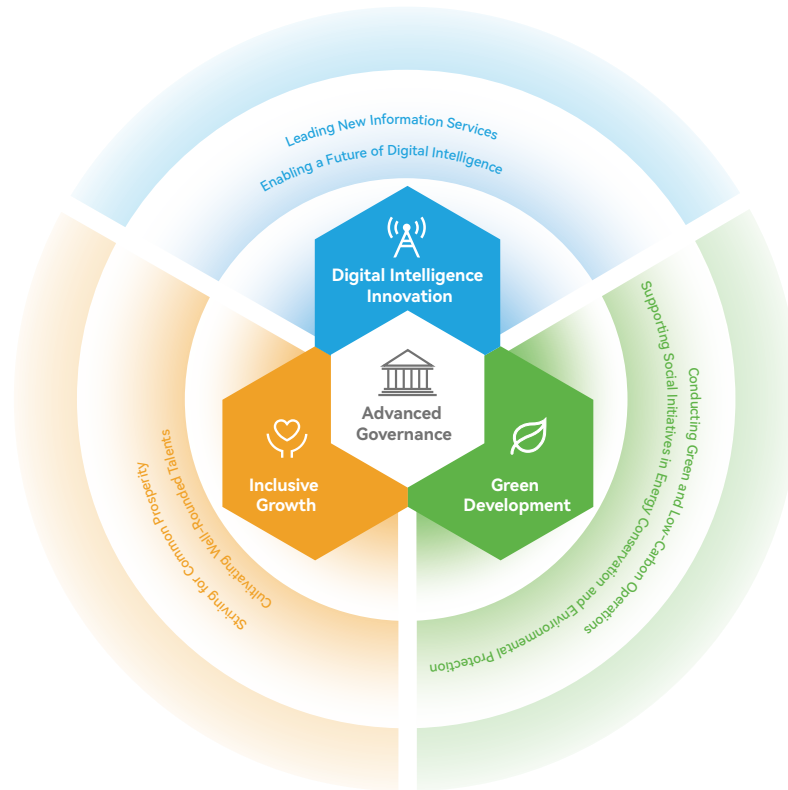
Extended Reading

Two Shifts: Shift in the Company's development from leading in quantity and scale to leading in quality, profit, and efficiency; shift from focusing on the achievement of current performance targets to focusing on long-term value growth

Two New Projects: A new information infrastructure featuring 5G, CFN and capability middle platforms; a new information service system integrating "connectivity + computing force + capability"

Five Dividends: Innovation dividend, popularity dividend, reform dividend, talent dividend, and ecological dividend

Sustainable Development



**CSR Philosophy: Sincerity and Fulfillment.
Self-Realization and Empowerment**




China Mobile Sustainability Model

“Sincerity and Fulfillment. Self-Realization and Empowerment” means that China Mobile upholds the utmost sincerity and strives to fulfil our own nature, people’s nature, and the nature of all things (Sincerity and Fulfillment) and that while pursuing sustainable growth of the Company itself (Self-Realization), we leverage our strengths to contribute to the sustainable development of our economy, society, and environment (Empowerment).

“Sincerity and Fulfillment” has been part of our CSR philosophy since 2006 and the core of our CSR efforts over the years. “Self-Realization and Empowerment” captures the essence of our CSR philosophy from both internal and external perspectives: we leverage our development to drive and empower the coordinated development of the wider economy, society, and environment.

Main Actions

CSR Topics

	Digital Intelligence Innovation	Leading New Information Services	Enabling a Future of Digital Intelligence
	Inclusive Growth	Striving for Common Prosperity	Cultivating Well-Rounded Talents
	Green Development	Conducting Green and Low-Carbon Operations	Supporting Social Initiatives in Energy Conservation and Environmental Protection
	Advanced Governance	Optimizing the Corporate Governance System	Preventing and Resolving All Kinds of Risks



Digital Intelligence Innovation

In step with the development trend of the information civilization era, China Mobile maintained a steadfast focus on the goal of "becoming a world-class enterprise and a major force in building a cyberpower, a digital China, and a smart society", making dedicated efforts to build a new information infrastructure and a new information service system, democratize the "connectivity + computing force + capability" services, and continuously improve the quality of supply. The Company consistently worked to be a powerful catalyst of the digital intelligence transition in production, life, and governance across the whole society, improve the quality of customer service, push for an open and cooperative ecosystem, and strengthen network security. We applied a new generation of information technologies to build a modern industrial system to continuously unlock demands and empower the high-quality development of the whole society.



Leading New Information Services



Enabling a Future of Digital Intelligence

SUSTAINABLE DEVELOPMENT GOALS

Responding to SDGs

8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

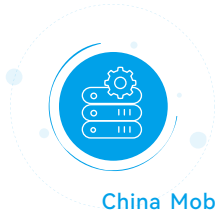


11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION





Leading New Information Services

China Mobile strove to build a new information infrastructure focused on 5G, CFN, big data, and capability middle platforms, innovatively built a new information service system of “connectivity + computing force + capability”, and created new models of value growth to promote the new generation of information technologies to become an essential service for the society.

Creating First-Rate “Connectivity Services”

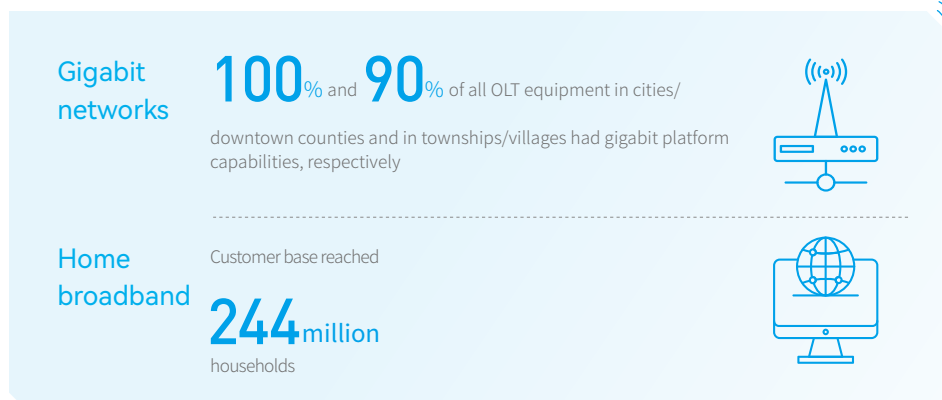
China Mobile continued to build and deploy 5G and gigabit optical fiber networks to provide high-speed, mobile, secure, and ubiquitous “connectivity services”. We aimed to build first-rate 5G networks to provide high-speed, mobile, secure, and ubiquitous connectivity services for the people and various industries.

► Strengthening basic connectivity

We strengthened the scientific planning, precise construction, co-construction and sharing of 5G networks, achieved multi-frequency coordination and efficient deployment by scientifically coordinating our 700MHz, 2.6GHz and 4.9Ghz spectrum resources, and continuously expanded the depth and breadth of 5G coverage. We furthered co-construction and sharing of 5G networks with China Broadnet, focused on building 700MHz frequency band network as a foundation and progressively expanded our indoor coverage with precise development of the 2.6GHz and 4.9GHz frequency bands, cementing our leading edge in 5G as we worked to build the world’s largest boutique 5G network with nationwide coverage, advanced technology, and excellent quality.



Thoroughly implementing the national “dual gigabit” network plan, we refined the gigabit deployment strategy and promoted pipeline coverage by category in response to customers’ needs in the market. We prioritized building of our platform capabilities and set up ports by demand, enhanced the end-to-end network capabilities of our household broadband and created a gigabit broadband boutique network connecting thousands of households.





Case China Mobile's 5G served the ocean

Proactively responding to the strategy of building China into a maritime power, China Mobile launched 5G coverage projects across inshore, nearshore and offshore waters, and promoted the expansion of 5G networks into the ocean. In such way, we played an instrumental role in strengthening maritime supervision, promoting development of the maritime economy, and facilitating the life of fishermen and tourists. By the end of December 2022, our maritime 5G projects covered numerous coastal provinces such as Liaoning, Shandong, Jiangsu, Zhejiang, Fujian, Guangdong, Guangxi and Hainan, and achieved extensive coverage of nearshore waters.



© China Mobile built 5G networks in the "Offshore Communities"



© Fishermen stayed in contact with their families via VoNR

► Optimizing network experience

With a focus on users' experience, we continuously improved network quality and actively tackled quality issues. We have built a digital intelligence network operations and maintenance system to accurately identify and address network problems and precisely build and improve the efficiency of network resources, thereby providing high-quality network services to support diverse business applications.



•For individual users

- We led the industry in terms of both mobile network quality satisfaction and 5G Internet quality satisfaction.
- We were the first in the world to offer VoNR HD calling service; we introduced support for 720P HD video calls, making communication more effective and interesting.



•For household users

- We maintained a >99% timely rate for installation and maintenance service across the network.
- We provided "One Household, One File" quality optimization services for customers and completed network optimization for 158,800 communities, bringing continuous improvements in network stability and robustness.
- The success rate for automatic activation of household broadband services increased from 95.57% to 97.90%, and the time required for activating household broadband services was shortened from 22.72 hours to 20.53 hours.

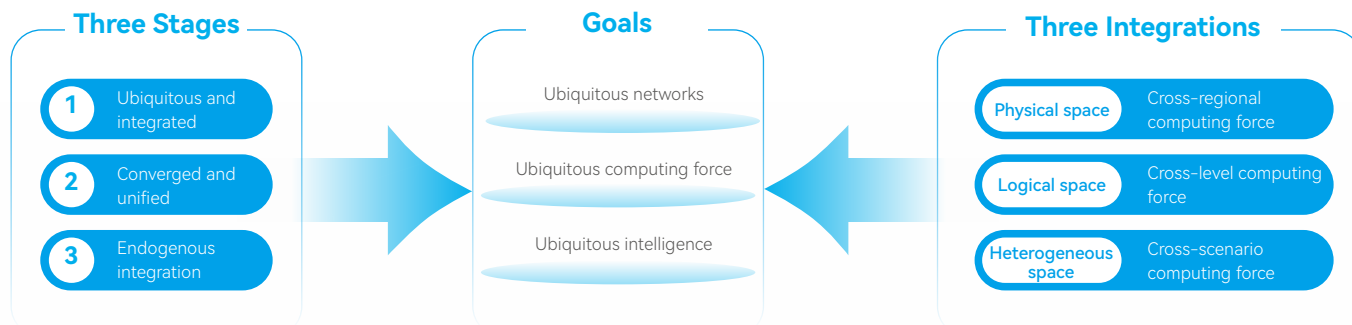


•For business users

- The overall satisfaction with of private line network increased from 93.53% to 96.57%, and the satisfaction with enterprise broadband network increased from 91.22% to 94.86%.
- The activation time for standardized use cases of private 5G networks was significantly reduced and the IoT activation timely rate increased by 55PP.

Enhancing Ubiquitous and Convergent “Computing Force Services”

China Mobile implemented the national strategy of channeling more computing resources from the eastern areas to the western regions. With the development goal of developing ubiquitous computing, co-existing computing and network, smart orchestration and integrated services, we optimized the layout of data centers and the planning of high-speed direct networks, sped up the construction of an extensive and integrated CFN, and developed instantly accessible “computing force services”. We built a three-level low-delay computing force service system with only 20 milliseconds delay nationwide, approximately 5 milliseconds delay within a province and 1 millisecond delay within a prefecture-level city, thereby promoting computing force as an essential service for the society like water and electricity.



Accelerating the construction of CFN and harnessing self-developed computing network technologies

Computing force refers to data processing capability. CFN is an innovative technical concept proposed by China Mobile in 2021 that refers to a new type of infrastructure offering one-stop service characterized by deep integration of computing force and network. Stronger computing force means stronger data processing capability, which would produce more accurate and useful data. Therefore, CFN will undoubtedly become an important foundation for creating a digital intelligence-empowered society.

Standing at the forefront of sci-tech innovation, China Mobile integrated the eight core elements of “ABCDNETS” and continuously promoted the construction of CFN. Among these core elements, Cloud, Edge and Terminal constitute the multi-layer architecture for ubiquitous computing force ; Network, as the bridge connecting users, data and computing force, constitutes the new infrastructure of CFN through deep integration with computing force; Data and AI are integrated into CFN as its “brain” and contribute to a unified, agile and efficient computing network resource supply system; Blockchain is the cornerstone for maintaining credibility of computing force transactions; Security is the foundation for ensuring the reliable operations of CFN and needs to be integrated into the CFN system to form an endogenous security protection mechanism.



► Promoting the deployment of computing network

We further promoted the deployment of computing network and accelerated the upgrading of infrastructure focusing on the “Three Integrations”. We implemented the strategy of channeling more computing resources from the eastern areas to the western regions and promoted a hierarchical layout of the national integrated CFN comprising national hub nodes, provincial data centers and edge data centers. We promoted the construction of “4+N+31+X” mobile cloud, network structure optimization and high-speed direct connections, and built a three-level low-latency computing force service system. We built nationwide cloud dedicated networks, accelerated the efficient coordination of central, edge and terminal computing force, and brought all connected devices to the cloud. We further enriched the diverse computing force resources, such as CPU, GPU and FPGA, and sped up the unified grid-connected management of social computing force, including cloud service providers, smart computing and supercomputing centers, to meet the demands for computing force in different scenarios.

4+N+31+X

4 refers to the four focal regional areas (the Beijing-Tianjin-Hebei Region, the Yangtze River Delta, the Guangdong-Hong Kong-Macao Greater Bay Area and the Chengdu-Chongqing Economic Circle); N refers to the super large-scale data centers planned within the 10 data center clusters as national hub nodes; 31 refers to the super large-scale data centers planned for each province; and X refers to the city-level data centers and convergence rooms planned for the respective localities.

In 2022

710,000+

cloud servers (including mobile cloud, network cloud, and IT cloud) launched

Floating point computing capacity reached

8.0 EFLOPS

Deployment of computing force resources

Strengthening the construction of mobile cloud resources: We added 62,000 new servers, bringing the total to 154,000 (excluding private cloud and computing force servers).

Optimizing the IT cloud resources layout comprising “one cloud and six centers”: We added 70,000 new servers, bringing the total to 342,000.

Fully supporting the cloud transformation of the network: We adjusted the disaster tolerance relationships in large areas, forming an overall layout of “8+X”, 16 provinces, and 21 nodes.

Transmission network optimization

Building an efficient and intelligent interconnection network: 508 data transmission flows in the backbone network and the cloud dedicated network are covered by direct connections, reducing network delay and improving relay efficiency; the number of prefecture-level cities with PE equipment deployed for cloud dedicated networks reached 304, supporting the on-demand access of social computing force resource pools nearby.

Building a ubiquitous network with flexible cloud access: We built OTN (Optical Transport Network), SPN (Secret Private Network), PTN (Packet Transport Network), PON (Passive Optical Network) and other networks, leading the industry in terms of underlay network coverage capacity; built the SD-WAN (Software-defined Wide Area Network) covering 31 provinces and connected the Overlay network to the cloud to meet the demands for flexible cloud access.

Building data centers

National Hub Nodes: We added nodes to and expanded our data center clusters to build strategic reserves.

Provincial Data Centers: We promoted intensive business deployment and made full use of existing land resources by building as much as needed and insofar as conditions permit to optimize resource utilization.

Prefecture-Level Data Centers: We sped up the retrofitting of facilities in old server rooms to cultivate their potential, increase efficiency, strengthen coordination and optimize allocation of server room resources.

► Innovating computing force network application

China Mobile continued to carry out R&D in core CFN technologies, actively building capabilities in key areas such as storage and computing integration, computing power routing, and in-network computing to gradually establish a complete technical stack and panorama of CFN. Based on the prototype of a “Computing Network Brain” and pilot projects on existing networks, we worked to enrich our instantly accessible computing force services and expedite the integrated allocation and smart supply of computing network resources. By building the CFN Innovative Test Infrastructure (CFITI), we advanced materialization of various new scenarios such as east-to-west data storage, east-to-west computing, east-to-west AI training, east-to-west rendering, central cloud training and edge cloud implementation, and computing force trading. Under our proposal of an innovative “computing force e-commerce” model, we built a unified trading platform for reliable computing network services, thereby revitalizing computing force resources across the society.

CFN has been adopted in a broad swath of scenarios, including in applications such as cloud XR and cloud games, in cloud-network integrated products such as cloud dedicated access and cloud internet, in industry solutions such as unmanned mining and port machinery remote control, and in new forms and models of business such as Internet of Vehicles (IoV) and metaverse. Going forward, China Mobile will seek to be a major force in supporting the digital vision of “ubiquitous networks, ubiquitous computing force, and ubiquitous intelligence” through the construction of the CFN.



Case

China Mobile launched the CFITI to advance “the east-data-west-computing project” profoundly

The CFITI was officially launched at the “Computing Power Network Innovation and Development” parallel session of the 2022 China Computational Power Conference. With a view to promoting the construction of enormous scientific apparatus for national CFN, CFITI was anchored in four key objectives: a new technology test bed, a national demonstration base, an industrial convergence platform, and a new business incubator. It featured a multi-node interconnected dual-plane test network for sci-tech innovation and business verification. With a starting layout of 1+9+9, it radiated from the northern base, the International Information Port (Beijing), as the central node (the “1”), to span the whole country, forming an innovative interconnected multi-node infrastructure. The two 9s were nine group-level nodes in the nine provinces of Zhejiang, Jiangsu, Guangdong, Shandong, Henan, Shanxi, Guizhou, Inner Mongolia, and Gansu, and nine characteristic provincial-level nodes in the nine municipalities/provinces of Beijing, Chongqing, Hunan, Fujian, Xinjiang, Yunnan, Hebei, Sichuan, and Ningxia.

Developing Open and Shared “Capability Services”

China Mobile continued to build an open and shared capability middle platform system of “business + data + technology” that incorporated the features of China Mobile as a telecom operator and as a brand while offering modular and ready-to-deploy “Ability as a Service” (AaaS). We built industry-leading capability middle platforms to democratize a cloud-based, digital, and smart life across society, aiming to enhance social, user, and business value all at once.

► Building capability middle platforms

The Company deepened the convergence and accumulation of integrated information technologies such as big data, AI, blockchain, security certification, and precise positioning. It optimized the “central kitchen” sharing mode as represented by service output, settle-in and development, and integrated applications. We also built a “capability supermarket” for middle platforms, gathering high-value capabilities from internal and external sources to establish open and shared middle platforms with industry-leading capabilities.

By the end of December 2022



Building industry-leading capability middle platforms

Business middle platforms	Technological middle platforms	Data middle platforms
<ul style="list-style-type: none"> ◆ Accumulating common business capabilities and supporting agile innovation of products and services ◆ Improving quality and efficiency based on the cloud-native technology architecture via the application of intelligent processes, intelligent auditing, and intelligent operations and maintenance 	<ul style="list-style-type: none"> ◆ Aggregating common capabilities such as communications, AI, and blockchain ◆ AI: The value of launching the Jiutian AI platform at scale exceeded RMB 3.9 billion ◆ Blockchain: Providing 12 production-level capabilities for commercial use, such as proof of existence and tracing 	<ul style="list-style-type: none"> ◆ Gathering value data and building core data capabilities ◆ Hosting over 300PB of centrally shared value data, leading the industry in scale

Wutong Big Data platform: improving the efficiency of sharing and opening up and empowering the development of industry ecosystem

Big data is a “digital treasure trove” in the new era. As big data permeate every corner of our society, economy and daily life, China Mobile worked to maximize the value of its platforms, actively stepped-up cooperation across the big data ecosystem with open platforms, open ecosystems and open portals based on its Wutong Big Data platform, and unleashed the value of data as new growth drivers.

In 2022, we set up four “centers” for different audience surrounding our Wutong Big Data platform: Product Promotion Center, Talent Pool Center, Ecological Exchange Center and Operations Management Center. We provided services to customers and front-line customer relationship managers in eight major industries such as IT and finance, assisted in hosting 23 large-scale exhibitions and served a total of over 70,000 customers. For college students, we held the “Wutong Cup” Big Data Application and Innovation Competition, and hosted big data training camps under our partnerships with universities, forming systems for cultivating internal and external talents, and providing opportunities for us to promote our platforms and brands. For partners within our business ecosystem, we gathered big data capabilities, opened-up D-PaaS (Data Protection as a Service) capabilities and built a multi-party secure computing platform to meet the diverse needs of our industry customers as we worked together to create a big data ecosystem. For our management personnel, we standardized rights management and operations to ensure system security.



© China Mobile hosted the Maker Hackathon 2022



Empowering a Future of Digital Intelligence

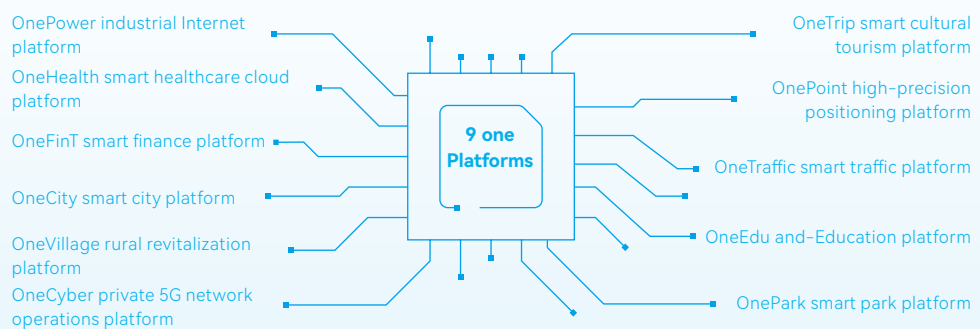
Fully deploying the foundation and capabilities of the new information service system, China Mobile actively developed a forward-looking business layout and diversified the product portfolio to cater to the varied needs of economic and social development. We pushed for the widespread adoption of high-quality products across industries and in people's lives to fuel the digital intelligence transformation in production, life, and social governance in the whole society.

Promoting Digital Intelligence Production

Profoundly implementing the "5G+" plan, we harnessed our strengths and capabilities in AI, blockchain, cloud, data, network, edge, terminal and security (ABCDNETS) to build secure, reliable, and stable information networks with visible services, amplify end-to-end capabilities in critical areas such as industrial Internet and IoV, and drive in-depth application of information across all forms and stages of production such as agriculture, industry, and service, thus boosting the digital intelligence transformation across sectors and industries.

9 one Platforms

The 9 one Platforms are a series of industry platforms developed in-house by China Mobile, and their capabilities provide the key foundation for us to serve the ToB market. Building on our key scenario capabilities accumulated over time, we developed a suite of packaged solutions for various industries, offered one-stop empowerment resources for our business partners and delivered integrated services to our customers.



► 5G+ industrial Internet

Leveraging the cutting-edge technologies of 5G+ industrial Internet, the Company developed an assortment of products and solutions for infrastructure construction, factory site upgrading, applications for key stages, and network security protection. Striving towards the three objectives of improving quality, efficiency, and scale, setting benchmarks for safe production, and promoting energy conservation and carbon reduction, we also introduced standard application scenarios such as machine vision-based inspections and AR remote operations and maintenance, consistently advanced our application scenarios from ancillary processes to core processes in production and optimized the 5G fully-connected factory capability system.

"5G Fully-Connected Factory" solutions and capabilities

10 industry solutions	Electronic equipment manufacturing, equipment manufacturing, steel, petrochemical engineering, building materials, household appliances, textiles, mining, ports, and electricity
3-level product system	Production line, workshop, and factory
Multiple standard applications	Standard offerings such as industrial quality inspections and industrial safety monitoring, and general capabilities such as new industrial smart gateways, high-precision indoor positioning, cloud-based equipment inspections, industrial identification, carbon management, digital twins and industrial low-code development

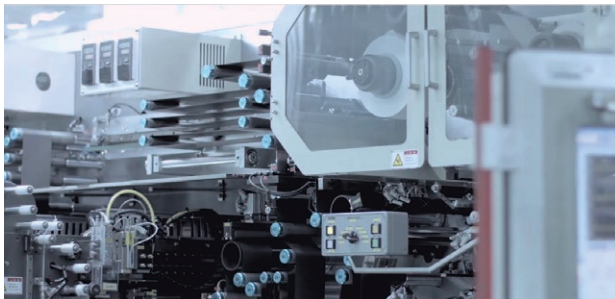
Smart Factory: Centered on the core architecture of "one industrial gateway/5G industrial terminal module + one private 5G industrial network + one industrial Internet platform + N 5G application scenarios", we provided industrial enterprises with "headquarters + branches" one-stop digital smart factory solutions building on standard 5G application scenarios such as large-scale data gathering, machine vision-based quality inspection, factory monitoring, cloud-based AGV and AR remote collaboration. By doing so, we equipped modern factories with "a smart brain", "keen eyesight" and "meticulous housekeepers" and promoted the digital transformation of industrial enterprises.

By the end of December 2022, China Mobile had implemented over **2,300** commercial use cases of 5G smart factory



Case CATL's 5G Smart Factory and China's largest private business 5G network

China Mobile, in collaboration with CATL, built China's largest private business 5G network in terms of coverage, covering over 5 million square meters in total and spanning several provinces, regions and municipalities including Fujian, Jiangsu, Sichuan, Guangdong, Shanghai, and Qinghai. It is currently the largest private 5G network for business in China in terms of scale. Integrating technologies such as 2.6GHz+4.9GHz networking, UPF+, and private 5G network operations platform, the project enabled a variety of 5G application scenarios such as central smart process perception control system, AI-powered ultra-high-speed full-scale video stream quality inspection, full-scale big data real-time inspection, augmented reality (AR) expert system, and smart logistics. By setting up cloud-based digital factories with our 5G technologies, we played an instrumental role in the intelligent upgrades of high-tech enterprises, which won us wide recognition including Top Ten 5G Use Cases at the World 5G Convention and the name of a "Global Lighthouse Network".



© CATL's 5G+ Smart Factory Inter-Provincial Private Network Project

Smart Mines: We developed an integrated solution for the mining industry featuring "one private 5G mining network + one mining industrial Internet platform + N industry applications". The solution was applied in a multitude of typical scenarios, such as remote control of equipment, AI video monitoring, and robot patrol inspections, to help achieve goals like fewer miners required, unattended operations, unmanned driving, and smart management and control and enable the intelligent management of the entire mining process from production to operations and emergency response.

By the end of December 2022, China Mobile had helped build more than **370** 5G-powered smart mines across China



Case 5G-powered smart mines became increasingly IT-based, digitalized, and smart

Catering to mining companies' needs for smart operations, China Mobile worked with Gaohe Energy to develop three information infrastructures, namely "private 5G mining network, cloud data center, and intelligent management and control platform", along with several smart applications.

In terms of network, we successfully tested the first underground 5G VoNR in China using the "Smart Mine" private 5G network based on centralized cloud architecture, enabling underground voice communication and authority management.

In terms of platform, we made operations visible and manageable over 5G networks, introduced real-time data gathering on underground mining, excavation, machinery, transportation and communication, and enabled intelligent control of the entire mining process.

In terms of applications, applications built on 5G network technology, such as 5G+ Smart Combined Mining, 5G+ Smart Excavation, 5G+ Patrol Inspection Robot, and AI-Powered Intelligent Identification of Key Areas, helped mining companies improve production safety, enhance quality and efficiency, and reduce energy consumption and emissions.

Smart Electricity: In keeping with the two key focuses of power generation from clean energy and intelligent distribution network, we created application scenarios such as 5G Intelligent Patrol Inspection, Three Automated Remotes for 5G Distribution Network, 5G Distribution Network Differential Protection, and 5G Intelligent Power Distribution Room. These scenarios helped power plants reduce the manpower needed and realize unattended operations while enabling highly automated power distribution which provided added reliability of power supply. This was a step forward for the power industry in digital intelligence transformation. Leveraging our strengths as a telecom operator, we co-authored the *White Paper on Network Security in 5G Virtual Private Networks for Electric Power*, in which we proposed a feasible and credible solution for ensuring the security of 5G virtual private networks for electric power.

By the end of December 2022, China Mobile had assisted numerous companies with more than **420** 5G smart power projects, including the State Grid Corporation of China and China Southern Power Grid Company Limited



Case 5G+ Offshore Wind Power – China’s first 5G offshore wind farm with deep coverage

Having regard to the complementary nature of 2.6G and 700M networks, Guangdong Mobile reused submarine optical fiber cables in offshore wind farm, sank UPF into onshore centralized control center, and provided continuous network coverage over a sea area of 1,256 square kilometers, with 700MHz macro base stations covering outdoors and 2.6GHz networks covering the fan towers. The project turned the area into a whole-new offshore smart park. We introduced application scenarios such as UAV Intelligent Patrol Inspection, 5G+ Electronic Fence, and and-Talkback Maritime Patrol Inspection and Emergency Response, enabled intelligent perception of people, property and goods, and addressed a handful of problems associated with traditional patrol inspections such as low efficiency and lack of security.

► Internet of Vehicles (IoV)

The comprehensive data processing capabilities applied by the Company in “vehicle, road, network, cloud, and image” contributed to the rapid growth of new IoV industries. Systematically targeting the three directions of connectivity services, information services, and vehicle–road coordination, we extensively explored digital innovations such as intelligent network connection, smart intersections, vehicle–road coordination, and high-precision positioning. We launched the world’s largest “5G+ BeiDou High-Precision Positioning” system, implemented China’s first 5G new infrastructure vehicle–road coordination projects in Suzhou, and participated in constructing national-level IoV pilot areas in Wuxi and Chongqing.

By the end of December 2022, we were empowering more than

35 million IoV front-load connections and operating more than **300** benchmark vehicle–road coordination projects



Case China Mobile enabled low-cost, high-efficiency digital transportation based on the OneTraffic smart traffic platform

China Mobile launched the “5G+ Precise Public Transport” project on Jiangxin Island, Nanjing using the in-house developed OneTraffic smart traffic platform. This was the first successful application of the 5G+V2X networking technology in China. We integrated data across various domains and across the island, and supported a wide array of application scenarios such as 5G Unmanned Vehicle, Smart Remote Control, Smart Road Early-Warning and Management, Bus Dispatch, 5G Smart Intersections, and 5G Smart Parking. The project reduced the infrastructure cost by 37% and increased the public operational efficiency by 27% and the average travel efficiency by 20%.



© 5G+ Precise Public Transport, Jiangxin Island, Nanjing

► Commerce and cultural tourism

We provided smart solutions and products for authorities, enterprises, institutions and individual users in industries such as cultural tourism, commerce and real estate. Our offerings enabled industry authorities to enhance control over the industries, helped enterprises improve their service efficiencies, and provided greater convenience to the public.

Smart Commerce: The Company provided scenario-based solutions with “private line + cloud + applications” for a number of industries such as retail, hotel, catering, and service, and developed the “5G + IoT + GIS + 3D Visualization” Smart Site Management Platform for the construction industry.

By the end of December 2022, we had launched over **300** smart commerce projects and over **4,600** smart site projects and seen a net increase of **1.488** million hotel rooms at smart hotels

Smart Cultural Tourism: The Company developed the OneTrip smart cultural tourism platform targeting cultural tourism supervision, smart scenic spots, smart cultural museums, and other key areas.

By the end of December 2022, the platform had provided digital intelligence services for **16** provincial cultural tourism institutions in Jiangsu, Xinjiang, and other provinces, **14,000** A-level scenic spots, and **1,227** national museums

Creating a Life of Digital Intelligence

Taking advantage of the scale of its 5G and gigabit optical fiber network, China Mobile continuously enriched its product portfolio and scenario applications closely surrounding the digital intelligence life of individuals and families. We explored and innovated a multitude of scenario applications such as Virtual Digital Intelligence Human, Cloud XR Virtual-Real Space, Cloud Tourism, and 4K/8K Ultra HD Live Video. We also upgraded our GoTone, M-Zone, and Easyown brands. With these measures, we continuously worked to make it easier for people to acquire, apply, and interact with higher-quality information and make their life more intelligent.

► Enjoying a digital intelligence life

By integrating our capabilities in communication, storage, data and content, we developed featured products such as Mobile Cloud Disk, Super SIM, Mobile Identification, Video CRBT (Color Ring Back Tone), Cloud Games and Cloud XR. We advanced online and offline integration in the context of our daily life scenarios, from food, clothing, housing to transportation, so everyone's material and spiritual needs could be better served.

Innovative digital life: Based on our cloud + big data + AI capabilities, we integrated a rich mix of content such as videos, games, music, animation, and reading. We also explored and advanced metaverse applications, such as Virtual Digital Intelligence Human and Immersive Entertainment, to continuously enrich digital entertainment for individuals.

Rich application scenarios of video CRBT

China Mobile pioneered video CRBT in 2018, upgrading the traditional ringback music to ringback short video and making it visible.

In 2022, China Mobile enriched the application scenarios of video CRBT with a focus on individual, enterprise, and media markets to continuously meet the needs of different market segments. The user count of our video CRBT reached 343 million.

Content Reserve: We continuously expanded our content library by bringing in quality content, establishing an original content incubation system, and furthering in-house productions, and set up a whole-new stage for content. We hosted over 16 million pieces of content in total, with more than 5,000 pieces of quality content focused on the Winter Olympic Games, the World Cup and other IPs.

Product Experience: We optimized the experience with the basic functionalities of video CRBT and accelerated R&D of new technologies such as 5G Ultra HD Adaptive Media Playback and Real-time Interaction. We built up an all-encompassing product matrix and actively explored a full range of new fields such as metaverse, digital collection, and content re-creation, constantly optimizing product functionalities and improving product experience.

Content Release: We supported the publication of content on livelihoods and public welfare via video CRBT by developing a smart publication ability featuring data integration, audience

Convenient mobile network: The Company actively enhanced diversified, scenario-based application capabilities to provide individual users and industrial organizations with greater security and convenience in the use of mobile networks.

Mobile Identification

We offered login and identification services for mobile Internet applications. We provided businesses with comprehensive one-stop solutions to user account usage and data management based on our unique data network identification + data capabilities as a telecom operator, thus shifting mobile phone numbers from being a mere communication account to being a multi-industry account system that served "communication, Internet, IoT, and banking". By the end of December 2022, our mobile identification service had been connected to more than **49,000** applications, with an average daily identification volume of **1.873 billion**.

Super SIM

The national security properties and the convenience of application upgrades featured by the Super SIM card allowed us to innovatively develop a suite of secure and intelligent 5G products. Guided by the goal of being "the new cornerstone of security in the digital intelligence transformation of society", we combined the different function modules of SIM card with a variety of technical solutions such as digital certificate, digital identity, and NFC, thus achieving identification service value, security service value, and livelihoods value and gradually making the Super SIM card our new information service infrastructure.

5G Message

As an Internet-based upgrade of SMS, 5G Message has unique advantages, including being APP-free lightweight, integrated content such as text, image, audio, and video, and SSH login cloud service, which enable it to provide a wide range of information application services for society. By the end of December 2022, 5G Message had been connected to nearly **13,000** applications.

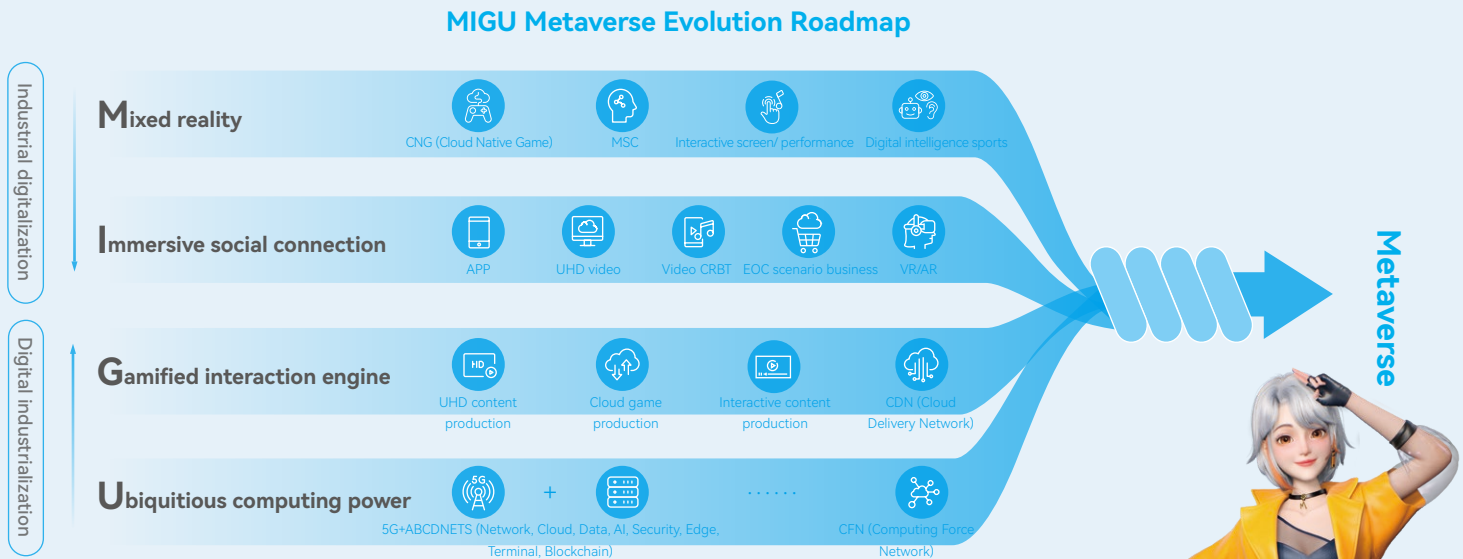
Enriching Customer Benefits: We built a digital life service supermarket and brought our convenient digital benefit experience to thousands of households. By the end of December 2022, China Mobile's customer benefits supermarket hosted 10,243 benefit products under 10 categories from 6,442 brands. With the "Spark Plan of 10,000 Stores" initiative, we introduced joint products, conducted joint marketing and promotion, and equipped our business partners with the ability to market their digital products directly through our customer benefits platform.

By the end of December 2022, we had

287 million benefit customers

Foreseeing metaverse

Mobilizing its technical advantages and Ultra HD video-related capabilities, China Mobile actively built and expanded its presence in the field of metaverse and released the MIGU Metaverse Evolution Roadmap. More than 10,000 users interacted on our industry-first Real-Time Rendering of Single Bit Space. More than 100,000 concurrent sessions were recorded on our 5G+ CFN-based Distributed Real-Time Rendering Network; and our 5G+ CFN Whole-Scene Cloud Games also registered more than 100 million MAUs. Meanwhile, more than 1.8 million meta-settlers joined China Mobile MIGU's all-series products and received their "bit" statuses, and more than 57 million users tried out and interacted on our metaverse.

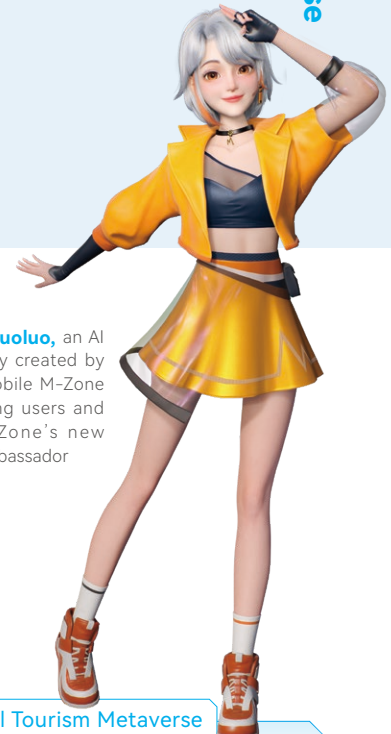


© China Mobile MIGU unveiled the MIGU Metaverse Evolution Roadmap

A Snowy Metaverse for the Winter Olympic Games

As the official broadcaster of the 2022 Beijing Winter Olympic Games, China Mobile was the first in the industry to achieve live broadcasts of 530+ games in full. We brought the first digital-reality "Snowy Metaverse for the Winter Olympic Games" to our users. During the games, China Mobile made history with the world's first large-scale 8K Ultra HD live broadcasts. By bringing panoramic photography, 5G+XR, AI subtitles and other advanced technologies to the arena, we built the world's first "Snowy Town" for the Beijing Winter Olympic Games and allowed users to experience the charms of ice and snow in the Metaverse for the Winter Olympic Games. Meet Gu, the L5 digital avatar of Eileen Gu, a Winter Olympic champion, was a complete sub-millimeter replica of herself. The digital avatars created for five Olympic champions – Eileen Gu, Xu Mengtao, Sui Wenjing, Han Cong and Ren Ziwei – performed at the online Spring Festival Gala, which brought sports games and the ice and snow culture closer to the general public. Our live broadcasts and derivative content on the Beijing Winter Olympic Games recorded 34 billion views, 71.1 billion online clicks and 67 million counts of overseas exposure.

Cheng Luoluo, an AI girl jointly created by China Mobile M-Zone and young users and also M-Zone's new brand ambassador



World Cup Metaverse

As the authorized broadcaster of the World Cup Qatar 2022, China Mobile created the world's first World Cup Metaverse. We pioneered the first Naked-Eye 3D Video CRBT based on a 3D rendering engine, which was played over 1.2 billion times. We also pioneered the "Watching Football in the Car" experience in a multi-screen and multi-angle intelligent cockpit (available to 80% of new-energy auto companies). We presented our users with a novel experience and brought them to the scene across mobile phones, tablets, VR/AR and TVs, and even enabled them to experience the goals from the players' view via cloud VR/AR. Our whole-scenario contents were played 36 billion times, and our metaverse digital intelligence products covered 40% of the games.

Metaverse Music Feast

M-Zone launched the world's first whole-scenario digital-real metaverse concert – the "M-Zone Music Feast". We created a customized immersive XR stage and invited celebrities to perform with Cheng Luoluo, the M-Zone digital intelligence ambassador, bringing a high-tech sensory feast to music fans. The live broadcast garnered over 376 million views in total.

Interactive Cultural Tourism Metaverse

China Mobile actively promoted metaverse construction in Xiamen and built a benchmark demonstration project of cultural tourism metaverse in China. During the 22nd China International Fair for Investment and Trade (CIFIT), China Mobile debuted the Metaverse AR night scene in Gulangyu, which brought a hyperspace experience with land-sea and digital-real spatial interactions.



► Building distinguished brands

Over the years, we have always been building our brands in adherence to our business philosophy of “optimizing customer perception and furthering market integration”. With a focus on business travel and family settings, GoTone provided exclusive courtesy services and maintained our high-value customers; associating with health, GoTone invited Olympic champions to fitness live broadcasts and conveyed positive brand connotations; associating with public welfare, GoTone organized charitable donations and enhanced its brand image. M-Zone built out the first metaverse space, cultivated its digital intelligence ambassador, and sponsored iconic events to spread its brand culture. Easyown launched customer upgrade plans for elderlies and delivery drivers, and developed products tailored for customer groups.



Case China Mobile “GoTone” enriched service offerings and improved user experience

China Mobile “GoTone” built a system of exclusive courtesy services for business travelers and offered customers with high-quality services and experience, including airport and high-speed rail VIP lounges, discounted hotel rates, insurance, etc. For example, the VIP lounge service had extended to 147 airports and 150 high-speed railway stations nationwide, and the hotel VIP service had extended to more than 300,000 hotels worldwide. In 2022, the GoTone exclusive courtesy service program served 4.13 million customers on 6.7 million instances in total. Our “GoTone 2022 Fitness Plan” provided fitness live broadcasts and invited Olympic champions and celebrities to lead fitness enthusiasts in completing 10 fitness sessions, which attracted over 10 million online viewers. We also launched the “GoTone Fitness Club” AI physical test and AI personal training, enhancing the digital intelligence fitness experience of “GoTone” customers and enriching the brand’s connotation of “innovation, motivation and sensibility”.



► Innovating smart home

China Mobile shaped a new smart home lifestyle that combines full-gigabit network connections with cloud-based applications, created a household information service portal consisting of broadband television, digital cinema and vertical content, and promoted our products and applications such as smart home network deployment, home security, smart voice remote controls, big screen content-on-demand services and and-Home smart voice. Meanwhile, we vastly expanded HDICT (home data, information and communications technology) application scenarios such as digital villages, smart communities, smart home, elderly healthcare, home education, and smart vehicle space. We have developed more scenarios in social, entertainment, home office and community contexts to provide comprehensive smart home products and services that extend into all processes and all scenes.

Smart Home Network Deployment

We provided different smart home network deployment services by classifying households into three classes based on floor area. We adjust our terminals and services offerings having regard to the users’ broadband bandwidth and the latest developments in WiFi technology. We placed a focus on promoting WiFi6 networking products and devised customized solutions for users. The monthly proportion of WiFi6 routers out of all routers activated increased from 50% at the beginning of the year to **74.0%** in December 2022, indicating a notable improvement in the user terminal structure. In response to the government’s call for expanding gigabit optical network, we upgraded our home network product offerings and launched the FTTR (Fiber to The Room) business in May 2022, which had more than **500,000** users by December 2022.

Big Screen Content-on-Demand Services

We provided optional “Mobile HD” content services to users, including standard entertainment such as movies, TV shows, variety shows, children’s shows, sports, cartoons, reading, e-sports and educational content. Meanwhile, we also offered interactive educational and healthcare content, cloud games, music and karaoke, video calls, home control and other interactive content and applications. With these services, we delivered a full scene entertainment solution featuring “watch + learn + exercise + listen + play” experience for households. In 2022, users of our big screen content-on-demand services reached **110 million**.

Andlink

We built a smart home information services portal and offered users a vibrant household information services ecosystem. Andlink had been connected to **over 450** hardware manufacturers and **over 10,000** types of devices, and recorded **over 110 million** hardware bindings, ranking the **second** in the smart home industry. We also built a lightweight application access solution based on the Andlink mini program, which provided developers with one-stop services from creation, management to operations, and developed over **1,000** accesses.

► Providing Heartwarming Services

Committed to our “customer-first” and “service-oriented” service philosophies, we built the “Heartwarming Service” brand, formed a “Three-All” (all-round, all-process and all-staff) suite of services. We promoted new digital service models and offered one-stop digital service capabilities to customers through the 10086 comprehensive smart service portal, continuously improving the quality of our services.

All-round service capabilities: We shaped a set of service quality standards based on customer experience, which drove further improvements in our end-to-end services. We made extensive use of intelligent technologies and tools, innovated digital intelligence services, and continuously improved our service operations and smart service support capabilities. By focusing on “big services” and taking customers’ perspective, we dedicated ourselves to tackling service quality issues that our customers were concerned about.

Innovating digital intelligence technologies to bring high-quality, convenient, and efficient services to customers

We launched the 10086 comprehensive intelligent service portal, applying big data and AI technologies to provide customers with intelligent customer service, video customer service, and other intelligent services. The portal provided an average of **173 million** counts of intelligent customer services and **132 million** counts of video customer services on average per month.

With the benefit of the “Dayin Platform” (customer experience improvement and management platform), we provided customized and engaging services for customers.

Over a course of four years, we continued to make progress on our Satisfaction Improvement, Lights-Out and Sunlight Operations

“Satisfaction Improvement Operation”: We focused on improving customer satisfaction over issues relating to mobile internet access, broadband internet access, key products and service contacts.

“Lights-Out Operation”: We focused on addressing key and difficult issues raised in complaints and improving the efficiency of complaint handling. As such, our customer complaint rate decreased year by year, and the monthly complaint rate per 10,000 users decreased by **more than 50%** compared to that of three years ago.

“Sunlight Operation”: We focused on protecting customers’ rights and interests, and established long-term mechanisms to cracked down violations of our customers’ interests and effectively addressed issues such as uninformed subscriptions.



Empower **businesses**

Empower **operations**

Empower **hotlines**

Driven by data and processes, the Dayin Platform has achieved dynamic management of experience enhancement and controllable service operations.

The “Use and Evaluate” feature has been implemented in over 200 business scenarios, reaching an average of 270 million customers per month and enabling prompt access to their feedback on service experience. Covering the entire customer service process, it generates customer satisfaction scores and proactively identifies and resolves issues before customers do, delivering proactive care for millions of customers every month. The platform also enables precise service operations by creating and applying service tags, with a monthly usage volume of billions of times.



Building the brand with actions

Five worry-free game-watching services

Worry-free networks, worry-free game watching, worry-free communication, worry-free remote services, worry-free guarantee

Six new measures of Heartwarming Service

Exclusive filial card, nationwide inter-provincial broadband, exclusive rights upgrading, remote smart services, “Three Ones” worry-free consumption, and prevention of international fraud

Personalized services

“Heartwarming Service: Elderly Guardian Plan,” Heartwarming Service: Delivery Driver Guardian Plan”

Touching customers with contents

Colorful contents

We launched a series of easy-to-understand videos, including the “Heartwarming Service” brand promotion film, the 10086 multi-language service vlog, and the home broadband self-help troubleshooting guide



Case Always available for the people

As a service channel with close ties to innumerable customers, China Mobile's 10086 continues to evolve its service capabilities to adequately support the information and communications needs of the general public.

We innovated a new-generation, cloud-based customer service system and enhanced our digital intelligence support capabilities, which upgraded our previous decentralized support system in 31 provinces to a centralized one, unified our service standards and improved our service efficiency. We supported our employees working from home under our "knowledge empowerment, training motivation and employee care" home-based operations model. We took the lead in launching 5G Video Customer Service and effectively improved the processing efficiency of complicated service requests. In addition, based on our digital intelligence capabilities such as the new-generation customer service system and cloud-network integrated operation and dispatching platform, we innovatively enhanced our abilities in resource allocation across our network and set up a full-network early-warning mechanism covering over 400 workplaces in 31 provinces, shaping our new operation and organization model of "full-network coordination". We thereby maintained service continuity and notably improved the customer service experience.

All-process quality management: We established a full-process and end-to-end service quality management model and continuously made self-improvement. We carried out data analysis to identify problems in business design and processes before working out quality control points and incorporating them into the service standards and business processes. Which enabled us to trace quality throughout the entire lifecycle. We carried out satisfaction surveys covering all business categories, all contact points, and all customer groups. Each month, we collected feedbacks and suggestions from nearly 200 million users to quickly identify dissatisfaction and make improvements through closed-loop management. We strengthened complaint management and operations, continuously enhanced the tracing of recurring cases, and made sure to solve similar issues once and for all after one complaint.

Continuously improving the customer complaint operations and management system

We focused on addressing the "three quality" issues related with network, products and customer contact occasions, to continue to improve the satisfaction of our mobile, household broadband and business customers.



We regarded customer complaints as effective means of discovering service quality issues and improving service quality. We promoted the effective handling of service issues and ensured that we meet rectification targets set by the Ministry of Industry and Information Technology (MIIT) for common issues in the industry.



We focused on improving the efficiency of customer complaint handling, addressing the "breakpoints" in complaint handling coordination and integrating the complaint handling production systems across the network, thus achieving integrated management of the system.

All-staff service culture: We carried out a variety of featured service culture activities, including General Manager Reception Days, "Station at Stores, Listen to and Address Complaints" campaigns, customer-centric discussions, "Speak for the Service" and "face-to-face" services. We continued to organize service stars selections, selecting role models and their day-to-day stories to shape our image of "Heartwarming Service". In this way, we shaped a service culture where all staff members valued, supported and devoted themselves to customer service.



Case "Station at Stores and Listen to Complaints" – a new mode of "Heartwarming Service"

To comprehensively improve its service quality, China Mobile established the "Station at Stores and Listen to Complaints" campaign, encouraging all staff to go to the front lines based on their job nature. We considered this as an opportunity to re-examine and re-optimize our operations. Focusing on every bit and piece, we shifted from business's perspective to customer's perspective, so we could effectively address practical customer needs and concerns. In 2022, over 96,000 staff members participated in the initiative, submitting 34,000 opinions and suggestions, with an improvement rate of over 90%.



© China Mobile implemented the "Station at Stores and Listen to Complaints" campaigns nationwide

Empowering Digital Intelligence Governance

Leveraging its widely distributed information infrastructure nationwide that spanned all five levels of administration, namely provinces, municipalities, counties, townships, and villages, China Mobile facilitated the integration of massive, real-time, and multi-dimensional data resources across cities, communities, and villages. Meanwhile, China Mobile utilized next-generation information technologies to enhance the integration, mining and utilization, analysis, and overall coordination of data elements, leading to more effective and nuanced social governance.

► Improving overall digital intelligence governance and creating a better urban life

By strengthening the application and integration of its own capabilities, China Mobile stepped up efforts to build its suite of government services product capabilities, such as “One-Stop Government Services”, “One-Stop Collaboration” and “One-Stop Management”, and supported the modernization of the country’s governance system, and overall governance, comprehensive improvements in service delivery to the public, and the development of new smart cities. By the end of December 2022, we had developed **31** mature scenario-based solutions, deployed **53** products developed in-house, and provided IT-based government service solutions to over **200** prefecture-level cities and **1,500** districts and counties.

◎ Creating the “Digital Gansu” provincial government pilot

To help Gansu Province speed up its digital government initiative, China Mobile formed a team of 2,500 with people from 13 specialized subsidiaries and over 20 external companies. The Digital Gansu project was the first time that China Mobile participated in a provincial-level digital government project as a general integrator, representing its first provincial-level digital government benchmark project. Aiming for the project to be “ahead in Midwest China and top-level nationwide”, the team used the most advanced middle platform infrastructure, and through data sharing and business process reengineering (BPR), built a system architecture of unified entry, services, capabilities, data, cloud and network, and operations and management. For the first time, over 1 million service points across all five levels of administration were reviewed and sorted out from end to end and the business processes were reengineered, leading to unification in service points, forms, request acceptance and handling, processing, review, and materials. The system led the country in delivering a consistent, barrier-free experience with online and offline handling of more than 1 million service points by achieving 46 unifications across all four of the provincial, municipal, county, and village levels and interconnection among nearly 1,000 systems. This significantly standardized government services in Gansu Province, and the resultant five-level acceptance and handling system enabled people to have their requests handled from end to end on one online platform, including cross-regional requests. The average percentage of requests that could be handled online reached 94% across the province, significantly boosting government service effectiveness in Gansu Province.

◎ Creating “Digital Heilongjiang” to maximize data value and improve service delivery to the people

The Heilongjiang Digital Government Project included an integrated province-municipality-county framework. With the aim of “Digital Longjiang”, China Mobile established the system by restructuring the business flow, optimizing the management flow, and integrating the data flow so as to enable the government to deliver services through the most streamlined processes and using the fewest materials possible while minimizing the time and cost required and ensuring the greatest ease and satisfaction on the part of the citizens.



◎ Creating the “First Digital City in Northeast China”

We launched the Digital Shenyang Project with the goal of making it the “First Digital City in Northeast China”. In this project, we helped build five major middle platforms of digital government, including the core base, the center, and the data middle platform. The system assembled data in such areas as government services, society, city, and industries, thus forging an “integrated digital base”.

◎ Creating the first group of provincial-level construction pilot cities in Shanxi Province

The Shanxi Jincheng Smart City Project was China’s first full-scenario smart city project brought to life. It included five fundamental platforms, such as a city brain and an open blockchain platform, and ten smart applications such as smart monitoring and digital agriculture. The project was a new type of medium-sized smart city benchmark project built on the OneCity platform that integrated multi-scenario applications and relied on Internet innovation for technical support.

◎ Building China’s leading smart county-level cities

Fengdu County, Chongqing: The Smart Fengdu Project was the first operator-built smart city project in Chongqing. The project created shared links between fundamental government platforms, thus enabling a range of features such as unified service portals, the sharing of information resources, big data application analysis, and video image sharing. The upgrade enhanced both the quality of service delivery and the efficiency of government decision-making. The project won “China’s Leading Smart County-Level City Award”.

Quannan County, Jiangxi: The Smart Quannan Project was built on China Mobile’s 5G networks, OneCity platform, and AI platform and, using terminal devices for data collection, offered the Quannan government a range of applications such as emergency response, grid governance, abnormality alert, and global command, along with a suite of smart terminal services such as mobile law enforcement and cloud horn. The project further modernized the city’s governance.

► Creating smart community with refined management and connecting the “last mile” between community and home

China Mobile developed “AndCommunity” and OneZone Smart Community for urban communities, offered a comprehensive suite of digital services for all life scenarios, and brought residents greater convenience and happiness. By the end of December 2022, our solutions had been adopted in more than 112,000 residential communities across 31 provinces, municipalities and autonomous regions, bringing a positive impact on the life of 16 million residents.

Ensuring Systemic Security

In compliance with relevant legal and regulatory requirements on network security, China Mobile continued to build a structure that promote accountability for and take network security seriously, advanced the role of network security in forming a new development pattern, and safeguarded economic and social development.

► Ensuring emergency communications support

We made dedicated efforts to deliver communications support during emergencies and achieved the target of “no major network failure, no major cybersecurity incident, and no major customer complaint”. We provided solid communications support for a multitude of major events, including the Beijing 2022 Olympic Winter Games and Winter Paralympic Games, the National People’s Congress and Chinese People’s Political Consultative Conference (NPC and CPPCC), the 2022 Annual Conference of the Boao Forum for Asia, and the Fifth China International Import Expo (CIIE). We also played an instrumental role in ensuring communications coverage during emergencies such as the Luding earthquake and 3.21 China Eastern Airlines flight MU5735 air accident, which demonstrated our strong sense of duty as a major player on the national emergency communications response team as well as our tenacity and professional capabilities.

Case Full support for CCTV’s HD live broadcast coverage of Winter Olympics torch relay

On February 3, 2022, the Beijing Winter Olympics Games torch arrived in the Zhangjiakou competition zone and was to travel through five local landmarks, from the Nihewan Ruins Park in Yangyuan, Desheng Village in Zhangbei, the Zhangjiakou Industrial Culture Theme Park, the Chongli Fulong Ski Resort and finally to the Dajingmen Square in Zhangjiakou. Hebei Mobile worked out a meticulous plan to support broadcast of the torch relay: we built 25 new base stations around the landmarks, carried out routine inspections, equipment health inspections and parameter checks on a daily basis over 82 base stations, 144 communities and fiber-optic cables, to ensure fail-proof communications during the torch relay. As the 225th torchbearer finished his relay run, the torch had travelled 14.92 kilometers through 225 passes in 7 hours and 40 minutes, during which our 5G services delivered an uninterrupted feed without any lag or frame loss with a peak user count of 12,303, and completed our mission of supporting CCTV’s 5G high-definition live broadcast coverage of the torch relay.



© Chongqing Mobile delivered communications support during a forest fire rescue in Chongqing



© Jiangsu Mobile provided network support for the World IoT Expo 2022



© Xinjiang Mobile provided communications support for the 7th China-Eurasia Expo 2022

► Ensuring network security

China Mobile set up a designated Network Security Leadership Team and continued stepping up the construction of a network Security Operations Center (SOC) with an integrated expert team covering monitoring, analysis, tracing and mitigation. We advanced our initiative on thorough investigation and resolution of network security risks and hazards, and continued to rolled-out the "Elite Encouragement Plan" to improve our abilities in delivering support for network-wide security operations. Through these efforts, we aimed to build a solid security shield for the cloud-network integrated era and ensure a secure environment for communications.

China Mobile redoubled efforts to bolster the construction of the Cyberspace Security Response Center (Cyber-SRC) and build an "integrated, end-to-end trustworthy" computing network security protection system. As well as strengthening the protection of Critical Information Infrastructure (CII), we also enhanced centralized cybersecurity operations and practical offense and defense capabilities while ramping up our capacity for cybersecurity management and emergency communications support under extreme circumstances. We optimized the data security governance system, further advanced centralized management of harmful information, and strengthened prevention against content security risks.

Further strengthening security awareness

We carried out a series of activities such as "1,000-day Secure Network Operations" and Cybersecurity Workday, recording **4.11 million** participations in security awareness education and training.

Further strengthening identification and elimination of network security risk

We formulated and issued the *China Mobile Guiding Opinions on Network Security Risk Management*, advancing systematic management of key risks, strengthening network risk classification and grading for scientific risk management, and furthering the integration of risk identification and elimination into our daily operations. We improved the efficiency and effectiveness of risk identification and elimination by leveraging multidimensional network data and various algorithms such as fault knowledge graphs, alarm features, resource topology, complaint characteristics, anomaly detection models, and abnormal log analysis, significantly enhancing the resiliency and robustness of our networks against potential risks.

Further strengthening the effectiveness of emergency response plans

We carried out routine emergency drills to improve the emergency preparedness and response-ability of the operations and maintenance (O&M) staff. We have devised a total of **1,388** emergency plans to ensure the inclusion of all necessary scenarios.

"Three areas of further-strengthening and three areas of further-improving"

Further improving network security services

Committed to meeting national network security protection requirements, we acted on the philosophy of "security as a service" and worked to establish industry-leading multi-node dynamic defense capabilities, with a view to "implementing regulations, protecting ourselves, and ensuring customer security". We built collaborative defense and control capabilities and assisted in the creation of a collaborative network security protection system; we safeguarded the security of our critical information infrastructure to support the Company's smart transformation; we established dedicated operations team and processes to provide 24/7 network security services for customers.

Further improving the expertise of our network security personnel

We increased efforts to enhance the practical capabilities of our network security personnel to meet the protection needs of our communication networks and customers, continuously building our team into a highly capable and well-rounded security force with outstanding knowledge, skills, and abilities in both defense and offense. The team received multiple awards from the provincial and ministerial departments.

Further improving the automation of daily maintenance operations

We continuously reduced the proportion of manual operations, which helped reduce human errors and improved efficiency in daily maintenance operations, and contributed to the digital intelligence transformation of our network operations and maintenance.

► Protecting the rights and interests of customers

Responding to national requirements for combating and mitigating telecom frauds, China Mobile continued to carry out the “Cut-Off”, “Modem Fraud Crackdown”, and “Peace-of-Mind” operations to protect the legitimate rights and interests of customers.

“Cut-Off” Operation

We invalidated **5.48 million** high-risk cards, declined **453,000** registration requests from fraud-related defaulters, intercepted **550 million** scam calls and **140 million** scam messages, and shut down **3.475 million** scam websites, reducing the average monthly volume of scam numbers by **39%** year-on-year, maintaining our leadership position in the industry in terms of effectiveness of similar operations.

“Modem Fraud Crackdown” Operation

Using our independently developed GoIP monitoring and early-warning platform, we followed the latest trends and features of “simple networking GoIP” and “fixed-line GoIP”, and carried out cross-provincial data integration, analysis and sharing. We assisted local public security authorities in dismantling **2,516** fraud rings across the country, seizing **9,749** “GoIP and modem pool” devices and arresting **6,734** suspects. Those remarkable results earned us **7** out of the top 10 places in the “Modem Fraud Crackdown Heroes List” published by the MIIT.

“Peace-of-Mind” Operation

We furthered cooperation with the police and brought fraud awareness campaigns to the front lines. Internally, we compiled the *Warning and Education Case Studies* and provided training for front-line employees, recording **1.14 million** participations; externally, we focused on raising public awareness and early-warning, assisted **12,761** vulnerable rural grassroots grids to carry out fraud awareness campaigns and sent **2.77 billion** early-warning messages.



Case Forging a “long tassel” to squash SMS “dark market”

To effectively prevent and control SMS violations, China Mobile built a “Long Tassel System” that targeted SMS offenders. Leveraging SMS big data and the machine learning capabilities of the Jiutian platform, the system replaced traditional manual SMS management with smart monitoring, enabling rapid identification and proactive early-warning of SMS violations. Since the system was launched, more than 6,000 problems under 22 categories such as business violations and equipment defects have been identified and resolved, covering 337 prefectural and municipal cities in 31 provinces nationwide. In addition, China Mobile continued to amplify the value of the “long tassel” by adopting it in a wider range of scenarios. For example, we created the first “Water Room” (a new type of crime ring that is specifically responsible for laundering stolen money) identification algorithm in China to aid in anti-fraud efforts, which addressed public security authorities’ need for tools for identifying “water rooms”.



Case Innovating network information security intelligence management and strengthening network information security governance

Through an innovative move to apply online public opinion monitoring to network and information security governance, China Mobile built its own network big data intelligence collection and analysis platform, and achieved dynamic monitoring, automatic tracking, real-time sharing of network-wide security threat information with customization options. The result was a new type of one-stop, all-round and digital intelligence management system. Since its launch, the system has provided 24/7, all-encompassing service support, forming a closed loop from “information identification” to “handling and feedback”, effectively enhancing our risk management capabilities.

The system enabled pre-event management of network and information security incidents by allowing them to be discovered 2 to 7 days before risks circulated widely across existing networks and ahead of user complaints. Since its launch in 2021, the system has assisted with intercepting a total of 1,131,700 pieces of harmful information, reported more than 1,200 incidents such as network attacks, discovered 1,267 risk clues, and accurately shared intelligence information on more than 16,000 occasions. We have also compiled more than 300 typical case studies under four categories such as telecom network fraud, network attacks and operator offences.

► Creating a clean and bright cyberspace

China Mobile has always cared about the psychological health and network security of its young and teenage users. In 2022, the Company established a comprehensive control mechanism that covered all platforms to prevent underage internet misuse and other violations. We instituted mandates for copyright, approval number, content security audits of content, real-name authentication, and an adolescent anti-addiction mechanism on our 5G cloud game platform. We took concrete actions to ensure that instances of non-compliance that could compromise the health and safety of minors when using the products and services were kept to a minimum and effectively addressed.

Anti-addiction: We launched the teenage mode on our MIGU Music, MIGU Video, and MIGU Reading platforms and introduced real-name authentication and an anti-addiction policy on MIGUPlay to impose a time limit and restrict content access for teenage users.

Strict audits: We conducted strict filtering and screening of content harmful to teenagers, and promptly blocked all violating websites. MIGU Video specifically offered an option for reporting “content harmful to teenagers” in the reporting center to strengthen the reporting and handling of such content and to create a clean and bright cyberspace for teenage users. In 2022, we proactively dial-tested more than 3.42 million domain names with suspected pornographic contents, handled more than 18,000 domain names with suspected pornographic contents based on customer reports, and verified and blocked more than 660,000 domain names with pornographic contents.

Adhering to Innovation-Driven Development and Creating a “Highland of Information Service Technologies”



Engaging in Important Operations – Integrating into the National Sci-Tech Innovation System

China Mobile is actively involved in the construction of many national-level sci-tech innovation carriers, including the National Engineering Research Center and the National Artificial Intelligence Open Innovation Platform. We place a prominent focus on achieving breakthroughs in key and core technologies related to the urgent needs of China and the requirements for social and economic development. We spearheaded the formation of the 5G innovation consortium and acted as a leader in the modern mobile information industry chain and a source of top-class original technologies, taking active steps to empower China to become self-sustaining and self-improving in the field of information and communication technologies (ICT).

Focusing on making breakthroughs in key technologies

We carried out intensive R&D in core technologies focused on three major areas, namely fundamental capabilities, cloud-network infrastructure, and general capabilities, achieving technological breakthroughs in areas such as basic chips and key software, thereby amplifying the capabilities and application scale of network intelligence, cloud computing, private 5G industrial network, and other technologies.

Serving as a leader in the modern mobile information industry chain

We established a co-governance system for the mobile industry chain and launched the “10-100-1000-10000” partnership program. The first ten sub-chains have brought in more than 1,000 significant industry partners. Together, we identified demands and formed teams to develop a highly efficient industrial collaboration model that integrated multiple chains and linked internal and external resources; we built a collaborative innovation base with **four centers** set up for **development and test, evaluation and certification, display and release, and collaborative innovation**, to develop **a new large-scale scientific facility** fusing future cross-disciplinary fields such as **networking, intelligence, and computing** while integrating emerging information technologies such as **AI, computing force network, and 6G**. We gathered a wide spectrum of innovation elements from all four domains of industry, academia, research, and application to continuously enhance the viability, development, competitiveness, and sustainability of China’s mobile industry chain.

Spearheading the formation of the 5G innovation consortium

We took the lead in forming the 5G innovation consortium together with over 20 state-owned enterprises (including China Telecom and China Unicom) and over 100 key entities in industry, academia, research, and application to **develop world-leading 5G+ industrial networks and general capabilities** and create 5G demonstration applications for the industry.

Becoming a source of original technologies

We were dedicated to become a source of original technologies. Focusing on 5G and the next-generation mobile communications and systematic AI technologies, we worked to establish a central hub of expertise led by our chief engineers. We also actively explored new models of R&D institutions and research funding to be an international and diversified source of innovation. We led the industry in the number of approved 5G-A standard projects and high-quality papers on 6G. We proposed a theoretical framework for systematic AI and endorsed the importance of original technologies to provide a powerful engine of innovation driving the development of our industry.



Science and technology are primary economic engines, innovation is the primary driving force, and talent is the primary fuel. Guided by the national strategic needs, China Mobile continues to implement the innovation-driven development strategy. Striving towards greater self-reliance in science and technology, we consistently optimize our sci-tech innovation system and increase R&D investment, with a focus on fundamental research and the leading role of technical standards. Through those efforts, we continue to instill greater originality and forward-looking insights in our sci-tech innovation.

Mechanism Innovation – Exploring and Invigorating Sci-Tech Innovation Mechanisms

China Mobile has established an evolving “One System and Four Rings” Sci-Tech Innovation System and actively explores the innovative “Two Inputs and Two Outputs” policy. We built a novel talent management system called “One Core, Two Axes, and Four Drivers, and N Elements” to unleash the power of innovation. We continuously reformed sci-tech innovation systems and mechanisms and established a “Special Scientific Research Zone” to cultivate a highly dynamic and motivated community of scientific researchers. Moreover, embracing openness and cooperation, we leveraged our strengths in networks, technologies and resources and implemented the “Joint Innovation+” plan to create a new ecosystem of win-win cooperation in scientific research in collaboration with key universities, enterprises and other partners to provide accurate, efficient, high-quality and convenient digital services for various market entities, forming a new type of symbiotic and mutually beneficial digital ecosystem. Furthermore, we continued to support entrepreneurship and innovation to foster a culture of innovation in the wider society and enrich the innovation ecosystem. We set up a benchmark technology enterprise association with more than 190,000 registered members, bringing industry partners together through a variety of brand activities such as the Science and Technology Week and the High-Tech Innovators Summit, covering nearly 5 million people.



Inner Ring: Strengthen research in fundamental areas, promote key technological breakthroughs and build a high-level scientific research team

Middle Ring: Build leading platforms and products for CHBN markets

Outer Ring: Promote market development with products

Cooperation Ring: Cooperate with national platforms, leading enterprises, universities, and research institutions to build a dual-cycle layout characterized by solid internal capabilities and expanding external cooperation

► Creating a “Special Scientific Research Zone”

We stepped up efforts to reform the sci-tech innovation system and built the “Special Scientific Research Zone”, where we piloted a four-dimensional compensation and incentive model consisting of “position + performance + role incentives + mid-to-long-term incentives” to underline the value of contributions and widen the incentive gap. We implemented the “fixed cost” mechanism to enhance teams’ management autonomy. We established a three-dimensional career development path based on “professional + management + role”, putting in place a task-based, non-hierarchical, and vertically flexible employment mechanism. We also implemented numerous other mechanisms, such as “open competition”, “horse racing”, and “valuation adjustment mechanism (VAM)”, and improved accountability while fully delegating authority and responsibilities.

► Promoting “Two Inputs and Two Outputs”

Input resources

We implemented the four innovation projects and increased investment in R&D, with the R&D expenditure CAGR in the past three years exceeding **28%** and the investment in fundamental research for applications exceeding **RMB 900 million**. Our R&D investment reached **RMB 21.7 billion** in 2022, representing a year-on-year increase of **17.0%**.

Input policy support

We developed a system for promoting sci-tech innovation, including guidelines, action plans, implementation plans, and other documents, to introduce a comprehensive set of incentives and support sci-tech innovation. We took active steps to explore a diverse range of cooperation models, including joint R&D, competition-based selection, and integration of research and application, to increase the effectiveness of technological research.

Two Inputs and Two Outputs

Output results

We continued to upgrade the core competency list management mechanism and cumulatively output over 300 achievements. The results from the list have translated into more than **RMB 10 billion for 6 consecutive years**, with a cumulative total of more than **RMB 80 billion**.

Output talents

We prioritized major science and technology projects and strategic transformation. Focusing on sci-tech talents, we built a strong lineup of talents and a high caliber of professionals in the field of Internet Information Services (IIS), and continuously upgraded our “10-100-1000-10000” talent system. As of the end of December 2022, we had formed a research team of more than **39,700** people, with technical personnel accounting for **36.80%** of our total workforce.

► Implementing the “Joint Innovation+” plan

We continuously upgraded the external R&D cooperation system and explored new models of cooperation based on the “Three News and Five Commons” principle. We developed innovative joint carriers and created a “model room” to showcase our achievements with a regional focus and a national reach. We continued to promote high-quality R&D cooperation by leveraging the 30+ innovative “Joint Innovation+” R&D cooperation carriers, gradually forming a new pattern of internal and external “double circulation” R&D ecology.

Integrating cooperation resources

We increased investment in technology and marketing and enhanced the sharing and reuse of cross-industry knowledge, capabilities, and markets to promote closer networking among multiple resources. We leveraged the role of capital to expand investment in the industry and jointly push forward product innovation and application expansion.

Creating excellent cooperation platforms

We built and strengthened the 9 one platforms to meet the common needs of various industries and upgraded the Pan-Terminal Omni-Channel Sales Alliance, the Digital Life Service Provider Alliance, etc. to enhance our brand image. We took the lead in building the Computing Force Terminal Industry Alliance and the Metaverse Alliance to enrich the computing force terminal and metaverse applications.

Improving cooperation mechanisms

We broke the barriers that restricted the flow of data, technology, created an unimpeded docking channel for one-stop cooperation and network-wide implementation, and carried out multi-level cooperation such as joint construction, operation, and R&D.

► Building “Entrepreneurship and Innovation” bases

China Mobile made solid progress in the construction of national demonstration bases for entrepreneurship and innovation, optimized the carrier system, and enhanced the impact of brand events, creating a dynamic ecosystem of entrepreneurship and innovation. Since being approved as one of the second batch of national demonstration bases for entrepreneurship and innovation in 2017, China Mobile has established 10 “HeChuang Incubation” spaces (including mobile cloud, smart city, intelligent hardware, etc.) and one industrial ecology incubation center, cumulatively incubating more than 360 projects (including internal and external projects). We have opened up eight distinctive capability-sharing platforms including communication capabilities, digital home, and IoT to the whole society. The capabilities we offer have been accessed over 800 billion times, with more than 300,000 applications incubated.





Promising Sci-Tech Innovation – Fostering Sci-Tech Advancement for Substantial Achievements in Innovation

Undertaking to advance the development of information and communications technologies, China Mobile takes advantage of its world-leading network scale to explore applications and promote research on the convergent application of network, cloud, data, AI, security, edge, terminal, and blockchain (ABCDNETS) technologies. Taking a forward-thinking approach, the Company is deeply engaged in conducting original research on 6G, metaverse, next-generation AI, etc., making considerable achievements. China Mobile remained among top-class global telecoms in terms of the number of international standards we spearheaded and the number of patents filed. In 2022, 12 innovations of the Parent Company were selected for inclusion in the Recommended Catalogue of Sci-Tech Innovations of Central Enterprises (2022 Edition) compiled by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), where China Mobile was ranked among top central state-owned enterprises and took the first spot among operators. Six of our innovations were recognized in the “2022 Innovation China” series lists published by the Chinese Association for Science and Technology (CAST).

► New breakthroughs in sci-tech innovation



Technologies

- **Continuously leading 5G development:** China Mobile proposed three major directions and 10 key technologies for 5G evolution and formed a consensus. We built the world's largest 5G+ BeiDou high-precision positioning network, pioneered the 5G+RTK fusion broadcast technology, and were the first to release prototypes in five areas, namely Integrated Sensing and Communication (ISAC), sub-band full duplex (SBFD), passive IoT, X-Layer, and space-air-ground integration.
 - Conducting **the world's first operator NTN air-ground integrated communications test.**
 - By launching **the world's first systematic 6G network architecture**, China Mobile achieved breakthroughs in more than 10 key 6G technologies, including new wireless transmission, new network protocols, and endogenous safety and security. Furthermore, **the number of high-quality 6G-related papers ranked first among global telecom operators.**
 - China Mobile established **the world's first open-source CFN community** and built the nationwide CFN Innovative Test Infrastructure (CFITI). Also, China Mobile assisted in launching the first heavyweight CFN product consisting of 80,000 computing force servers.
 - China Mobile broke world records in the field of next-generation optical communication, including 800G and long-distance few-mode fiber (FMF) transmission, and published 8 high-level papers at top international conferences.
 - Our proposal of “Engineering and Industrialization of Integrated Storage-Computing Chips” in the field of IoT was listed as one of the “Top Ten Major Industrial Technology Issues” in 2022, and the memristor-based storage-computing chip jointly developed with Tsinghua University reached an industry-leading level.
 - China Mobile proposed **the first “three-layer and seven-element” infrastructure in the metaverse industry.**
 - China Mobile accumulated 287 AI capabilities, filling the gap in network and AI integration technology, and proposed original technological directions for “systematic AI”.

Standards

- China Mobile won the first prize in the China Standard Innovation Contribution Award – Standard Project Award.
- China Mobile consistently remained among top global operators in the number of international standards, and held **52** leadership positions in international organizations. In 2022, we led the submission of approximately **1,300** standard-related articles.

Patents

- China Mobile has won the **China Patent Silver Award for three consecutive years**, with the “Methods and Apparatuses for Network Function Information Interaction” **receiving the China Patent Silver Award** and the “Configuration Methods, Network-Side Devices, and Terminals for a Frame Structure” and “A Method, Base Station, and Terminal for Providing Positioning Services” **receiving the China Patent Excellence Award** in 2022.
 - China Mobile received approval from the government to build service institutions for national patent navigation projects.
 - China Mobile led the establishment of the Intellectual Property Alliance of the ICT industry.
 - The cumulative number of our domestic patent applications exceeded **30,000**, with **13,508** granted; the cumulative number of our overseas patent applications was close to **1,200**, with **502** granted. In 2022, we submitted **4,734** domestic patent applications, **250** PCT international applications, and **202** overseas applications.



Inclusive Growth

Achieving prosperity for all is an essential requirement of the Chinese path to modernization. At China Mobile, we embrace openness, inclusiveness, and mutual growth and are committed to leveraging the power of information technology to benefit society as a whole. We strive to build a high caliber of digital intelligence talent and provide opportunities for our employees to grow and thrive with us. By actively shouldering social responsibilities, we continuously improve the quality of life of the people and ensure that the achievements of modernization benefit more people in a fairer way, making the vision of a better life for everyone a reality.



Striving for Common Prosperity



Cultivating Well-Rounded Talents

SUSTAINABLE DEVELOPMENT GOALS

Responding to SDGs

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

8 DECENT WORK AND ECONOMIC GROWTH

10 REDUCED INEQUALITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Striving for Common Prosperity

Adhering to the principle of people-oriented development, China Mobile worked to bridge the digital divide for marginalized population and contribute to rural revitalization. We actively engaged in public welfare and charitable activities and provided high-quality services to support coordinated regional development. We strengthened our overseas responsibilities and brought the benefits of social progress to the people.

Crossing the Digital Divide

China Mobile actively advanced efforts to increase broadband speed and lower tariff, helping small and medium-sized enterprises (SMEs) with their difficulties and prioritizing the benefits of the people. Leveraging our convenient intelligent and cloud-based online approaches, we endeavored to eliminate the digital divide for special groups, including people with disabilities, seniors, and those with cultural differences, to democratize digital access for all. We were actively involved in promoting the digital intelligence upgrading of education and healthcare, helping the public service sector reap the benefits of information technology and enjoy the level of convenience brought by digital intelligence while promoting the sharing of educational and medical resources.

► Propelling speed upgrade and tariff reduction to widely benefit enterprises and individuals

In 2022, China Mobile made solid progress in propelling speed upgrade and tariff reduction, leading to substantial benefits for enterprises and individuals alike. We offered micro-, small- and medium-sized enterprises (MSMEs) a 10% discount on long-term subscriptions of enterprise broadband and Dedicated Internet Access (DIA) and waived fees for some SMEs for one to three months. The Company offered tariff cuts for three specific groups: seniors, people with disabilities, and people who were lifted out of poverty. The new "Heartwarming Service Elderly Guardian Plan" and upgraded "Filial Piety Card/Package" were designed to offer more services to seniors, including location tracking and triple anti-fraud service, at a more favorable price. Additionally, the "Care Card" was exclusively launched for people with disabilities and those who were lifted out of poverty.

In 2022, we provided targeted tariff reductions that benefited a total of **37.167 million** people in these three groups

► Meeting the needs of seniors and facilitating smart aging

China Mobile took active steps to bridge the "digital divide" facing seniors to meet the requirements of the gray hair industry for high-quality development. We explored innovative ways to integrate the industry with the next-generation information technologies and developed information services that are user-friendly, effective, appealing, and reliable. This has helped to create new growth opportunities for the gray hair industry while at the same time enabling seniors to share in the benefits of digital technology development.

Digital intelligence
elderly care

We developed a connected intelligent healthcare service platform that catered to the needs of elderly people with chronic diseases. This platform served millions of users and enabled the transition of healthcare service from "in-hospital to out-of-hospital, offline to online, one-time to periodic, random to personalized, manual to intelligent, and passive to active".

With a focus on the essential needs of elderly care and the elderly population, we developed "a standard product framework, a dual-level operations platform, and an ecological coordination mechanism" to create a closed-loop service system integrating "information, monitoring, management, consultation, registration, and prescription purchasing". Building on the "Filial Piety Card" and large screens, we aimed to rapidly expand our user base, strengthen sustainable and scenario-based tiered operations, and enhance customer loyalty and business value.

By the end of December 2022, China Mobile had built 120 smart elderly care demonstration sites, signed contracts with 117 elderly care institutions, and created over 2,700 home-based elderly care beds, serving more than 1.3 million senior users.

Customized elderly care service solutions

For customers aged 60 and above, China Mobile launched the Easyown Filial Piety Card service plan focused on five essential needs: communication, security, travel, entertainment, and life. The plan included a range of features, such as third-party bill payment, calls with family members, an extra-large data package, anti-fraud protection, location tracking, and cost-effective offers.

We developed a comprehensive senior service solution combining "mobile HD + smart voice remote control + senior-friendly content, and senior-friendly interface".

We developed a smart guardian solution that provided "camera/smart speaker/watch for seniors/SOS button" to help senior customers enjoy a smart life in the digital era.

Convenient mobile services for the elderly

Taking advantage of our centralized operations, we added a convenient and efficient "one-touch access" for nationwide customers aged 65 and above in dialing the 10086 customer service hotline, allow them to skip the multi-level key-press and waiting process and access customer service representatives directly.

We enabled our senior customers to have a better and more considerate experience with options such as "speak slower" and "say it again".

After launching the service, we served a cumulative total of over 55 million senior customers from the end of 2020 to the end of December 2022, handling 209 million manual service inquiries.



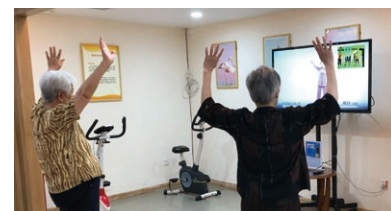
© China Mobile launched the senior-friendly service "Heartwarming Service Elderly Guardian Plan"



Case

"Smart Elderly Care, Enjoy the Golden Years": Fujian Mobile promoting the digital intelligence transformation of elderly care

Since 2018, Fujian Mobile has been exploring innovative approaches to healthcare and elderly care, continuously refining the products, platform, and ecosystem to promote the "intelligent" changes in "elderly life, supervision and protection, and service mode" in the field of health and elderly care and drive the digital intelligence of the elderly care industry. Fujian Mobile developed hardware with three major functions for seniors living alone, namely imperceptible monitoring, emergency call, and health management, addressing problems with the lack of caretakers. Fujian Mobile also collaborated with communities to set up a caring platform for seniors living alone, providing them with AI-based somatosensory interactive home fitness products and Internet TV synchronized classroom services, thus creating a unique "virtual nursing home". In addition, Fujian Mobile established a comprehensive information platform for elderly care services in Fujian by integrating high-quality online and offline resources, helping the government promote and popularize home-based elderly care beds and providing an integrated solution for canteens, thus pushing forward the digital intelligence transformation of government supervision.



© Elderly people experienced fitness classes from AI somatosensory interactive devices

► Attending to the needs of special groups and promoting barrier-free support

China Mobile cares deeply about special groups. In particular, our “AndMessage” has continuously invested in the field of accessible communication to address the communication needs of hearing-impaired people. We have developed accessible calling products and established the “AndMessage” dedicated accessible zone. We have also applied 5G + AI technology to create a new calling experience that offers speech-to-text and text-to-speech services during calls for hearing-impaired individuals to further address the communication difficulties they face in their daily lives.

Infinite Care: China Mobile’s “accessibility” services helping enjoy the exciting games and events

During the Beijing Winter Olympic Games, China Mobile’s self-developed real-time intelligent subtitles helped hearing-impaired individuals overcome the hurdle of not being able to hear or hear clearly during the live broadcasts. This product was highly commended by the China Association of the Deaf.

During the 2022 FIFA World Cup, China Mobile fully upgraded its “For Those Who Can’t Hear” accessibility service. We launched the “Digital intelligence Sign Language Announcer” using technologies such as real-time rendering and Natural Language Processing based on deep learning networks to provide 10 professional and accurate sign language commentaries for hearing-impaired individuals.



© Sign language teachers verified the real-time content of the digital intelligence sign language



© China Mobile’s digital intelligence sign language commentator, Yi Tang, provided the first digital intelligence sign language World Cup commentary

► Empowering education development and using 5G to promote high-quality education

Education is a top national priority. To meet the needs of building a high-quality education system, promoting quality and balanced development of education, and serving urban-rural integration, China Mobile has developed a range of applications in support of the digital transformation of education, including the dual-reduction service platform, e-student ID, and 5G cloud examination room.

Building a new foundation for digital education

Private network connection: We have built a private 5G network for the education industry, which has been implemented in nearly 100 schools. Technological exploration: We have developed a white paper on dual-domain private network for the education industry and **applied for four invention patents, including 2 high-level patents**. Application innovation: We have **developed ten applications** and deployed **over 1,500 5G+** smart campus projects.

Dual-reduction regulatory platform contributing to educational equity

The dual-reduction platform offers multiple application services including fund supervision, after-school service management, three types of classrooms settings, online tutoring, and parents-school cooperation. It **serves 20 million teachers and students from 2,000 schools and over 600 educational institutions**. The platform has won awards from the Education Technology and Resource Development Center of the Ministry of Education and the China Academy of Information and Communication Research (CAICT).

Remote Examinations Driving the Reform of Examination Format

Promoting online and paperless examinations: We have built a 5G smart cloud examination solution that integrates online + offline examination venues, which was exclusively co-developed with the Ministry of Education and has been adopted by **over 400 institutions and schools in 30 provinces** and **served more than 10 million students**. Promoting online and smart arts examinations: We have developed national standards for exam venues and exam implementation. We have created three types of exam venues, including standardized exam venues, self-built exam venues, and movable exam cabins, to provide greater convenience to students.



Case

Hunan Mobile: “I Am the Successor” 5G classroom boosting revitalization of rural education

Hunan Mobile implemented a private network and education cloud through the 5G smart education cloud network, integrating data and applications to create five smart education applications and achieving full digitization of the environment, resources, and applications. We made an investment of over RMB 20 million in building smart classrooms that enabled students to engage in independent personalized online learning using a number of learning tools such as smart school ID cards and smart mobile devices. A combination with 5G remote teaching helped address the uneven distribution of educational resources. In 2022, the smart classroom solution was adopted by over 2,000 classrooms in 102 Furong schools (with over 70% rural students and over 30% impoverished students), covering 100,000 students. Through the 5G network classroom, children who live in remote areas can also have the opportunity to attend classes given by famous teachers in Changsha, thus extending high-quality educational resources to rural schools.

► Efficient and convenient healthcare safeguarding people's health

The well-being of the people is a crucial indicator of national prosperity and strength. Actively responding to the requirements of building Healthy China, China Mobile promoted the deep integration between 5G and the healthcare industry. We have developed the OneHealth smart medical and health product system based on the integration of cloud and network, joining hands with 2,000+ medical institutions to explore innovative medical solutions to boost the high-quality development of the medical and health industry.

Empowering key hospitals to improve their service quality



© Delivered the world's first remote 5G fundus oculi laser surgery in cooperation with Peking Union Medical College Hospital



© The national-level tele-consultation platform built in cooperation with China-Japan Friendship Hospital has been installed in 6,000+ medical institutions



© Built the 5G digital intelligence panoramic hospital in cooperation with the First Hospital of Hebei Medical University

Promoting systematic improvement of medical insurance networks

China Mobile supported the digitization of the medical insurance system. For example, China Mobile assisted the National Healthcare Security Administration in preparing many official documents, including the *Guidelines on the Construction of Backbone Network for the Core Business Area of the National Healthcare Security System*, and also helped establish a private 5G network system for national medical insurance.

Zhejiang Mobile built the "Smart Medical Insurance" platform, providing 16 services, including cross-regional medical treatment and agency services, for healthcare security administrations at all levels, designated medical institutions and designated retail pharmacies, and insured individuals across the province.

Shaanxi Mobile built the Shaanxi Medical Insurance Information Center project, which includes the 12393 medical insurance service hotline, a medical insurance APP, and a provincial-level medical insurance command center, significantly improving the healthcare experience of the general public.

Facilitating the digital intelligence transformation of emergency response

We have independently developed a 5G emergency rescue integrated platform that has created a new emergency rescue model of "location determination upon call-in, rescue upon call, and hospitalization upon boarding". The platform has been connected to the prehospital emergency care of 300+ hospitals. We have established a medical rescue system in 20+ cities nationwide, including Beijing, Sichuan, and Guangdong, and upgraded 1,800 ambulances. The rescue platform has been applied at a number of major events, such as marathons and the Beijing Winter Olympics, and used for disaster relief, such as the 2022 Luding earthquake and Shimian earthquake in Sichuan Province.



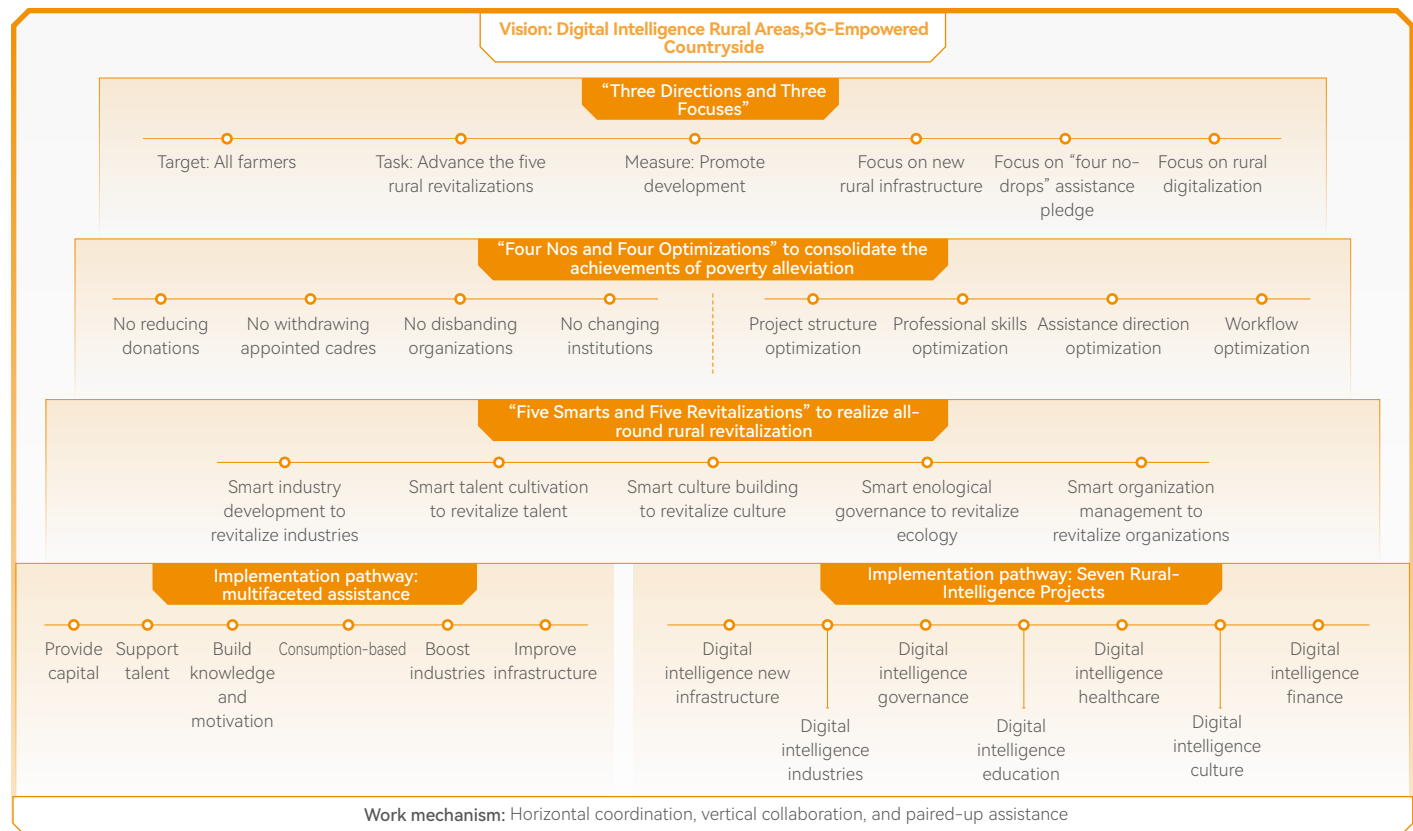
© China Mobile worked with the Beijing Emergency Center to implement a 5G ambulance upgrade to improve the efficiency of emergency rescue



© China Mobile built a 5G+ multi-network integrated emergency dispatch platform for the 120 Emergency Command Center of Guangzhou Municipal Health Commission, serving the development of the Pearl River Delta region

Advancing Rural Revitalization

Centering around the requirements of the national rural revitalization strategy, China Mobile has leveraged its strengths in communication infrastructure, information services, and organizational systems to continuously assist six designated counties (namely Huanan and Tangyuan in Heilongjiang, Aketao, Shule, and Luopu in Xinjiang, and Baisha in Hainan) and offered paired-up support to two counties (namely Gaize in Xizang and Maqin in Qinghai), engaging in assistance activities in 1,434 counties and villages. Using information-based equipment and digital intelligence resources such as IoT and cloud, the Company makes a dedicated effort to build digital intelligence villages and promote the digital intelligence transformation of rural production, social governance, and cultural lifestyle, thus empowering the modernization of agriculture and rural areas while playing our part in driving the overall revitalization of rural areas.



Fully implementing the “Digital Intelligence Rural Revitalization Plan”

- We coordinated efforts to promote targeted and paired-up assistance and to promote rural revitalization have yielded fruitful results.
- The Parent Company has received the highest rating for four consecutive years in the designated assistance assessment of central entities and ranked among the top three of all central state-owned enterprises for three consecutive years.
- As of the end of December 2022, we had dispatched more than 2,400 on-the-job assistance officials, donated RMB 287 million to the eight counties paired-up with the Headquarters and RMB 348 million to designated impoverished areas nationwide, spent RMB 470 million on consumption-based assistance, and trained 90,000 grassroots officials and individuals.
- The seventh batch of the “Universal Telecommunications Service Project” pilot delivered 4G coverage 4,954 remote rural villages and built 263 new border 4G base stations; we developed 580 5G smart agriculture demonstration projects nationwide, covering more than 350,000 remote rural villages.
- We held company-wide activities to select and honor models in rural revitalization, exemplary assistance demonstration sites, and best practices in digital intelligence village construction to inspire excellence, set benchmarks, summarize experiences, and promote higher-quality work across the Company.

In Numbers: 2022 Digital Intelligence Village Project Achievements (as of the end of December 2022)

We allocated a special fund of **RMB 19 billion** to provide network information services for poverty-stricken areas across the nation, achieving basically continuous 5G network coverage in towns and villages throughout the country and good coverage in some developed rural areas

The assistance funds benefited **17.66 million** out-of-poverty customers

We installed approximately **1.3096 million** Clairvoyant surveillance cameras for "Safe Villages", connected to **324** government supervision platforms

We set up **61,000** "ViLin" HD video venues in rural areas, serving **607,000** rural users with software terminals

Rural users of "AndIntercom" reached approximately **1.4849 million**

We created **38** rural financial demonstration projects, recording **88.09 million** retrievals of our big data services

Anti-poverty-returning platform has been put into operation in **more than 40** prefecture-level cities of **10** provinces

OneVillage platform has been deployed in **31** provinces

Over **2,000** rural smart schools have been built

"Huicun" products have been launched in **30,700** administrative villages

93 rural primary medical care demonstration projects have been launched

► Deploying new infrastructure to consolidate the foundation of digital intelligence villages

Infrastructure construction is critical to rural revitalization. China Mobile has been leading the charge in constructing new information infrastructure in rural areas, such as 5G and gigabit broadband, shouldering more than half of the industry's universal telecommunication service task volume. The Company has consistently leveled up the quality of rural networks to improve information services and terminal supply.



© Guizhou Mobile built rural base stations



© Gansu Mobile built a base station in Nantai Village, Linze County, Zhangye City, to improve access to communication services in remote mountain villages



Case Mobile Internet of Videos (IoV) technology connecting rural governance network

China Mobile actively carried out "digital village construction". The Company conducted in-depth analysis of the needs of village committees and villagers and built a scenario-based computing-force service platform and an industry-level business platform using mobile IoV technology. We created a carrier-level digital village governance solution using a "standard delivery + light customization" model. Digital Village provides video and playback services to meet villagers' needs to watch over their homes and also supports the sharing of public video streams with the village committee to ensure village security and comprehensive governance. In addition, the public video stream managed by village committees can be pushed to the public security "Snow Bright/Skynet" system through a government-enterprise platform to assist the government in comprehensive governance, security and protection, and health initiatives.

© Shandong Mobile built a digital village platform for the Xigang Town in Zaozhuang City, Shandong. Connecting 36,000 households, 72 village IoVs and 386 surveillance cameras, this platform enabled management of the entire town on a single screen and allowed villagers to address 90% of their livelihood affairs with a QR code, bringing a more than 30% enhancement in service efficiency for the villagers.



Approaching Prosperity Together – Zhejiang Mobile Assisted in Common Prosperity Practices

On May 20, 2021, the State issued the *Opinions on Supporting Zhejiang in the Development of a High-Quality Common Prosperity Demonstration Zone*. Zhejiang was to shoulder the political responsibility of pioneering relevant efforts in supporting plans for national development. Zhejiang Mobile swiftly responded by setting-up future villages objectives, continuing to empower and explore efforts oriented towards common prosperity.

From 2018 to 2022, Zhejiang Mobile took a multi-dimensional approach to support paired-up Qiliang Village in Shuangxi Township, Pan'an County, Jinhua City, including consolidating infrastructure, increasing industrial income, improving livelihood, extending industries, and developing alongside neighboring villages. Qiliang Village is remotely located with a weak collective economy. However, since the deployment of its first village-level 5G base station, the development of Qiliang Village has entered a new stage. Its "Qiliang Chunshe" e-commerce platform generated over RMB 6.3 million in the sale of specialty agricultural products, elevating the village's collective operating revenue from RMB 22,000 five years before to RMB 1.01 million in 2022.

After its initial success in rural revitalization with Qiliang Village, Zhejiang Mobile swiftly stepped up efforts and set off an explosive momentum of digital intelligence empowerment across Zhejiang Province with a particular focus on governance, services, and industry digitalization. In September 2022, Zhejiang Mobile took the lead in achieving 100% 5G network coverage in all administrative villages across the province, painting China Mobile on the image of common prosperity in the new era.

Completed close to

800

rural digital intelligence projects in total

Fully involved in the digital intelligence empowerment of

81

future villages

Directly or indirectly boosted the income of collective households and farmers in

1,170+

administrative villages



© Chen Jide, the first secretary of Qiliang Village, Jinhua City, Zhejiang Province, visited villagers

Chongqing Mobile promoted rural digital intelligence construction and enabled villagers to enjoy the benefits of digital intelligence

Chongqing Mobile integrated our strengths in advanced technology and user base with our experience with demonstration bases. Building on the foundation of information infrastructure that reaches villages and households, it brought happiness to the vast countryside and started a new chapter on "digital intelligence rural revitalization". Chongqing Mobile actively advanced the adoption of smart agriculture and had established more than 80 demonstration sites that combined 5G technology with smart agriculture by the end of December 2022. They were designed to help farmers reduce costs and increase efficiency. To achieve this goal, the company implemented a series of training programs, such as "Mobile Phone Use", "Spring Plowing and Spring Sowing", and "E-Commerce Services". The training series covered various aspects of production and life and was offered through methods like 5G live broadcasting, pre-recorded videos, and campaigns, making it easy for farmers to use digital means to facilitate their life and production and cumulatively reaching 27.51 million people. Chongqing Mobile also built an e-commerce platform specially for agricultural products to provide end-to-end integrated production and marketing services that ran through the entire process of "planting, managing, harvesting, and selling" and promote production through sales, which served more than 1,000 products with a cumulative transaction volume of RMB 350 million. The company also launched the "Yuyinong" resident score service to provide local governments with smart tools for rural governance. The service reached over 340,000 farmers in 1,170 villages in 272 towns and streets of 31 districts and counties.

► Empowering modern agriculture and facilitating the digital intelligence transformation of agriculture

With a view to establishing a modern agricultural production and management system, China Mobile advanced the development of "Internet +" agriculture and facilitated the comprehensive and deep integration of information technology with agricultural production, operations, management, and services.

Precise planting

The smart tea plantation in Huizhou District, Huangshan City, Anhui Province, used 5G sensing and control systems for refined management, which led to an 80% reduction in the costs of labor, management, fertilizers, weeding, and production materials and an increase of around RMB 800-1,000 in per-acre yield.



© Smart Tea Plantation in Huizhou District, Huangshan City, Anhui Province



© Sichuan Qionglai Pig Farm

Sichuan Qionglai Pig Farm combined video surveillance system, smart feeders and other IoT devices, and AI video image analysis technology to achieve smart measurement of pig weight and pig counts, reducing manual workload and human-pig contact time by 50% and 80%, respectively.

Smart breeding

Smart farm machinery

Haizhou District of Lianyungang, Jiangsu Province, has built an unmanned farm machinery system based on 5G+ BeiDou high-precision positioning technology, which realized fully mechanized, precise and unmanned farming operations, such as plowing, planting, managing, and harvesting. This reduced the direct labor costs by 52%, saved an average of 2kg of seeds per *mu*, and increased the yield by an average of 80kg per *mu*. It is a benchmark for high-efficiency and high-quality unmanned farms.



© Unmanned Farm Machinery in Haizhou District, Lianyungang, Jiangsu



© Anhui Mobile employees and farmers sold farm products through 5G live-streaming e-commerce

With its advantages in 5G boutique network, Anhui Mobile arranged for a team of employees to provide guidance for farmers on conducting live streaming sessions at a vegetable base in Donghe Village, Liyang Town. By teaching the farmers to use 5G-powered live-streaming e-commerce to promote their produce, Anhui Mobile helped them diversify their sales channels from traditional offline sales to tap into online sales.

Digital-intelligent production and marketing

Smart agriculture and tourism

Guizhou Mobile created the "5G + VR + agriculture + culture + tourism" model to empower the integration between rural agriculture and tourism. It promoted the upgrading and transformation of traditional industries including rice-fish system and tea planting. Guizhou Mobile also built the "Qianyi Manor" agricultural products e-commerce platform to revitalize industrial resources in rural areas.



© Guizhou Mobile employees installed the traceability identification for "Qianyi Manor" platform live streaming

► Promoting rural culture revitalization with digital intelligence publicity

Building on the vast and vibrant local cultural resources, we publicized the rural revitalization strategy via the digital intelligence platform, meeting the spiritual and cultural demands of rural users and contributing to the revitalization of rural culture.

Case Empowering by technology content and cultivating the “cultural tree” of Tangyuan

China Mobile advanced rural revitalization with a commitment to empowerment by technology and took a variety of measures to revitalize the culture of Beikaoshan Village in Tangyuan County, Jiamusi City, Heilongjiang Province.

Producing rural short drama to promote the image of Tangyuan County.
We helped bring about the shooting of the rural revitalization-themed short drama *Me, My Father, and My Grandfather* in Tangyuan County, which showcased the achievements of local development.

Filming 8K HD videos to promote the distinctive Northeast China culture.
We filmed 8K HD promotional videos of the county-wide square dance exchange and performance event which was held on the National Fitness Day showcasing the region’s customs and traditions. The event featured 15 teams from various townships and communities performing a variety of dances, including dragon dance, Yangko, square dance, fan dance, and folk dance. We also established a dedicated Tangyuan section on the National Exercise Channel of our MIGU Video APP featuring varied content such as square dance tutorials, agricultural product sales, introduction of popular scenic spots, etc., to promote Tangyuan’s sports and cultural heritage.



Committed to Public Welfare and Charity

China Mobile actively engages in public welfare and charity activities. The Company operates an innovative public crowdfunding platform for public donations, continuously makes donations to branded charitable projects, and carries out volunteer services, sharing the fruits of corporate development with society in various ways.

► Innovatively operating a public welfare platform

After undergoing centralized selection and review by the Ministry of Civil Affairs (MCA) of the People’s Republic of China, China Mobile Philanthropy was selected as one of the third group of MCA-designated Internet crowdfunding information platforms in November 2021, making us the first and only telecommunications operator to be selected.

The China Mobile Philanthropy platform is an Internet public welfare platform built to support the development of philanthropy and promote common prosperity through the participation of caring enterprises and the general public. The platform provides charitable organizations with services including fundraising information publishing and management, and provides the public with convenient, transparent, and secure donation services. The platform is operated by China Mobile Online Services Co., Ltd, and deployed on China Mobile APP, 10086 WeChat Official Account, and 10086 Alipay Life Account.



民政部指定慈善组织
互联网公开募捐信息平台

全球通蓝色梦想
公益计划



扫码识别二维码献爱心



Platform operation performance · 2022

We invited **29** charitable organizations onto our platform, including China Foundation for Rural Development, China Charity Federation, China Education Development Foundation, China Charities Aid Foundation for Children, One Foundation, etc.

We launched **44** fundraising projects jointly with our partners, with a focus on rural revitalization, Luding disaster relief, education assistance, medical treatment, elderly care, and people with disabilities.

A total of 203,165 donors joined our platform during the year, making 237,695 donations, including approximately **RMB 4.5386 million** and **367 million** reward points.

► Engaging in public welfare activities

◎ "GoTone Blue Dream Public Welfare Program" Project

In October 2020, China Mobile launched the "GoTone Blue Dream Public Welfare Program" in collaboration with the Ministry of Education, China Education Development Foundation and China Mobile Charity Foundation, to support the development of basic education in rural areas. As of the end of December 2022, we had raised over RMB 8.65 million for 62 schools in 31 provinces, autonomous regions and direct-administered municipalities under the program, including RMB 6.57 million in points donations and over RMB 2.08 million in cash donations made by China Mobile users, to provide schools with educational and teaching supplies.

◎ "And You" Educational Assistance Program

Since 2014, China Mobile headquarters has been carrying out the "And You" charitable assistance program for the eighth consecutive year, where employees at our headquarters provided "One-on-One" assistance to primary and secondary school students in eight counties (including Gaize County in Xizang, Maqin in Qinghai, Aketao, Shule and Luopu Counties in Xinjiang, Huanan and Tanguan Counties in Heilongjiang, and Baisha County in Hainan) and provided financial support for them to complete schooling. In 2022, in collaboration with Beijing Mobile, we raised nearly RMB 1.1 million in total employee donations under the program. By the end of December 2022, we had supported 3,250 students for a total of RMB 3.65 million.

◎ "Little Scientist" popular science series activities for children

Under a program initiated by China Mobile Research Institute (CMRI), a team of technical experts and volunteers is mobilized to give online and offline popular science courses, perform experiments, and make donations to children and teenagers in urban village communities in Beijing, old revolutionary base areas, and remote mountain areas. By the end of December 2022, over 200 teaching hours were recorded under the program. It was recognized as an Innovative Case of Ideological and Moral Construction for Minors in the Capital City in 2022.

◎ The Xinglongchang School District of Luxi County, Hunan Province, arranged for teachers and students to watch the online course entitled *Connecting Virtual and Reality with Children from the Little Scientist*, a popular science program for children



China Mobile "Philanthropy Stars of the Year"



Zhang Liuzhen
Employee of the Online
Marketing Service Center

Caring for Children

Since 2021, Zhang Liuzhen has rallied various departments to work together with the "Uncle Long Legs" public welfare program under the theme of "Caring for Children's Hearts and Building Dreams for the Future". They raised over 500 pieces of clothing and more than 2,000 books, along with funds through various channels to cover the treatment costs of 197 children diagnosed with CHD.



Zhang Ye
Employee of Inner
Mongolia company

Unwavering Dedication, Steadfast Pursuits

Since joining the Xing'an Branch Volunteer Service Team and the "Red City Volunteer Police" Volunteer Service Team in Ulanhot City in 2012, Zhang Ye has actively participated in nearly 200 volunteer activities, including poverty alleviation and education assistance, "spreading warmth in winter", and traffic control for the "Building a Civilized City" initiative, recording 500 hours of total service time and a total of RMB 20,000 donated for education assistance.



Zhang Wenmeng
Employee of Henan
company

Infinite Love, Boundless Volunteering

Zhang Wenmeng has devoted himself to volunteerism for 13 years, clocking over 1,500 hours of volunteer service time in total. He led the establishment of the "Party Member Volunteer Service Team of Guancheng Branch, Zhengzhou", which has conducted more than 30 public benefit lectures on "Preventing Telecom Fraud". The team also donated over 20 mobile phones and more than 1,000 books for left-behind children in impoverished areas.

Contributing to Luding earthquake relief by various means to create information service “lifelines”

Donating for disaster relief in a coordinated way upon hearing the news

After the magnitude-6.8 earthquake hit Luding, Sichuan Province on September 5, China Mobile was deeply concerned with the situation and immediately deployed efforts to carry out earthquake relief and emergency communications support. We promptly initiated an emergency rescue plan, dispatched local subsidiaries and research institutes to the earthquake-stricken areas, and supported earthquake relief and post-disaster reconstruction efforts with **RMB 50 million** in donations from the Parent Company to the Sichuan Charity Federation.

Making rapid responses to support rescue and relief efforts with big data

Using the Wutong emergency response platform, the Wutong Big Data Team of China Mobile Information Technology Center gathered the latest disaster information from the China Earthquake Networks Center and swiftly completed an analysis on population distribution within a 10-kilometer radius of the epicenter. The team accurately identified the distribution of **more than 4,000** victims during the two hours before the earthquake and assisted the government in implementing rapid and precise relief efforts.

Offering heartwarming service to the victims

Sichuan Mobile promptly activated a green rescue channel, deferred service termination for **680,000** local and roaming users in Ganzi and **75,000** local and roaming users in Shimian County, Ya’an City, and also offered free data traffic + voice packages to **69,000** local China Mobile users in Luding County. We set up **12** emergency service stations at service halls in the earthquake-stricken areas to provide 24-hour emergency services such as resting area, free charging, safety check-ins, hot water and disinfection. Customers in Ganzi and Ya’an were given priority access to representatives on our 10086 hotline, helping **45** victims reach their families.

Racing against time to restore communications in the earthquake-stricken areas

Sichuan Mobile immediately set up an emergency support team to carry out communications emergency response work, cumulatively dispatching **2,562** support personnel, **703** emergency support vehicles, **800** fuel engines, **50** satellite phones, **9** emergency communication vehicles, **3** emergency power units, and **13** portable satellite equipment to repair damaged base stations and transmission cables, thus quickly ensuring critical services for the earthquake relief emergency command center and all temporary shelters. Moreover, the company also expanded the network capacity to support the telephone communications of the epicenter and conducted full inspections and risk assessments of surrounding communication facilities.

5G networked drones providing full support to emergency communications in the earthquake-stricken areas

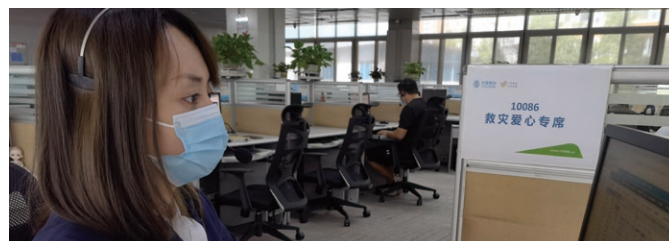
China Mobile (Chengdu) Industrial Research Institute, together with Sichuan Mobile, promptly dispatched a drone emergency rescue team of **30** members and **6** different drones to the affected areas in three work lines. Our emergency liaison officers stationed at the Department of Emergency Management of Sichuan Province, ready for dispatch and to assist communication with frontline command. Our large fixed-wing drones and medium-sized drones provided emergency communications support. Our surveying and mapping personnel also provided support for surveying and mapping operations to form multi-dimensional communication support for earthquake-stricken areas on the ground and in the air. As of September 7, a total of **6,125** rescuers and missing users were connected to our emergency communications system, generating **6,871.61MB** of data traffic and **15,499.6** minutes of VOLTE voice calls, safeguarding emergency communications for rescuers.

Calling for donations to show care on our Philanthropy platform

After the earthquake, our China Mobile Philanthropy platform timely reached out and partnered with other charitable organizations. Together, we planned and launched special donation campaigns, and received **23,600** donations totaling over **RMB 913,000**.



© A satellite emergency vehicle provided support for the government of Luding County



© China Mobile instituted 10086 special customer service for disaster relief



© An 8-person advance team from Sichuan Mobile hiked to the Hailuogou Scenic Area to repair base stations

► Launching branded charitable programs

China Mobile has consecutively won the China Charity Award for years and received wide acclaim for its long-standing support for China Mobile Charity Foundation's "One Red and One Blue" branded program.

China Mobile Charity Foundation's "One Red and One Blue" branded program

○ China Mobile's "Heart Caring" Campaign

Since the launch of the campaign in 2011, we have offered free screening to 63,850 children and free treatment to 7,446 children diagnosed with congenital heart disease (CHD).

In 2022, we invested RMB 13 million to provide screening to 1,952 impoverished children and offered free surgeries to 377 impoverished children diagnosed with CHD in seven provinces, including Ningxia, Qinghai, Hebei, Guangxi and Shaanxi.

○ Blue Dream – China Mobile Education Aid Plan

Since the launch of the program in 2006, we have cumulatively trained over 130,000 principals from primary and secondary schools in central and western China, donated 2,310 libraries and built 4,360 multimedia classrooms.

In 2022, we invested RMB8 million in total in the "Blue Dream" Principal Training Program and trained 1,000 principals from primary and secondary schools in the rural areas in 10 provinces in central and western China including Xizang, Yunnan and Inner Mongolia using a "three-stage" training pattern. We also invested RMB 17.3 million in the "Blue Dream" Multimedia Classroom Program in five provinces including Sichuan, Shaanxi and Guizhou, and donated 331 multimedia classrooms to 240 primary and secondary schools in 31 counties.



© In August 2022, free CHD screening in Xiong'an New Area and Langfang under Hebei Mobile's "Heart Caring" Campaign – a charitable campaign for impoverished children diagnosed with CHD

► Widely spreading public goodwill

China Mobile actively promotes public welfare to encourage more widespread public participation.



Case Together for a Shared Future with China Mobile – China Mobile's Charity Run spread positive energy

In March 2022, the "Together for a Shared Future with China Mobile" Charity Run sponsored by China Mobile officially kicked off. Winter Olympic champion Eileen Gu was joined by representatives of China Mobile's "Heart Caring" Campaign families, running team representatives, and other representatives of China Mobile and Shougang Group at the Big Air Shougang to mark the launch of the 2022 China Mobile "Heart Caring" Campaign. The Charity Run was aimed at conveying public welfare philosophies, calling on everyone to participate in fitness exercises and show care for special communities, help children with CHD receive treatment, and together create a healthy China and shape a shared future. The event received wide attention with a total of 370 million views across platforms, over 150,000 interactions, over 1,000 reports by mainstream media and over 2 million participants in the Charity Run.



© Launch of Charity Run

Coordinated Regional Development

China Mobile actively implements China's major regional strategies and proactively integrates itself with national strategies on coordinated regional development. Positioning ourselves as a "Major Force in New Regional Infrastructure, Enabler of Digital Intelligence Transformation, Leader in Sci-tech Innovation and Pacesetter in CSR", we contributed as an enterprise to collective regional development efforts and provide high-quality services to support coordinated regional development.

► Building systems to serve national strategies

To better serve strategies on coordinated regional development, China Mobile formed the Leadership Group for Implementing National Strategies on Regional Development chaired by our Chairman and with heads of each division as deputy leaders to coordinate and advance efforts in supporting regional development. The Leadership Group has set up a series of overall work systems, complied with requirements set out in national strategies, and published the *China Mobile Guidelines for Implementing National Strategies on Regional Development* and the *Notice on Further Deepening the Implementation of the Work Requirements Related to the National Strategies on Regional Development* to specify our objectives, tasks and relevant requirements.

► Firmly supporting coordinated regional development

We promoted the deep integration of national strategies on regional development into all processes of our production and operations, reform and development. Set directions: We continued to effectively carry out strategic planning and coordination, set clear medium and long-term goals and key annual priorities such as integrated regional CFN deployment, integrated information services supply and regional sci-tech innovation. Allocated resources: We set up strategic resource pools and reserved special funds to strengthen support for underdeveloped areas and safeguard implementation of major regional projects. Optimized policies: We devised policies on collaborative development of big data, cloud computing, edge computing and inter-provincial handset data traffic sharing to support regional collaboration. Ensured implementation: We included implementation of the national strategies on regional development in the annual performance assessment of relevant units to ensure implementation.

Our "One System and Four Rings" sci-tech innovation system perfectly corresponded with a series of "major regional strategies", such as the Beijing-Tianjin-Hebei Region, the Yangtze River Economic Belt, and the Guangdong-Hong Kong-Macao Greater Bay Area. In terms of improving internal R&D capabilities, we have been given the green light to build national engineering research centers for next-generation mobile communication technologies, established joint research institutions with Tsinghua University and other universities, and cooperated with national-level laboratories such as Pengcheng Laboratory, Zhejiang Lab, and Purple Mountain Laboratories. We actively participated in constructing the Jingjinji National Center of Technology Innovation. In terms of exploring joint R&D models, we launched the "Joint Innovation+" plan, and built 12 R&D institutions with universities as well as nine joint laboratories with sci-tech innovative enterprises.

We continued to enhance regional network interconnectivity and gradually achieved a meshed architecture with regional interconnectivity. We initiated the third phase of the cloud private network backbone expansion project and corresponding transmission network project. In the Yangtze River Delta region, we added four new backbone core nodes for a total of 12 and added five new cross-provincial direct connection links, with an average of 20 province-outbound bureau directions, achieving full interconnectivity between the Yangtze River Delta region, the western computing force hub region, and mobile cloud center nodes, with inter-provincial export bandwidth reaching 25Tbps. In the Beijing-Tianjin-Hebei region, we added three new inter-provincial relay bureau directions, increasing the average province-outbound bureau directions from 13 to 14, leading to full interconnectivity with all mobile cloud center nodes and national computing hub nodes, with the inter-provincial export bandwidth reaching 10.9Tbps. To meet the network integration needs of the Yangtze River Delta, Beijing-Tianjin-Hebei Region, and Guangdong-Hong Kong-Macao Greater Bay Area, we will initiate fiber optic cable line construction projects such as the Shanghai-Nanjing-Hefei, Hangzhou-Fenhu (Suzhou), Shaoguan-Wuzhou, and Shanghai-Guangzhou.

CSR Perspective: China Mobile is taking actions to promote coordinated regional development

In the Beijing-Tianjin-Hebei region

We released the *2022-2024 Action Outline for Coordinated CFN Development in the Beijing-Tianjin-Hebei Region* and pushed for the signing and implementation of the cooperation agreement for the Beijing-Tianjin-Hebei (Langfang) Data Center; formulated a special plan for regional network construction, constructed a boutique network covering 155 square kilometers of the urban sub-center, achieving full 5G coverage in the urban areas of Xiong'an New Area; participated in the construction of the Xiong'an Center of the Beijing-Tianjin-Hebei National Innovation Center; and provided communication support for the Beijing 2022 Winter Olympics and completed the network demonstration projects in the sub-center of Beijing and Xiong'an New Area.

In the Guangdong-Hong Kong-Macao Greater Bay Area

We launched international business access points and international submarine cable landing stations, shortening the average latency between Hengqin (Zhuhai), Hong Kong and Macao by 75%; built China's largest provincial-level boutique dedicated optical transport network (OTN) and an optical cross-connect (OXC) network with latency of less than 3ms within the Greater Bay Area; and expanded the capacity of the Zhuhai-Hong Kong cross-border land cable system, adding 1,100G of cross-border Hong Kong-bound circuits in Zhuhai, bringing the total capacity to 1,300G.

In the Chengdu-Chongqing Economic Circle

Focusing on the new development pattern, we upgraded the Chengdu-Chongqing Economic Circle into one of the four hotspot regional data centers for in-depth participation in the construction of national integrated CFN hub nodes and the top-level national nodes for industrial Internet identifier resolution.

At the Hainan Free Trade Port

We supported the construction of "Smart Hainan", expanding the province-outbound Internet bandwidth to 3,600G and implementing more than 30 government cloud projects.

Fulfilling CSR Overseas

China Mobile continued to expand internationally and fostered new drivers for market growth. We continued to make efforts to promote international development, support implementation of the "Belt and Road" Initiative and drove global digital intelligence inclusion, demonstrating our commitment to social responsibility as a central state-owned enterprise.

► Broadening the global network coverage

China Mobile is fully committed to building a large-capacity, multi-route and high-quality transmission network that provides "one-point access to the world". By the end of December 2022, our international transmission bandwidth reached 123T with a year-on-year increase of 16%. We focused on optimizing networks along the "Belt and Road", completed IP network optimization in Southeast Asia, improved three key network indicators, i.e., the number of IPT customers, network traffic and the number of routes penetrated, and made a leap towards creating a global Tier-1 network.

Submarine cables	We expanded our bandwidth by 13.3T, and advanced submarine cable projects in the Asia-Pacific region, the Asia-Europe region and Africa, and furthered our vision of "one global submarine cable network".
Land cables	We completed expansions in network capacity along the China-Vietnam, China-Laos, China-Kyrgyzstan, Zhuhai-Hong Kong, Zhuhai-Macao, China-Laos-Thailand and China-Russia-Europe corridors. We developed end-to-end corridor-type land cable capabilities along the Belt and Road, launched the first phase of the China-Laos-Thailand corridor, and completed the construction and launch of the China-Kazakhstan-Russia-Europe corridor.
POPs	We added five nodes and improved the access capacity of POPs around CFN.
Data centers	We advanced the construction of the Hong Kong Fo Tan Data Center and expanded the IDC resources through cooperation. In 2022, we had more than 1,209 cooperative data centers overseas.

Case Participating in construction of network infrastructure and breaking through the bottleneck in communications in Africa

In May 2020, the 2Africa submarine cable project team, consisting of eight enterprises including China Mobile International Limited (CMI), announced the construction of the 2Africa submarine cable. In August 2021, the project team announced the addition of one new branch, the 2Africa PEARLS, to the existing Africa Ring submarine cable, which would extend connectivity to Middle East and Southeast Asian countries and regions, including the Persian Gulf, Pakistan, and India. When completed, the 2Africa submarine cable would be the world's longest, covering a total length of 45,000 kilometers. It would seamlessly connect Asia, Africa, and Europe, offering up to 3 billion users worldwide – or 36% of the global population – a more efficient and convenient international connectivity experience. The cable would also will bring more economic and social benefits to industries that rely heavily on the Internet, such as education and healthcare, and significantly boost the global digital economy.

The 2Africa submarine cable made its first landing in Genoa, Italy in April 2022. By the year-end, the system design for the Red Sea, Mediterranean, northern, and eastern segments had been completed, and equipment production had begun. The 2Africa submarine cable project is on track to be completed and operational by 2024 as planned, with a total of 46 landing points worldwide.

In November 2022, CMI partnered with a leading African provider of dynamic power and IDC comprehensive solutions to develop IDC solutions for Africa to contribute to the growth of the local digital economy.

To further build a Silk Road of Information connecting the world with intelligence, CMI has been actively building an all-round and three-dimensional system for communication network resources with "Information Highways (submarine and land cable resources)", "Information Stations (POP)", and "Information Distribution Islands (IDC)" as the core. CMI has created a three-dimensional high-speed channel for information in an all-round way. With these efforts, CMI has provided large-capacity and high-quality connection services to meet the growing bandwidth demands driven by 5G and digitization between Europe, Africa, the Middle East, and East Asia.



► Shouldering responsibilities as an outstanding employer

Committed to fulfilling its corporate social responsibility, China Mobile has launched a series of graduate recruitment programs overseas, continuously working to maintaining a harmonious and sustainable relationship with the local community.



CMI won the “2021-2022 Talent Development Award for Co-Building the ‘Belt and Road’ with High Quality” presented by the Belt and Road Talent Alliance.



CMI won the “Best Employers in Asia” award presented by the Hong Kong Council of Social Service for the fourth time.



Case Offering employment opportunities in South Africa

On April 14, 2022, the Job Fair 2022 of Chinese-Invested Enterprises in South Africa organized by the South Africa-China Economic and Trade Association was held in Johannesburg. CMI’s subsidiary in South-Africa actively participated in the job fair, introduced CMI’s employment opportunities and talent training plan to the attending students, and made friendly exchanges with the representatives of local governments and other exhibitors. Nearly 1,300 local job seekers including students from universities and vocational and technical colleges in South Africa as well as more than 30 Chinese and foreign media, including South African Broadcasting Corporation (SABC), China Central Television (CCTV), and the Xinhua News Agency, attended the job fair on site. The job fair was also live-streamed via multiple online platforms and recorded nearly 50,000 viewers, effectively showcasing and promoting the corporate image and culture of CMI and contributed to a better brand image.

► Promoting a the corporate culture of “Trust, Responsibility, and Care”

The eruption of a volcano in Tonga caused severe disasters such as tsunamis, leading to significant economic losses and serious disruptions to external communications. China Mobile responded quickly, immediately assessing the situation of Chinese Mobile users visiting the area and providing them with temporary uninterrupted services with reduced international roaming fees. Once the local communication network was restored, users were able to contact their families and friends promptly.

CMI’s headquarters and frontline sales units conducted a total of 23 activities, including in-kind and cash donations and visits to local communities and welfare institutions.

CMI’s subsidiary in Indonesia conducted the “Send Warmth and Love” public welfare campaign at Santo Yusup Orphanage in Cianjur Regency, Jawa Barat, Indonesia.

CMI’s subsidiary in Thailand arranged for employees to visit the local center for children with disabilities, where they listened to their difficulties in life and study and shared inspiring stories with them.

CMI’s Middle East and Africa section visited Al Noor Rehabilitation & Welfare Association for People of Determination, a local welfare institution for children with special needs in the United Arab Emirates with toys, and explored models for future cooperation and support with the institution’s management team.

China Mobile International responded promptly to the call of the UAE Food Bank and launched a food donation initiative. The company voluntarily collected dozens of bags of rice, noodles, and other dry foods, and donated them to the designated collection point of the UAE Food Bank on April 20th.

CMI’s subsidiary in Kenya organized an visit to Bishop Opera Luigi Locati Children’s Home, a shelter for homeless children in Nairobi, where our employees also donated clothes, shoes, quilts and other materials that they had voluntarily raised.



© China Mobile visited the Bishop Opera Luigi Locati Children’s Home

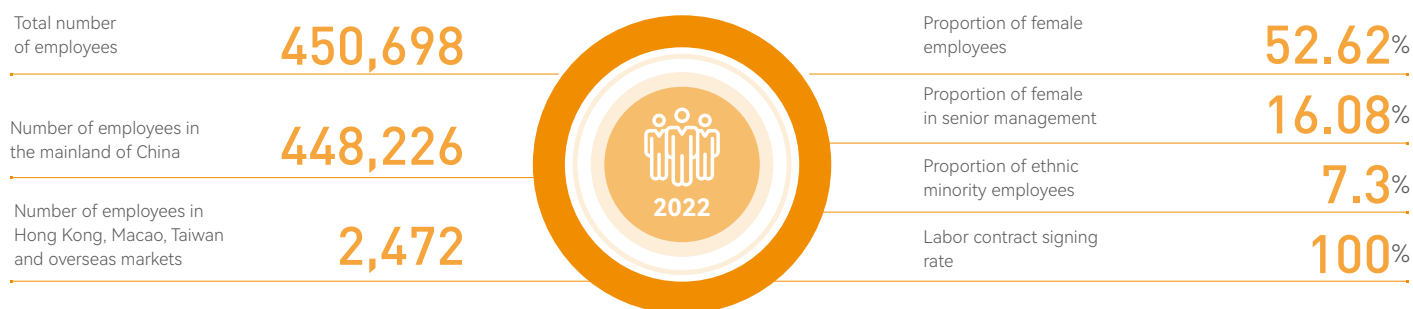


Cultivating Well-Rounded Talents

Adhering to the “Strengthening the Enterprise with Talents” strategy, China Mobile recognizes employees as the primary fuel driving innovation and leading development. By developing well-rounded talent development plans and establishing talent training and incentive systems, we remain firmly committed to creating enabling conditions and environment that help employees at all levels and in all roles to grow and thrive with us.

Protecting the Basic Rights and Interests of Employees

China Mobile fully respects and defends all human rights that are acknowledged globally and never involves itself in any activities that neglect or undermine these rights. We strictly observed the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China* and other applicable laws and regulations, continued to improve our employment management systems and dynamic supervision and notification mechanisms, and strictly prohibited child labor, forced labor, harassment and abuse. We also attached great importance to protecting employee privacy and made sustained efforts to create an equal, fair, flexible, efficient, harmonious and stable working environment, and to protect the legitimate rights and interests of our employees.



Case China Mobile taking actions to protect female employees' rights and interests

China Mobile pays close attention to protection of female employees' rights and interests. Through the “Heroines' Contribution” campaign, we encouraged female employees to offer their views and voice out their suggestions on our transformation and development. Through the “Defense of Heroines' Rights” campaign, we improved our abilities to serve female employees and defend their legitimate rights. Through the “Care for Heroines” campaign, we enhanced our services and support for female employees, and implemented policies like parental leave to help them address difficulties at work and in life. Through the “Heroines' Growth” campaign, we built a dynamic and robust body of female employees. By the end of December 2022, the percentage of female employees at the headquarters who returned to work after maternity leave stood at 100%.

► Diversity and equal opportunity

We are committed to promoting fair employment and does not allow such factors as race, ethnicity, gender, religion, etc. to impact the recruitment process, providing equal employment opportunities for all candidates. We released recruitment information via various channels including our official channels, external channels and colleges, and standardized our résumé selection, written test and interview processes, to create a fair, open and just recruitment environment for talents.

With a focus on needs relating to digital intelligence transformation and high-quality development, we continue to step up efforts to attract professionals with IT/CT/DT backgrounds and optimize our workforce structure. We prioritized hiring graduates from areas or ethnic regions that had been lifted out of poverty among comparable candidates and provided human resources support for units that implemented national and local government requirements such as assistance to Xizang, Qinghai or Xinjiang and rural revitalization. In 2022, the Company carried out a summer campus recruitment for the first time in addition to the regular fall and spring recruitments, and recruited graduates from two consecutive classes. In 2022, 8,365 college students were recruited through campus recruitment, up 1,268 from the previous year.

► Innovating talent recruitment mechanisms

We stepped up efforts to recruit high-end, scarce and outstanding young talents, and implemented a suite of special programs such as the “Outstanding Talent Plan”, the “Golden Seed Plan”, the “Diamond Plan” and the “Top Talent Plan”. We further collaborated with colleges and universities for early access to talents, applied for the Ministry of Education's programs dedicated to connecting talents with needs, partnered with multiple colleges and universities to establish “employment training bases”, and entered into high-end talent training agreements to recruit talent in an efficient manner.

Outstanding Talent Plan

We fully integrated implementation of national employment policies with our need for talent reserve to support our transformation and development. We organized online and offline spring campus recruitment, our first ever summer campus recruitment, and social-wide recruitment in a customized, detailed and integrated manner. Our efforts in promoting employment of college students were featured in CCTV's program *Topics in Focus*.

Golden Seed Plan

We established innovative talent recruitment and cultivation mechanism pivoted around the major businesses including 5G, CFN, and smart middle platforms, further carried out special campus recruitment targeting outstanding college graduates with great potential, and continued to amplify efforts to attract more highly skilled, specialized, and promising young talents.

Top Talent Plan

Focusing on the Company's major missions, important transformation areas, and key research projects, we recruited high-level and experienced talents from society and intensified efforts to attract more high-end, scarce, and outstanding young talents.

Diamond Plan

To step up efforts to become a world-class enterprise by building a dynamic "Powerhouse", we continued to strictly control the gross scale, tap the full potential of existing resources, and magnify the increment effect. We innovatively implemented special incentives to optimize the workforce structure and redoubled efforts to recruit more IT/CT/DT professionals, thus establishing an employee team that keeps pace with the Company's needs for digital intelligence transformation and high-quality development.

► Compensation and benefits system

We implemented a "performance-oriented and structure-adjusted" compensation system. We remained committed to offering compensation that was market-driven and performance-oriented. Meanwhile, we continued to refine and enhance our incentive mechanisms, adjust the composition of the remuneration package, amplify the incremental effect of compensation, and enhance efficiency in the allocation of compensation resources. With these measures, we stimulated and maximized our employees' motivation and improved their commitment to work.

We built a "three-pillar" medical security system framework consisting of basic social medical insurance, as supplemented by corporate medical insurance and with the option to take out personal commercial medical insurance, and brought satisfaction and safety to our employees with continued improvements in our medical security system.

► Implementing democratic management

We respect employees as a stakeholder in our Company and convene workers' congress meetings on a regular basis. We enhanced disclosures of bread-and-butter matters to the employees and other issues of common concerns, and further formalized our workers' congress. We have also set up a CEO mailbox and also a mailbox for the chairman of the labor union to receive employees' feedback. According to the principles of "hierarchical handling, categorized processing, centralized management and emphasis on feedback", the mailbox for the chairman of the labor union receives and handles reasonable suggestions and comments concerning our development strategies, management policies, operations, rules and systems, democratic management, workstyle, corporate culture and staff culture, labor union, emergencies and issues affecting employees' production and life. Any major issue would be submitted to the senior labor union as soon as possible, which would follow up and resolve the issue in a timely and appropriate manner, to effectively safeguard employees' rights to be informed, to participate, to be heard and to supervise.

Strengthening Vocational Capabilities Training

We developed multi-level and distinctive training programs, offered specific trainings to different levels and categories of employees, and combined online with offline sessions and training with practice. We advanced comprehensive upgrades to the training system centered on the "Helm" leadership development program, the "new drivers capacity enhancement" package, and the "Navigation" qualification program, and leveraged the China Mobile Online Talent Development Center to continuously reskill and upskill our workforce, to cultivate our workforce's potential and value.



Case Building a digital intelligence learning platform with massive resources

Closely centered around the three main areas of "capacity building, content creation and operational development", the China Mobile Online Talent Development Center continued to evolve in its digital intelligence capabilities. It offered ten smart learning apps, including intelligent recommendation, intelligent invigilation and intelligent broadcasting, and included five security protection capabilities, including web page tamper-proofing and the "Red Ship Guard" to enhance information security on the platform. With a focus on knowledge management and content creation, we built a content system of 48 sequences under seven categories, with courses on new infrastructure, CHBN and grid-based operations accounting for more than 65%. The platform also offered themed courses such as macroeconomic trends, innovative applications, and philosophy and social sciences, and e-books and audiobooks in the cloud library at the Online Talent Development Center. Striving for lean operations and management, we pioneered a "T-H-T" (Ten-Hundred-Thousand) Expert Studio with ten Group-level chief experts, forming an important base for the demonstration, leadership, knowledge sharing and professional exchanges among technical experts across the Group.

During the reporting period, there were 1,960 new courses, 466 excellent business case studies, 1,304 new senior engineer papers and knowledge articles, and more than 15,000 test questions at the Online Talent Development Center. Moreover, we held 53 Group-wide livestreaming activities, set up 80 new special learning topics, organized 580 certification exams, and recorded a total learning time of 44.53 million hours.

Expanding Career Paths for Employees

China Mobile planned and built a V-shaped “10-100-1000-10000” talent “queue” with a reasonable composition, comprehensive specialties and a large scale which could grow and flourish together with a focus on four “teams”: strategic leaders, high-level experts, outstanding engineers and outstanding young talents in science and technology. We have built a diversified career development system to provide employees with broad development prospects and well-established career paths. In 2022, we issued the *China Mobile Standard Position Database (2022)*, which improved and optimally created 283 non-manager standard positions to ensure that our employees’ abilities and talents are best aligned with their positions so that they can maximize their potential.

Providing Humanistic Care for Employees

China Mobile takes active measures to balance the employees’ work and life. We organize a rich variety of cultural and sports activities such as basketball, table tennis, badminton, bowling, and fitness to enrich the employees’ leisure time and endeavor to create a happy workplace that values work-life balance. Furthermore, the Company adheres to the people-centered philosophy and has made steady progress in implementing the caring system by relying on the “Heartwarming” brand. In 2022, we continued to provide people-centric services under the “Heartwarming” brand, including “Heartwarming” employee caring programs, “Happiness 1+1”, “Heartwarming” financial mutual aid system, and care for special groups, thereby creating an inclusive and caring system and continuing to increase employees’ sense of belonging and happiness.

“Five Small Spaces”

For seven years on a row, we continued to advance our “Five Small Spaces” program – small canteens, small bathrooms, small lounges, small activity rooms and small reading rooms, to provide all kinds of necessary and emergency facilities and supplies for our frontline employees. In 2022, we spent RMB 566 million in construction costs under the program.

On top of its sports, reading and music elements, the “Happiness 1+1” MIGU Fun series activities also introduced new digital intelligence products such as 5G+AR/VR and empowered new sports and social scenarios with AI, to allow employees to experience new services and provide them with a new, AI-interactive experience and made the activities more creative and entertaining.

“Happiness 1+1”

We continued to encourage the labor unions at all levels to leverage a combination of online and offline activities, to cultivate employees’ interests and hobbies during the activities, and to care for their physical and psychological well-being. We also expanded the benefits of labor unions to all corners of our organization, such as the grid staff, to relieve their work stress.

In 2022, a total of 302,000 employees within the Group participated in the MIGU Fun Journey of Health activity; 257,000 employees participated in the Journey of Reading activity, registering a total reading time of 2.97 million hours; 101,000 employees participated in the Journey of Music – MIGU “Listening” Fun activity, registering a total of 30 million minutes of music-listening and 500,000 counts of song-sharing; a total of 207,000 employees participated in the Journey of Music – MIGU “Video” Fun activity, registering a total of 3.589 million hours of video-watching.

Helping employees in need

We put more efforts in caring for retired officers, employees with critical illnesses, disaster-affected employees, and other special groups.

Caring for female employees

Labor unions at all levels helped female employees to relieve stress and improve their physical and psychological health through building software and hardware facilities such as the Mommy’s Houses, yoga rooms and fitness reading as well as providing psychological counseling and organizing craftsmanship activities.



© Ningxia Mobile held the “Bring Kids to China Mobile” activity to celebrate the Dragon Boat Festival and the International Children’s Day



© Shandong Mobile conducted the all-staff “Work with Enthusiasm and Live a Happy Life” fitness event



© China Mobile Hong Kong Company Limited organized a basketball game

Protecting Employees' Health

China Mobile earnestly implements the *Guideline on Implementing the Country's Healthy China Initiative* issued by the State Council, strictly observes the *Law on Prevention and Control of Occupational Diseases*, and fully assumes primary responsibility as an employer to prevent occupational diseases. We took a variety of measures, such as organizing regular physical examinations for employees, popular science lectures and care for employees' mental health, to effectively protect the health and safety of our employees.

Holding the Law on Prevention and Control of Occupational Disease Awareness Week



With a focus on occupational health, employees' physical and mental health, care for female employees, the employees' mental health, and labor protection, we carried out three thematic publicity campaigns, four counseling sessions, one special lecture, and one warning education activity, and offered 15 courses in the special online section covering all staff members.

During the activity, the employee health management room was opened to all the employees to provide them with health consultation, guidance, check, and other services as well as immediate first-aid and treatment for common diseases and sudden symptoms.

Collecting health cases



We gathered featured case studies on building a healthy enterprise and health-related stories of entrepreneurs and employees. A total of 36 stories were gathered from 14 organizations, including provincial subsidiaries, professional institutions, entrepreneurs and employees. One of the case studies, *Promoting the "Great Construction" of a Healthy Enterprise with "Small Incisions"*, was selected as one of the featured case studies of 2022 Healthy China Initiative Innovative Practices (Health Responsibility).

We attended the Second People's Health Assembly, the Roundtable Forum of Healthy Enterprises, and the training seminar of occupational health managers of central SOEs to share our experience, introduce our highlights in occupational health, and align our work with the industry best practices.

Caring for employees' mental well-being



We organized mental health care ambassador trainings for our employees, to help them enhance their own mental health and improve their job skills. By 2022, we covered over **400,000** employees under our employee mental health caring program, training over **3,000** mental health care adors and set up more than **100** stress-reducing rooms and care rooms.

We launched a 24/7 consultation and appointment hotline for headquarters employees and their immediate family members.

Holding lectures to raise health awareness



We showed care for employees' physical and mental well-being, and held health lectures and employee assistance program induction sessions, where professional speakers introduced employees to the happiness equation of positive psychology.



Green Development

China Mobile firmly believes that "lucid waters and lush mountains are invaluable assets". We therefore prioritize the harmonious co-existence between human and nature in our development plans, which guide us to make significant strides in cutting energy consumption and carbon emissions. We also actively drive the establishment of green standards along our industry chain and empower society to save energy and reduce carbon footprints with information technology. By doing so, we aim to increase our ecosystem's diversity, stability and sustainability, and make a contribution to the "Beautiful China" initiative.



Conducting Green and Low-Carbon Operations



Supporting Social Initiatives in Energy Conservation and Environmental Protection

SUSTAINABLE DEVELOPMENT GOALS

Responding to SDGs

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER



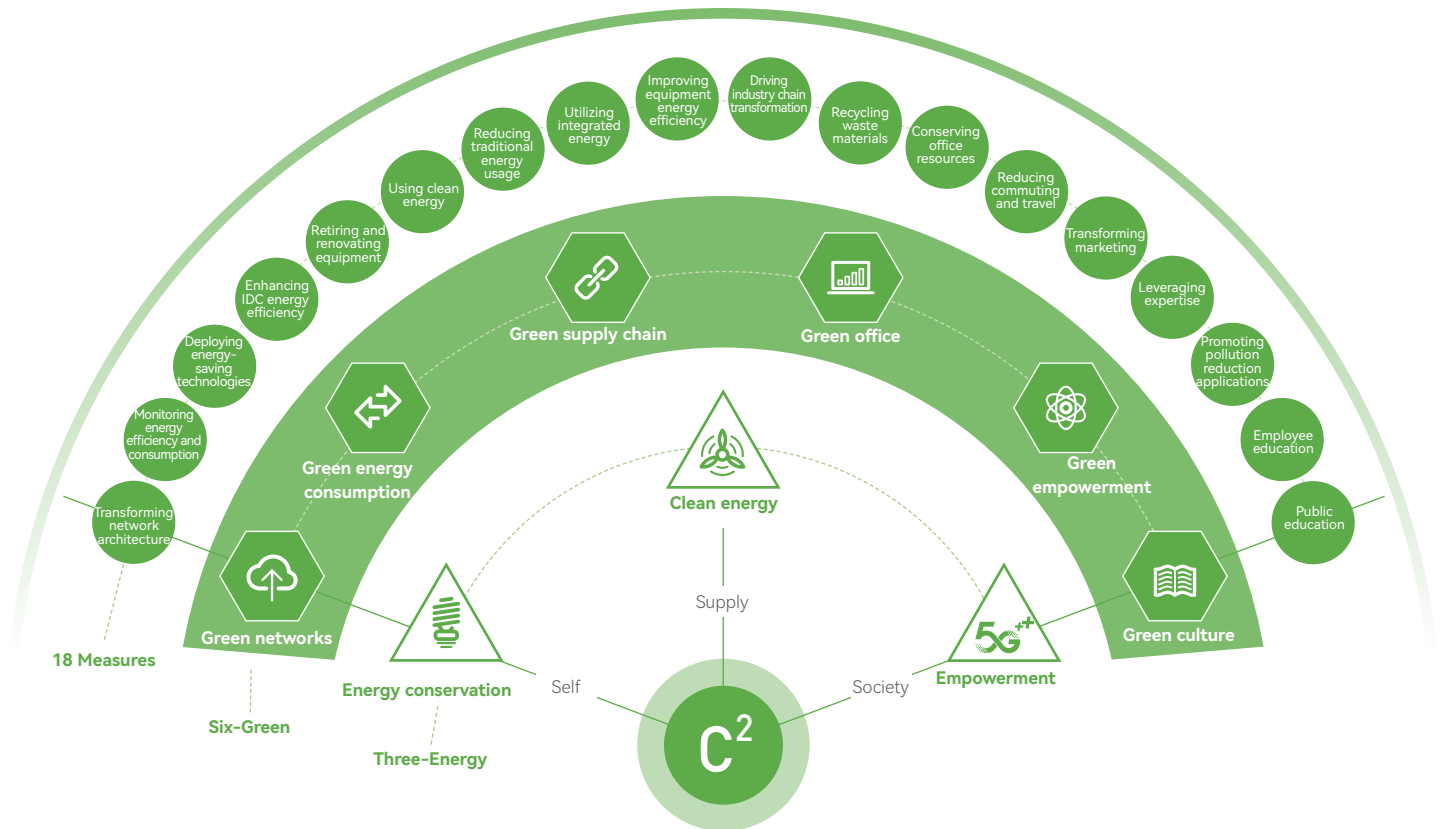
Conducting Green and Low-Carbon Operations

China Mobile incorporated carbon peaking and carbon neutrality goals (the “30-60 Decarbonization Goals”) into its overall development plan. While meeting the needs of society in information services with high quality and continuously promoting 5G and data center construction, we placed a heightened focus on the management of the 30-60 Decarbonization Goals, continued to advance all energy conservation and carbon reduction efforts, and worked to make our carbon emission stable and controllable, thereby supporting the country in achieving the 30-60 Decarbonization Goals on schedule.

Advancing Towards the 30-60 Decarbonization Goals

Guided by the 30-60 Decarbonization Goals, China Mobile keeps pushing forward the “C² Three Energy - China Mobile Carbon Peaking and Carbon Neutrality Action Plan”. With “energy conservation, clean energy, and empowerment” as the main course of action and green networks, green energy consumption, green supply chain, green office, green empowerment, and green culture as the paths of implementation, the Company continuously embeds green and low-carbon development into all aspects of its production and operating activities.

C² Three Energy China Mobile Carbon Peaking and Carbon Neutrality Action Plan



► Specifying governance measures

The chairman of the Company’s Board of Directors is responsible for our environmental policies and performance, leads our efforts in energy conservation, emission reduction, and climate change, and evaluates the performance in climate change. The Board of Directors is responsible for supervising and reviewing the annual performance and goal setting, and reviewing and approving the strategies and key action plans combined with climate issues as well as the budgets for energy conservation and emission reduction relating to climate change. The Company has put in place a three-level governance structure comprising decision-making, management, and execution. It has standardized the organizational structure and assignment of responsibility relating to energy conservation by releasing the *China Mobile Energy Conservation Management Measures*.

China Mobile Climate Change Governance Structure

Level of governance	Responsible organization(s)	Composition and primary responsibilities
Decision-Making Level	China Mobile Leading Group for Carbon Peaking and Carbon Neutrality (Energy Conservation and Emission Reduction)	The group is led by the chairman of China Mobile. The leading group implements national guidelines and policies concerning carbon peaking, carbon neutrality, energy conservation and emission reduction, assumes the primary responsibility for relevant tasks, researches and formulates overall strategies and deployments for environmental protection, energy conservation and climate action, coordinates the Company's relevant resources to create synergy, deliberates to solve major issues in the work, and ensures the steady progress of carbon peaking, carbon neutrality, energy conservation and emission reduction.
Management Level	Working Group for Pollution Prevention and Control and Energy Conservation	The working group was set up under the leadership group and is led by China Mobile's Vice General Managers. The working group is responsible for executing decisions made by the leadership group, and reviewing and approving investments in actions for energy conservation, emission reduction and climate change mitigation. Group members primarily include the heads of headquarters departments and relevant units. They are mainly responsible for implementing the overall strategies and deployment plans on pollution prevention and control and energy conservation, completing specific tasks, and giving instructions to implement our actions in response to climate change and promoting pollution prevention and control and energy conservation.
Execution Level	Departments responsible for energy conservation and emission reduction and related business departments at the headquarters / subordinate units	We have established working groups for energy conservation and emission reduction at the headquarters and our subsidiaries, which are responsible for coordinating and managing climate-related work from three perspectives of business, network and office. The working groups hold regular meetings to assess whether key activities and projects align with our strategies concerning climate change and energy, and make recommendations to the management.
	Planning and Construction Department	<p>The department is fully responsible for the planning and implementation of climate-related work. Its main work duties include reviewing the achievement of climate-related goals and indicators on a monthly basis, drawing up initiatives and budgets for energy conservation, emission reduction and climate change mitigation, and reporting regularly to the management level, the decision-making level and the Board of Directors.</p> <p>Tasks completed: The Department held the meetings of the China Mobile Leading Group for Carbon Peaking and Carbon Neutrality (Energy Conservation and Emission Reduction), issued the <i>Priorities for the China Mobile C² Three Energy Plan in 2022</i> and the <i>Performance Assessment Methods for the China Mobile C² Three Energy Plan in 2022</i>, and clarified the annual working principle, major objectives, and key tasks; made steady progress in promoting the 18 "Three-Energy and Six-Green" measures, and the main quantitative objectives were completed on schedule; published the Group's 2021 energy conservation and emission reduction performance assessment results and launched evaluation of green data centers; issued the <i>Technical Suggestions on New Energy-Saving Processes, Materials and Components for China Mobile's 5G Equipment</i> to fully play out its role as the leader of the industry chain and drive low-carbon development along the chain; launched seven special projects; enhanced internal management mechanisms, set up the "C² Three Energy Plan" regular reporting mechanism, formulated inspection scheme for energy conservation and environmental protection, and conducted co-inspections; issued the <i>Guiding Opinions for Application of Energy-Saving Technologies in China Mobile's Wireless Networks</i>; and formulated the <i>China Mobile Standards on Energy-Saving Classification of Equipment</i>.</p>

► Undertaking risk assessment

The Company actively identified, analyzed, and solved the risks and opportunities brought by climate change, fully integrated the climate-related risk management, and incorporated it throughout the Company's risk management system.



► Formulating coping strategies

Based on our identification and assessment of risks and opportunities relating to climate change, we analyzed the impact of each risk on our finances, operations and development over different stages of time, based on which we formulated our mitigation plans.

Climate-Related Risks Facing China Mobile and Coping Measures (Short-term: 0-1 year(s); Medium-term: 1-3 year(s); Long-term: 3-5 years)

Type of risks/opportunities	Description of risks/opportunities	Primary financial impact	Impact on business and strategies	Term	Degree of impact	Coping measures
New regulatory risks	Some of our subsidiaries were included in Beijing's carbon trading market, and shall conduct trading and perform their obligations in compliance with regulations and rules of the market. Meanwhile, there is a substantial possibility that we will be included in the upcoming national carbon trading market and shall conduct trading and perform our obligations in compliance with regulations and rules of the market. If our certified emissions exceed our carbon credit in carbon audits, we may need to purchase additional carbon credit on the market or set-off with Chinese Certificated Emission Reduction (CCER) and incur additional compliance costs.	Increased indirect (operating) costs	Adaptation and mitigation actions	Long-term	Moderate	Conduct quarterly accounting of carbon emissions, assess the financial impact of compliance costs and the legal risks of failure to comply on time, and issue carbon emissions notifications on a quarterly basis; evaluate consistency between our carbon trading management policies with the management requirements issued by regulatory authorities annually.
Technological risks	The evolution of the fifth generation of communication technology is expected to increase in the density of communications infrastructure. By the end of December 2022, 1.285 million 5G base stations had been established, providing 5G service for all prefecture-level cities, some counties, and critical areas in China. Failure to develop and use more efficient and energy-saving technologies will result in rapid growth in energy usage and costs.	Increased indirect (operating) costs	Investments in R&D	Short-term	Moderate to high	Assess the financial impact of energy costs annually, select appropriate low-carbon technologies, and devise schedules for phasing of working with value chain partners to drive the application of low-carbon technologies.
Severe natural factors	The Company is actively developing 5G business, and the stable operations of base stations, office buildings, and optical cables are of great importance to the Company's rendering of reliable 5G service to the customers. Extreme weather can cause varying degrees of damage to the Company's infrastructure and fixed assets and affect network quality. Increasing severity and frequency of extreme weather events may increase the Company's capital expenditures. An estimated potential financial impact of RMB 340 million may be caused.	Increased capital expenditures	Products and services and business operations	Short-term	High	Assess the potential impact of natural disasters on the damage of fixed assets, production and operations, and the environment based on their frequency and scale. Based on the assessment, plan and set up special funds for post-disaster reconstruction according to the assessment results, draw up plans for post-disaster reconstruction, and deploy emergency response plan in advance.
Long-term natural factors	Keeping the temperature of server rooms within a stable range is an essential prerequisite for the regular operations of base stations, server rooms and data centers. As global warming continues, rising temperature in the future will lead to increases in power consumption and electricity costs for air-conditioning at our base stations and server rooms.	Increased indirect (operating) costs	Business operations	Long-term	Moderate	Regularly assess and monitor the service time of air conditioners (ACs) in server rooms based on the financial impact of increased energy costs resulting from increased AC usage.

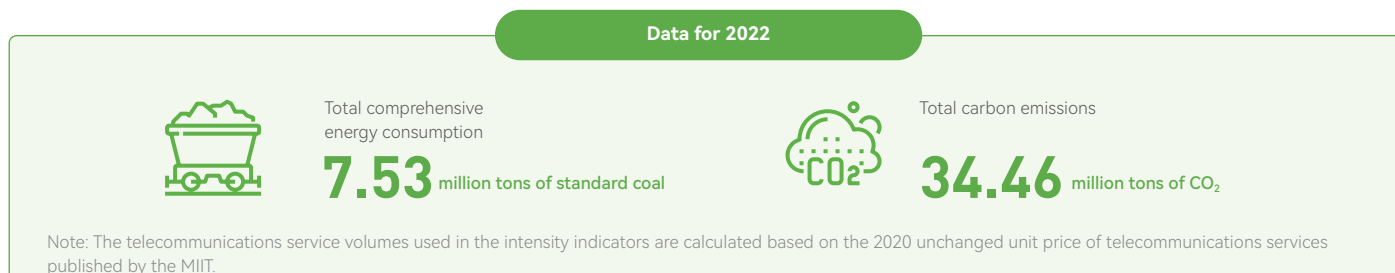
To understand the impact of significant climate-related risks on the Company's business strategies and decisions over different time stages, we also explored the application and analysis with industrial energy efficiency scenarios and models.

	<p>Industrial energy-saving scenarios</p>	<p>Scenario 1: By 2025, the comprehensive energy consumption per unit of telecom service shall decrease by 15% compared with 2020 (MIIT's requirement).</p> <p>Scenario 2: By 2025, the comprehensive energy consumption per unit of telecom service shall decrease by 20% compared with 2020 (China Mobile's target).</p>
	<p>Description of the model</p>	<p>Based on forecast on network scale and the energy-saving requirements of the two scenarios, we can calculate the maximum annual electricity consumption that would meet the energy-saving requirements (the expected annual electricity consumption less the maximum annual electricity consumption equals annual electricity savings needed).</p>
	<p>Application of business strategies and decisions</p>	<p>We determined energy conservation goals at different levels by subdividing the potential impact of the different scenarios.</p> <p>By 2025, the comprehensive energy consumption per unit of telecom service shall decrease by 20% compared with 2020. Subdividing this target, we need to reduce comprehensive energy consumption per unit of telecom service by at least 4% in 2022. We devised specific strategies and measures based on this year's target, including:</p> <ul style="list-style-type: none"> ● In terms of communication network, we promoted the transformation of network architecture including C-RAN and network cloudification, took solid steps in promoting construction of all-fiber foundation, furthered deployment of wireless network energy-saving technologies, continued to raise the energy efficiency of data centers and server rooms, and phased out old 2G and 4G equipment; ● We actively utilized clean energy and gradually reduced conventional energy use; ● Along our supply chain, we incorporated green and low-carbon technology evaluation results into the procurement scoring system, tightened procurement requirements on energy use efficiency, energy-saving functions and green manufacturing processes for 5G and other network equipment, power supply equipment, air conditioners and other supporting facilities, encouraged equipment suppliers to expand R&D and supply of green technologies and products, and recycle waste materials; ● In office, we saved office resources, reduced emissions relating to commuting and business travel, and advanced green marketing.

► Specifying management goals

Our primary indicators for measuring and managing climate-related risks and opportunities include Scope 1 GHG emissions, Scope 2 GHG emissions, Scope 3 (employee commuting and business travel) GHG emissions, comprehensive energy consumption per unit of telecom service, reduction in comprehensive energy consumption per unit of telecom service, reduction in comprehensive energy consumption per unit of data traffic and total water consumption, among other indicators. We pledge to reduce Scope 1 and Scope 2 GHG emission intensity target by 20% by 2025 from the 2020 baseline, and no target has been set for Scope 3 GHG emission yet.

We incorporated climate-related major issues into our compensation policy. For the Board of Directors, the State-owned Assets Supervision and Administration Commission (SASAC) included the energy conservation and ecological environmental protection by central SOEs into the operating performance evaluation of persons-in-charge of central SOEs in 2022, and linked such performance to compensation. As for the execution level, planning and implementation of climate actions has already been included as a KPI for performance assessment for the Planning and Construction Department. Compensation for general managers and energy managers of each subsidiary will also be directly linked to KPI assessment results.



Building Green Networks

With setting up a green network architecture and developing energy-saving network technologies as our goals, China Mobile continued to build green networks by advancing green and low-carbon development of base stations and data centers throughout their lifecycles, and retiring and renovating equipment.

<p>Advancing the green transformation of network architecture</p>	<ul style="list-style-type: none"> ● We delayed our networks and reduced the number of network devices to form a linear, cloud-network integrated, cloud-edge-terminal coordinated network architecture and computing force infrastructure centered around data centers; ● We built wireless networks using a C-RAN architecture, which simplified power and air-conditioning setup and reduced power consumption of supporting facilities, enhancing the overall energy efficiency of base stations; ● We set up a well-designed cloud infrastructure with scale efficiency based on advanced architecture and technologies, to continuously increase resource utilization efficiency and promote virtualization of core network element functions; ● We advanced the construction of an all-optical architecture, deployed 200G/400G optical transmission systems at scale with new ultra-low-loss optical fibers, and led the deployment of 100G and above optical transmission systems in Metropolitan Area Networks (MAN); increased the deployment and application of the 200G OTN systems in the interprovincial backbone transmission networks, covering large regional and provincial-level data centers.
<p>Monitoring and analyzing energy efficiency and consumption</p>	<p>We strictly controlled power consumption of our networks and progressively digitalized the management of energy efficiency and consumption monitoring. We used big data and AI technologies to track and analyze power consumption trends, compared and analyzed energy efficiency distribution, and took timely measures in response to abnormalities in energy efficiency and consumption. By the end of 2022, we had implemented centralized monitoring and analysis of energy consumption at more than 9,800 stations, including all kinds of data centers, core machine buildings, key convergent server rooms, and energy-intensive base stations across our networks.</p>
<p>Deploying wireless network energy-saving technologies</p>	<ul style="list-style-type: none"> ● We applied a range of wireless network energy-saving technologies, such as sub-frame silence, channel silence, shallow hibernation, deep hibernation and multi-layer network coordinated energy saving, and deployed them in our wireless networks by defining scenarios where these technologies can be applied. We also shut down unnecessary hardware by time, frequency and space to dynamically adjust resources utilization based on our business needs; ● We achieved energy savings by coordinating our multi-layer wireless networks without noticeably affecting user experience. In 2022, the energy efficiency of individual 5G base stations increased by 12% from 2021, and we deployed energy-saving technologies in 99% of applicable scenarios and extended intelligent wireless multi-layer network coordinated energy-saving management to more than 80% of our 5G base stations.
<p>Improving the energy efficiency of data centers</p>	<ul style="list-style-type: none"> ● We built data centers with new air-conditioning terminal equipment, high-temperature chilled water, natural cooling source, direct power supply from the power grid, high-voltage direct current (HVDC), liquid cooling, micromodules and comprehensive utilization of waste heat. All new large and mega data centers we built in 2022 had designed power usage effectiveness (PUE) of no more than 1.3; ● We strengthened energy consumption management, operations and maintenance, and applied AI technologies to achieve automated and intelligent energy consumption management. We also managed and controlled energy consumption by grade and category, and define benchmarks for energy-saving operations and maintenance by regions; in 2022, actual PUE of the 44 mega data centers across our networks decreased by an average of over 4%.
<p>Enhancing the energy efficiency of server rooms</p>	<ul style="list-style-type: none"> ● We conducted an assessment of the existing networks' energy efficiency, and strengthened energy consumption management, operations and maintenance. By optimizing resource allocation, retiring outdated and idle equipment, and improving the air flow in server rooms, we promoted energy-saving technology solutions with different power supply guarantee grades while meeting our business security needs, explored energy-saving potential within the existing network and improved its performance; ● We undertook green and low-carbon transformation of core server rooms, and promoted the application of technologies such as cold/hot aisle containment, micromodules, whole-rack servers and waste heat recycling in our server rooms; ● We actively promoted the application of natural cooling sources such as fresh air, heat exchange, and heat pipe by applying technologies such as the integration of server rooms and racks; ● In 2022, the actual PUE of the 938 core machine buildings across our network decreased by an average of over 4%.
<p>Repurposing high-energy-consuming retired equipment and low-energy-efficiency retired equipment</p>	<ul style="list-style-type: none"> ● We implemented the requirements to retire and renovate equipment under the <i>Guidance Directory for Retiring High-Energy-Consumption and Old Communications Equipment and the Directory for Retiring High-Energy-Consumption and Outdated Electromechanical Equipment (Products)</i> issued by the Ministry of Industry and Information Technology; ● We optimized management measures in respect of energy-intensive and inefficient network equipment in our existing networks, defined classification standards, and continued to advance rectification measures; ● We continued to carry out energy efficiency benchmark management, and optimize, renovate or retire outdated equipment in our existing networks.



Case Henan Mobile built green networks through “cloud-management-terminal” coordination

To further improve the management and controls over energy conservation and emission reduction, Henan Mobile promoted “cloud-management-terminal” coordination to build green networks, with a view to becoming a “vanguard” and a “hub” of green and low-carbon development.

Terminal: With AI-based management and controls, Henan Mobile explored a “software + hardware” power-saving combination strategy model, and built a multi-dimensional and digital intelligence main equipment power-saving control system, for comprehensive management and controls over energy consumption. It formed an energy consumption management and control taskforce to increase efficiency of high-energy-consumption systems, enhanced energy-saving management and control powered by “AI + digital-intelligence”, furthered centralized management and control over energy consumption of the server rooms, and worked to achieve the energy consumption targets for core machine buildings. It gave all-out efforts in building China Mobile data centers, and achieve comprehensive data collection and monitoring of data centers’ energy consumption. It optimized server room construction from “N” to “1” under our minimalistic CRAN server room reform plan, driving further reductions in energy consumption and carbon emissions of our server rooms across the network.

Management: Based on in-depth research on all aspects of the green supply chain system, Henan Mobile created a full-cycle green supply chain system, achieved refined management by implementing translation between supplier-side codes and internal codes, reduced suppliers’ costs and drove the digital transformation of the industry chain.

Cloud: Based on full-scale collection of energy consumption data, Henan Mobile built various models such as business volume-energy consumption model for main equipment and correlation models for air volume, temperature and energy consumption for air conditioners, and advanced scenario-based and digital intelligence development of energy-saving efforts. At present, it has built three major “Smart Cloud Brain” energy consumption management and control systems for multi-dimensional intelligent monitoring of energy efficiency of main equipment, real-time monitoring and analysis of energy efficiency and consumption of dynamic environment system, and comprehensive management of energy efficiency and consumption in data centers.



Case Creating intelligent green and energy-saving networks with refined management

Jiangsu Mobile actively carried out green practices, such as refining energy-saving operations and maintenance of networks, AI-based energy efficiency management, and replacement of high-energy-consumption equipment, from the four dimensions of data centers, core machine buildings, 5G base stations and resource operations. Jiangsu Mobile pioneered “COLD” energy-saving work practices based on the Standard & Poor’s ratings system, developed AI-based water-cooling adjustment and optimization to achieve precise cooling, and reduced electricity waste in distribution by optimizing systems and architectures. Through core machine building inspections and renovations of energy-extensive equipment, Jiangsu Mobile increased the operating efficiency of old machine buildings with specific, “floor-by-floor” policies. It improved energy efficiency of base stations by promoting software-based energy saving and hardware shut-downs at 5G base stations, AI self-adaptive control of air conditioning, and energy-saving renovations of server rooms. It also set up a resource operation platform, refined resource management, and conducted stock-take of assets and retired outdated equipment. Jiangsu Mobile’s program for retiring and renovating high-energy-consumption and outdated equipment was certified by the Jiangsu Province Energy Savings Trading Center and received three certificates evidencing energy-savings equivalent to 8,671 tons of standard coal, making us the first and only telecom operator in China to obtain an energy-saving certificate. In addition, the data center parks in Nanjing, Suzhou and Wuxi parks were all included in the list of “National Green Data Centers”.



© Temperature-based control of plate heat exchanger



© Replacing missing blind flanges to avoid waste of refrigeration capacity



Case Leading low-carbon development with the industry’s first technology suite for modern green data centers

In June 2022, the China Mobile Design Institute officially released the “China Mobile Technology Suite for Modern Green Data Centers”. Starting from the key and core technologies for data centers, we tackled the difficulties in green energy conversation with five approaches: scientific layout, overall architecture, prefabricated construction, digital intelligence maintenance and optimization, and efficient operation. This formed a full suite of technologies for modern green data centers, covering the full lifecycle of planning, design, construction, maintenance and operation, thereby enabling green and low-carbon operation, flexible deployment, and intelligent operation and maintenance of data centers.

8

data centers were selected for the *List of Featured Cases of National Modern Data Centers*

8

data centers were selected for the *List of National Green Data Centers*

Empowering green data center construction with “5G+”

To improve energy efficiency and reduce environmental pollution due to construction, our second data center in Hong Kong focused on building a modern, sustainable and green data center.

In terms of intelligent design and energy efficiency and utilization enhancements, we used AI technology and 5G networks for real-time monitoring to ensure optimal system performance. Through the use of high-efficiency chilled water units, smart irrigation systems, intelligent lighting control, and lift power recovery systems, we reduced the energy consumption by approximately 20% compared with the use of traditional facilities.

In terms of green and low-carbon development, in compliance with requirements of BEAMPLUS and LEEDGOLD green building certifications, the data center formulated a set of guidelines for materials sourcing, waste disposal, environmental protection, etc. It also minimized material and energy waste as well as ecological and environmental impact during construction by using renewable materials, a rainwater recycling system and a direct natural cooling system.

The China Mobile Park Construction and Development Company explored energy-saving measures for data centers and realized innovative energy-savings by applying technologies such as adding cold storage and heat exchange equipment and piloting the use of permanent magnet motors for cooling towers, earning the “2022 Featured Project Award for Efficient Cooling at Data Centers” issued by the Chinese Association of Refrigeration.

Promoting Green Energy Consumption

With the goals of electrified energy consumption and application of green power at scale, China Mobile increased the use of green energy, steadily reduced the use of traditional energy and promoted the integrated utilization of energy to achieve green energy consumption.



Increasing the use of clean energy

In regions with suitable climate conditions, we built small-scale renewable energy generation sets, such as wind turbines and rooftop solar panels; tapped into the potential of battery equipment, turning their role from a “static power backup” into a “dynamic energy storage”, coordinating and promoting consumption of green power; and we also purchased green power by way of direct bulk purchases in regions where green power is offered at competitive prices.



Steadily reducing the use of traditional energy

We strictly controlled the consumption of fossil fuels and actively utilized non-fossil energy sources; phased out coal heating, improved the operation and maintenance standards for stationary power units, optimized the allocation and scheduling of mobile fuel sets, and curbed diesel and gasoline consumption in our networks and production while ensuring emergency power supplies for networks; increased utilization of energy cascades, and improved energy efficiency by developing integrated energy projects that promoted the synergistic use of multiple energy sources such as electricity, heat, cooling and gas.



© Anhui Mobile set up lower-carbon base stations



© A green and energy-efficient server room of Hubei Mobile

Contributing to a Green Winter Olympics

"Green Olympics" is the foremost of the four concepts for the 2022 Beijing Winter Olympics: "green, inclusive, open and clean". Beijing Mobile actively researched and innovated green and low-carbon base station technologies and created a "low-carbon" base station model covering the full lifecycle of planning, construction, operation and maintenance, taking active steps to contribute to a Green Winter Olympics.

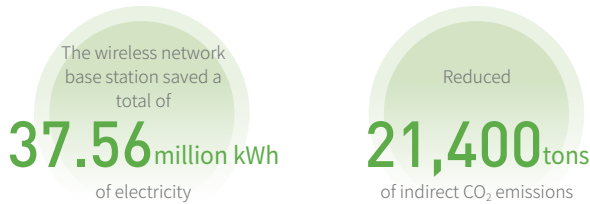
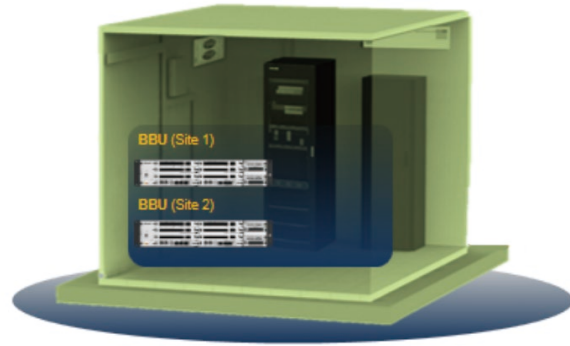


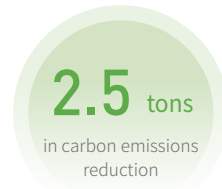
Diagram of BBU integration on the C-RAN machine room side



© Our minimalistic NR2.6G+700M planning model based on our C-RAN architecture reduced network energy consumption of individual stations in a multi-station frame by 2.4 kWh per day by integrating BBUs

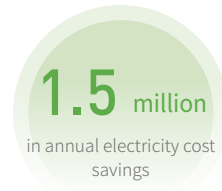
Henan Mobile built a PV low-carbon base station with 5G-based integrated energy cabinets

Henan Mobile adopted an integrated power supply solution based on "MIMO (multi-input and multi-output) power + solar energy". Under intelligent management and control with integrated energy cabinets, base stations fully utilized solar energy for power supply, saving 4,471 kWh of electricity and reducing carbon emissions by 2.5 tons per year, and enabling "low-carbon operation" of base stations.



Chongqing Mobile and China Mobile Chengdu Institute of Research and Development jointly developed an intelligent power-saving platform

In collaboration with China Mobile (Chengdu) Industrial Research Institute, Chongqing Mobile optimized energy-saving algorithms and strategies based on data on 4/5G network coverage, network quality and user perception, and completed the intelligent retirement and renovation of 1,124 stations with energy-saving potential. The efforts stood to save approximately 1.8 million kWh of electricity per year, equivalent to over RMB 1.5 million in electricity cost savings.



Yunnan Mobile built a "Zero Carbon" 5G emergency response cabin powered by wind-solar green energy

Yunnan Mobile built a new integrated cabin for emergency communications – the "Zero Carbon" 5G emergency response cabin – using the hybrid wind-solar power generation technology. Its hardware mainly comprised a wind-solar power supply system and a base station system. It applied non-line-of-sight (NLOS) transmission automatic addressing, transmission resource pre-planning, and modular solutions for wireless configuration information. With these efforts, it offered self-sufficient power supply, self-locating radar addressing, and fast equipment dispatch and activation. This low-cost 5G emergency response base station with self-sufficient power supply and automatic transmission addressing had low construction costs and energy consumption, improved efficiency in deployment of emergency response base stations and filled the gap in the industry. The average daily power generating capacity of the green energy cabin was 23.14 kWh. Compared with traditional coal-based power generation, the new cabin could reduce daily carbon emissions by 23.07 kg and daily carbon dust by 6.29 kg.

Water recycling at China Mobile (Xiamen, Fujian) Data Center

Equipped with a rainwater recycling unit, China Mobile (Xiamen, Fujian) Data Center collected rainwater from the roof and ground, and recycled it in a concave green space (7,300 m²) and a rainwater recycling pond (200 m³) in the park. The rainwater recycling system enabled the data center to adjust its water use strategy for green space and landscape irrigation and landscape water supplementation based on the seasonal precipitation and water storage volume. This removed the need for a 1,000 m³ rainwater recovery pond, saving approximately RMB 1.5 million in investment. According to assessment by relevant agencies, the total annual rainfall in the park could reach 3,260.6 m³, and the total volume of water that could be recovered could reach 2,234.6 m³.

Fostering a Green Culture

China Mobile actively promoted the vision of green development, fostered a green culture, and carried out extensive public welfare activities on environmental protection as we continuously endorsed a green and environment-friendly lifestyle.



Carrying out green training: We organized professional and systematic training on carbon emission reduction, carbon management, and carbon trading to cultivate professionals in green development.



Organizing green activities: We actively fostered awareness of environmental protection internally on a multi-dimensional, multi-level and regular basis by organizing activities on the National Energy Conservation Awareness Week, the National Low-Carbon Day, afforestation, etc. Through these events, we conveyed knowledge on low-carbon operations and continued to integrate green concepts into our production and operation as well as the daily work and life of our employees.



Summarizing green experience: We summarized advanced practices, successful experience and featured models with regard to energy conservation and emission reduction, and promoted them through regional exchanges, special training and other means of communication.



The China Mobile Energy Conservation Awareness Week has been successfully held for 13 sessions. For more information on the 2022 China Mobile Energy Conservation Awareness Week, please scan the QR code below.



CMCC Energy Conservation Awareness Week WeChat Official Account

© Chaohu (Hefei) Branch of Anhui Mobile carried out the "Live a Green and Low-carbon Life" public welfare activity on environmental protection



Supporting Social Initiatives in Energy Conservation and Environmental Protection

China Mobile actively builds a green supply chain and sets green standards in the industry. We actively leveraged information technology to empower carbon emission reduction and drive the green transformation of the society. Consistently attaching high importance to protection of the ecological environment, we optimized and improved our environmental management system and continually explored new methods and paths of environmental protection, thereby promoting harmony between humanity and nature and contributing to the conservation of our beautiful planet Earth.

Building a Green Supply Chain

We extended our green philosophy throughout the lifecycle of our products and businesses. By constantly improving our green procurement system, we promoted green production along our supply chain and drove the green transformation of the industry chain.

Developing “green procurement” standards

- We included evaluation on green energy-saving technologies in procurement scoring of more than 90% of our equipment to improve energy efficiency of equipment procured through centralized procurement;
- We incorporated SA 8000 (Social Accountability Standards), OHSAS 18001 (Occupational Health and Safety Assessment Series), and ISO 14000 (Environmental Management Standards) certifications into our supplier qualification review, dynamic quantitative assessment, and comprehensive strengths evaluation;
- We conducted information verifications on centralized procurement suppliers on a regular basis and guided our suppliers to save resources, reduce environmental pollution, and our work and occupational safety.

In 2022, our Tier 1 centralized procurement catalog included 102 categories of equipment, including mobile communications network equipment, transmission network equipment, IT hardware equipment, power supply, and active equipment for power environments.

Promoting paperless procurement and “contactless procurement”

- Implementing the digital procurement approach, we designed a digital tendering, evaluation and contract signing model, promoted standardized, online and automated tendering document and response templates, and achieved digitalization of the entire workflow from announcement, tendering, bidding, bid evaluation and contract signing;
- We increased procurement efficiency by implementing a new “continuous, contactless and paperless” procurement model based on the China Mobile’s procurement and tendering system, online video and remote monitoring.

In 2022, we carried out close to 40,000 paperless procurement projects and achieved a paperless procurement rate of 99.9%, reducing the use of paper by approximately 120 million pieces and reducing carbon emissions by approximately 240 tons. We further expanded the application of e-signature, with 53 bodies signing bidding evaluation reports for 8,354 projects electronically.

Creating a green and recyclable logistics system

Green packaging: We developed the equipment packaging with recycled paper together with our suppliers and reduced the use of non-degradable adhesive materials; required all suppliers to sign the *China Mobile Procurement and Bidding Commitment for Pine Wood Nematode Disease Prevention and Control*, and inspected plant quarantine certificates when receiving materials with wooden packaging, promoting our suppliers to meet their responsibilities and jointly build a sustainable supply chain.

Simplifying packaging to create a green supply chain

Taking green logistics as an important topic for coordinated development, China Mobile Terminal Company actively promoted green packaging. Through policy guidance and institutional requirements, it recycled the logistics packaging boxes from its internal distribution business, thereby promoting the circular utilization of packaging among upstream and downstream companies along the supply chain and building a green supply chain with concrete actions.

- **Green packaging:** Progressive reduction in outer packaging and lining of products, which also gives them a neater and cleaner look.

- **Green logistics:** Using smaller logistics boxes to save more paper, transportation space and costs.

Green circulation: We encouraged our strategic suppliers to use RFID labels, which can be used “end-to-end” from production and transportation to warehousing operations.

Empowering Carbon Emission Reduction in Society

We actively leveraged information technology to drive carbon emission reduction, accelerated the low-carbon and clean supply of energy, promoted the low-carbon transformation of energy-intensive industries, and helped enterprises save energy and reduce emissions. We worked to reduce "carbon footprints" (i.e., greenhouse gas emissions from human activities) while creating more "carbon fingerprints" (i.e., human initiatives to reduce greenhouse gas emissions). We actively promoted information-based applications in pollution prevention and control and developed "smart environmental protection" solutions.



Leveraging information technology to drive reductions in carbon emission

China Mobile stepped up efforts to empower cloud migration, digitalization and intelligent transformation, and promoted the digital transformation and upgrade of traditional industries such as power and metallurgy. We popularized online meeting, office, medical service, information consumption and other applications, and built big data platforms for urban transportation, travel and delivery, thereby improving the green and low-carbon supply of public services and contributing to a green and smart city and a green life for all.



Promoting information-based applications in pollution prevention and control

China Mobile used new-generation information technologies to collect, monitor, explore and analyze ecological and environmental data to serve environmental protection needs of the public and businesses, and address difficulties in environmental management and monitoring.



Case Offering new green and digital intelligence public power grids to save energy and reduce carbon emissions

Shandong Mobile collaborated with State Grid Shandong Electric Power Company to build 5G networks across the province dedicated to power supply, with a focus on the demands for "new power systems" that offer high-proportion access to new energy, high-flexibility and agile adjustment of power grids, and coordination among source, grid, load and storage, against the backdrop of the 30-60 Decarbonization Goals. It built three major 5G network slices and further promoted the integrated application of 5G and power grid technology. Targeting all business scenarios related to power grids, including power generation, transmission, transformation, distribution and consumption, it provided an integrated solution covering "terminal, management, cloud and application". With these efforts, Shandong Mobile successfully built a benchmark 5G project for scaled applications featuring "one network, one core, 12 scenarios and 300,000 applications".

The project focused on achieving both environmental and economic benefits. In terms of environmental benefits, it focused on creating green and digital-intelligent power grids, effectively reducing direct carbon emissions and enhancing capabilities for integrating new energy sources such as PV, thus greatly increasing the proportion of wind and PV power in power transmission. Moreover, the project enhanced efficiency, saved energy, and prevented unintended carbon emissions, alleviating energy crisis and helping optimize our energy structure. In terms of economic benefits, the project fully achieved unmanned intelligence and increased production efficiency by more than a hundred times, thus reducing costs and enhancing efficiency.



Case Setting a pan-Asian Games energy interconnection demonstration area combining "source, grid, load, and storage" in Hangzhou with 5G technology

Hangzhou Branch of Zhejiang Mobile deployed a dedicated 5G edge MEC (UPF) device for electric power inside the core server rooms of State Grid Hangzhou Power Supply Company, and utilized 5G slicing technologies and data relay capabilities of UPF equipment to create a wireless network dedicated to power supply with high security, high bandwidth, low latency and massive connectivity. The networks were used for the pilot application of 5G distributed network intelligent switch remote control and 5G distributed network differential protection service in the comprehensive real-scenario demonstration project of the pan-Asian Games high-flexibility power grid in Hangzhou. Through the application of 5G software and hardware slicing as well as provincial and regional UPF networks, the project could meet the demand for wireless communication of 5G power business in the entire process of "source, grid, load and storage" of the "energy internet".



12 applications were implemented under the project, covering the overall structure of power source, power grid, load and energy storage. As a pilot demonstration area of 5G+ energy Internet, the project achieved the efficient interconnection of energy and set an example for the comprehensive implementation of the energy Internet.

Source: Offering flexible means for control over total energy consumption and energy intensity from source through distributed provisioning of new energy

Load: Achieving precise, effective and orderly power consumption management through interaction between the source and the load

Grid: Penetrating the core process of production scheduling to enhance power supply reliability

Storage: Integrating the load resources in reserve to help achieve control over total energy consumption and energy intensity

Protecting the Ecological Environment

In strict compliance with the *Environmental Protection Law of the People's Republic of China* and relevant laws and regulations at places where it operates, China Mobile managed the full process of production and operation in a standardized fashion, adhered to economical and clean development, and built itself into a resource-saving and environmental-friendly enterprise. We attached great importance to environmental protection and remained committed to respecting, adapting to and protecting nature. We continued to optimize and improve our environmental management systems, made sustained efforts to protect biodiversity, and helped foster a new relationship where humanity and nature could live and prosper in harmony.

► Advancing pollution prevention and control

We actively applied new-generation information technologies to assist in environmental improvement and governance, and to empower the society in making improvements in pollution prevention and control and natural resource utilization.

Empowering water services with 5G to ensure clean water supplies

In 2022, Guangdong Mobile introduced smart upgrades to urban water services in collaboration with the Shenzhen Water and Environment Group by integrating 5G with all scenarios of water services. In November 2022, the "Demonstration Project of Application of 5G in Empowering High-Quality Operation of Urban Water Services" won the national first prize in the 5th "Bloom Cup" 5G Application Competition in 2022.



Guangdong Mobile used 5G technology to improve the full space-time monitoring and early warning capabilities of urban water services, and set up a real-time monitoring system covering the source, supply, discharge and sewage treatment of Shenzhen water services. It contributed to making all tap water in Shenzhen drinkable, helped create a no-flood urban area under rain and fostered a superior water environment.



Guangdong Mobile used 5G technology to build smart factory stations with fewer or no manpower, enhanced operation and maintenance capabilities across the entire water service chain, and built the first underground 5G smart water purification plant in China.



Guangdong Mobile independently developed a 5G capsule robot for remote sewage pumping stations without fiber optic coverage. Dedicated 5G WAN enabled complete patrol from multiple perspectives and HD backhaul of instrument data, thus improving the space-time monitoring and early warning capabilities of water services. Moreover, the dispatch center could make Ultra HD video connections to emergency command vehicles via the dedicated 5G network, which enhanced the emergency response capabilities of water services.

Improving the environment through smart monitoring

With a heightened focus on the ecological environment, Beijing Mobile integrated ecological resources to improve the urban and rural environment. It gave full play to its advantages in "IoT + big data" and applied them to garbage sorting, dust monitoring and catering fume monitoring, and offered government departments a visualization platform and a variety of intelligent monitoring tools. It installed on-board weighing devices on 64 garbage trucks, road dust load monitoring systems on two sweepers, and fume purification monitoring devices for more than 2,000 catering enterprises.



- **Garbage weighing and metering:** The device enabled more accurate upload of data and helped avoid falsification in garbage weight, thus making waste recycling more scientific and reasonable, and facilitating regulatory supervision and dispatch.



- **Road dust concentration monitoring:** The vehicles were equipped with an on-board road dust load monitoring system, which enabled continuous monitoring and local data collection, display, and real-time monitoring as the vehicles moved.



- **Catering fume monitoring:** urifier and fan operating points were set up for catering enterprises, which monitored the state of purifiers and fans. Monitoring data and alarm information were uploaded to an online monitoring platform to enable closed-loop management.

► Protecting the ecosystem

China Mobile is committed to protecting the ecosystem and makes every effort to avoid any impact on endangered animal and plant species throughout our business operations to pursue harmony between humanity and nature.

Building a digital intelligence and picturesque Sanming

By leveraging information technology, Fujian Mobile invested over RMB 100 million in environmental protection, ecological recuperation and other green development activities in Sanming City. It brought 5G to mountainous, water and forest regions, upgraded ecological governance, and built smart platforms dedicated to river courses, water services, mountain forests and migratory birds. With these efforts, the project translated ecological advantages into developmental advantages and ecological resources into wealth, fostered a pleasant ecological environment in Sanming, and benefitted thousands of forest farmers and the public.

Since its launch five years ago, the project has provided integrated, full-coverage and dynamic management to more than 2,000 river chiefs and more than 1,700 river administrators in Sanming, and standardized the management of river chiefs in Sanming, making Sanming China's first place to pilot comprehensive and standardized social management and public services through a river chief system. There have been zero forest fires at the Youxi Jiufu Mountain Reserve. The project also boosted the bird-watching economy in Mingxi, drove the growth of 10 local guesthouses and promoted "ecological bird watching + forest recuperation". The project was highly recognized by the government and had extensive social influence.



© Rostratula benghalensis, a migratory bird

Restoring the ecosystem of the saline-alkali soil land

As a major agricultural province, Jilin Province is a production base for commodity grains in China. Jilin Mobile set up a joint project team and carried out the "5G Dedicated Network Intelligent Agriculture Project on the Saline-alkali Soil Land of Da'an" in collaboration with the team of Yuan Longping Workstation. The project focused on saline-alkali land improvement, soil irrigation, and intelligent planting, among others, in Da'an City, a county-level city under the administration of Baicheng City, Jilin Province. The project was China's first workstation to practice Academician Yuan Longping's saline-alkali land remediation initiatives.

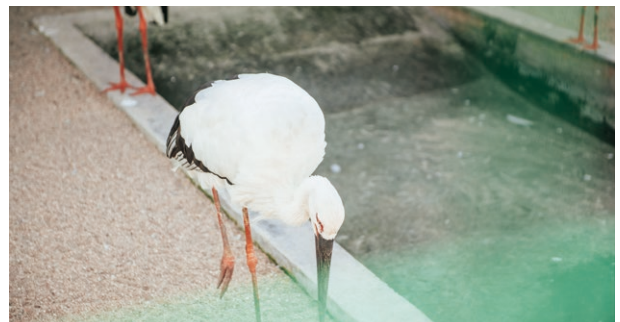
A number of 5G-empowered applications were introduced under the project, such as hyperspectral video backhaul, autonomous driving of 5G unmanned agricultural machineries and automatic cruise of 5G drones. Moreover, a number of 5G applications dedicated to agriculture, such as automatic irrigation, growth analysis, sowing and harvesting, also played a part in the project. The project increased agricultural output by about 10% and operating efficiency by more than 60%. 5G intelligent monitoring also enabled continuous monitoring of pH (potential of hydrogen) and ESP (soil alkalinity) in rice fields, thus greatly improving the efficiency of ecological restoration.



© A 5G drone cruising over rice fields

Empowering biodiversity protection with 5G

The Yellow River Delta in the Dongying City of Shandong Province provides a pleasant habitat for oriental white storks, earning it the name of "Hometown of Oriental White Storks in China". To protect this pleasant ecological environment for white storks, Shandong Mobile's Dongying Branch assisted relevant departments in pioneering a new model of protection that used 5G+VR to monitor the living environment, quantity, population distribution and other key information on white storks in real time, thus contributing to the scientific management of the bird reserve in the Yellow River Delta.



© Shandong Mobile assisted relevant departments in pioneering a new model of white stork protection by monitoring their living environment, quantity, population distribution, and other key information of white storks in real time by 5G+VR

Assisting in the "ten-year fishing ban" on the Yangtze River with 5G

With breakthrough 5G technologies, China Mobile built and deployed an array of intelligent networks for prevention, control and supervision. Through intelligent image recognition technology, we provided early warning of illegal fishing activities along river and lake shorelines, sand excavation management, monitoring of floating objects on the river, and river ecology monitoring. With these efforts, we formed 24/7 and all-round real-time monitoring, provided the local fishery administration with effective tools to manage the rivers and lakes and to nip illegal and criminal activities in the bud, thereby contributing to the enforcement of the fishing ban and environmental protection on the Yangtze River.



Advanced Governance

China Mobile is committed to the corporate governance principles of integrity, transparency, openness, and efficiency. We progressively established a series of policies and systems, internal control systems, and management mechanisms and processes, thereby forming a corporate governance system with prescribed and transparent rights and responsibilities, coordinated operations, and effective checks and balances. These enabled us to continuously improve the effectiveness of our corporate governance, prevent and resolve all kinds of risks, enhance our value, ensure sustainable development in the long term and deliver enormous returns to our shareholders.



Optimizing the Corporate Governance System



Preventing and Resolving All Kinds of Risks

SUSTAINABLE DEVELOPMENT GOALS

Responding to SDGs





Optimizing the Corporate Governance System

Protecting Shareholders' Rights

► Standardizing information disclosure

To give investors a clear picture of our development, China Mobile has always ensured that it follows relevant regulations and internal rules on management of information disclosures and reporting of significant information. We disclose truthful, accurate, complete and high-quality information to investors so they can make informed judgments and investment decisions. We disclose such information in a concise, clear and easy-to-understand manner. Based on information disclosure requirements, China Mobile has been delivering relevant information to the market and investors, and the quality of our information disclosures has been highly regarded by regulatory authorities and investors alike. In 2022, we disclosed over 300 announcements/correspondence.

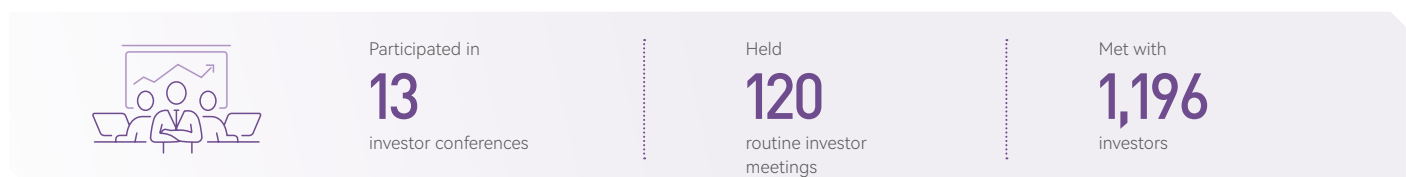
► Promoting diversified communication

China Mobile attaches great importance to interaction and communication with investors. We have formulated communication policies with shareholders and review them regularly to ensure their effectiveness. We have established a securities affairs department, dedicated to providing necessary information and services to, and communicate with, shareholders and investors and other participants in the capital market, to maintain an active dialogue with them and make sure they are fully informed of the Company's operation and development.

We use a number of formal channels to report to shareholders on the performance and operations of the Company, particularly through our annual and interim reports. Generally, when announcing interim results, annual results or any major transactions in accordance with the relevant regulatory requirements, the Company arranges investment analyst conferences, press conferences and investor conferences to explain the relevant results or major transactions to the shareholders, investors and the general public, listen to their opinions and address any questions that they may have. Moreover, we disclose several major unaudited operating and financial data every quarter, as well as customer data every month, providing additional information to shareholders, investors, and the public in a timely manner to keep them updated about the Company's business operations.

We maintain a close relationship with investors including investment bank conferences, one-on-one meetings, and teleconferences, providing timely information to the capital market regarding our business operations.

China Mobile attaches great importance to shareholders' meetings, including the annual general meetings and special shareholder meetings, and values communication between the Company's directors and shareholders. At each shareholders' meeting, the directors are committed to providing detailed responses and explanations to address shareholders' inquiries. In 2022, we held one annual general meeting and one special shareholder meeting.



Case Investor exchange event for listed companies in the telecommunications industry

To showcase the prospects of telecom operators in the blue ocean of digital economy and paint a bright picture of the industry's future transformation, China Mobile, China Telecom and China Unicom co-hosted an investor exchange event for listed companies in the telecommunications industry under the theme "Embracing the Blue Ocean Digital Economy, Looking Forward to a New Future of the Telecom Industry" on July 8, 2022. The purpose of the event was to communicate with investors and provide them a clearer picture of the industry. The telecom operators exchanged ideas with investors through a variety of means, including in-person interactions, online interaction as well as a "cloud exhibition hall".

Standardizing Corporate Governance

► Board of Directors

The key responsibilities of our Board of Directors include formulating our overall strategies and objectives, setting management targets, overseeing internal controls and financial management, supervising the performance of our management, performing corporate governance responsibilities, and delegating day-to-day operations and management to our executives. The Board of Directors operates on established practices (including relevant reporting and supervisory procedures). Meetings of the Board of Directors are held at least once a quarter and as and when necessary. Directors are requested to declare their direct or indirect interests, if any, in any proposals or transactions to be considered at meetings of the Board of Directors and abstain from voting as appropriate. In 2022, our Board of Directors met on twelve occasions (including seven occasions by way of written resolutions).

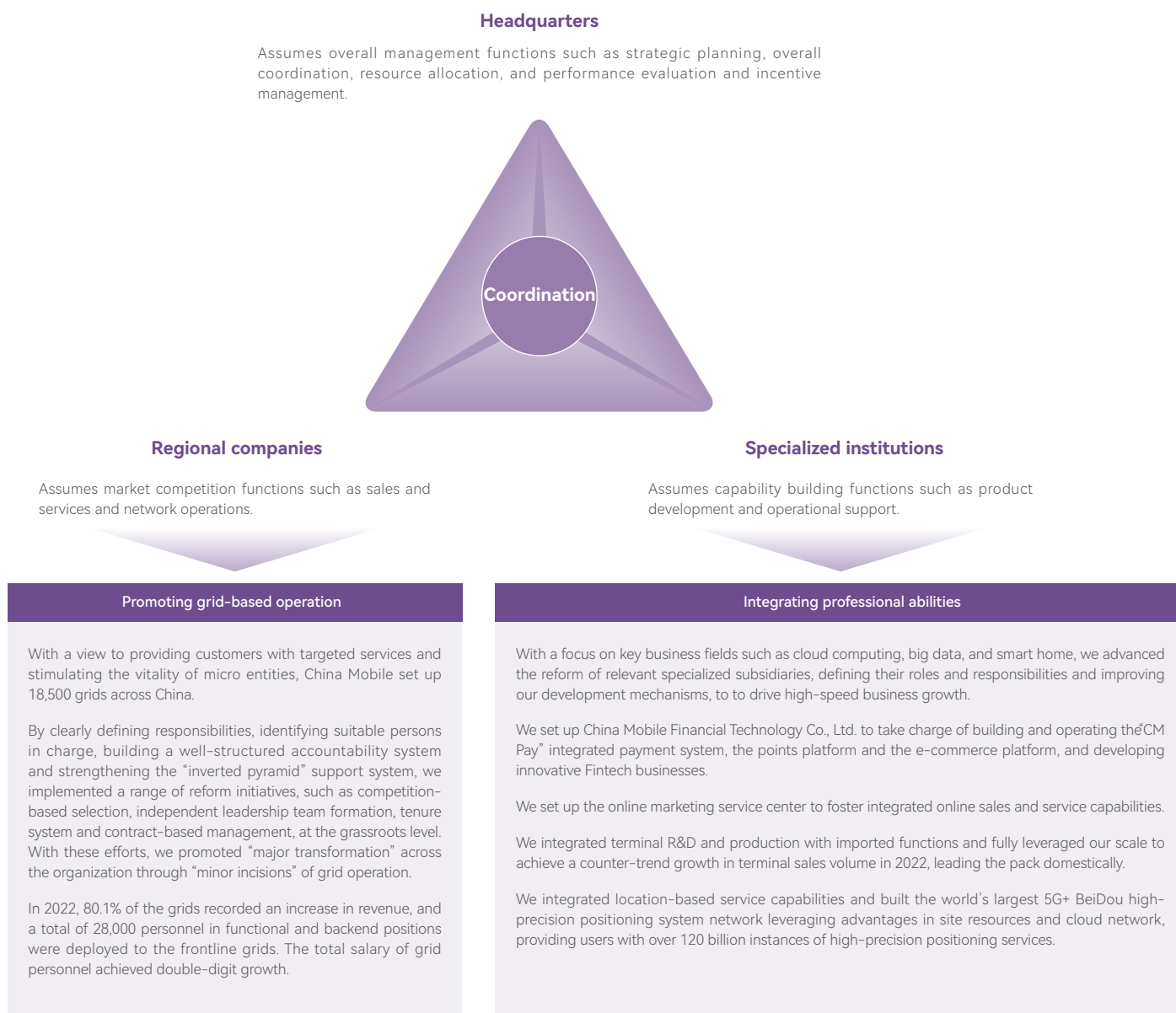


Furthering Comprehensive Reforms

In keeping with the three-year action plan for SOE reform, China Mobile sees furthering reforms as the key to “becoming a world-class enterprise”. As it worked to break down institutional barriers, China Mobile made significant achievements by building a modern corporate system with Chinese characteristics, optimizing the layout and adjusting structure, enhancing vitality and efficiency, and making sci-tech innovations.

► Creating a coordinated mechanism between “management”, “battle” and “support”

To keep up with the trend of modern enterprise management and scientifically manage the balance between centralized leadership and decentralized responsibility, China Mobile undertook a series of professional division of labor and integrations, whereby our headquarters make overall arrangements, regional companies focus on expanding the market, and specialized institutions work on building capabilities. We established an organizational layout for our operations whereby our headquarters are responsible for overall management, regional companies undertake battles and specialized institutions provide support, thereby pooling our efforts to make rapid and well-coordinated responses.



► Improving market-oriented operations mechanism

To foster a positive environment where “the competent are promoted, the excellent are rewarded, the mediocre are demoted and the inferior are removed”, China Mobile continued to further reform of three systems:



In terms of management selection, we firmly implemented the “Key Personnel” project and advanced a tenure system and contract-based personnel management for management personnel, which covered 100% of all 2,465 management personnel at 622 tier-2 and tier-3 subordinate units. Meanwhile, we stepped up the reassignment of low-performing managers and removal of incompetent ones.



In terms of employment, we saw an accelerated digital intelligence transformation in our workforce, with the number of technical staff growing from 130,000 to 169,000, and from 26.6% to 35.2% as a proportion of the total employees in the past three years. In 2022, 100% of our new hires were recruited through open recruitment.



In terms of income distribution, we set up an incentive model whereby one took a fair share of the total labor costs in proportion to contribution, which closely aligned with our business development, as well as dedicated incentive mechanisms for key businesses, and widened income distribution gap. We also implemented a suite of policies, such as “Racing to the Top” and internalization of core competencies, to eliminate equalitarianism in income distribution.

► Launching special initiatives to advance the reform of SOEs

In compliance with the requirements of launching special initiatives to push forward the reform of SOEs, we promoted the comprehensive implementation and systematic integration of the various policies and measures for SOE reform and positioned us to lead by example and spur breakthroughs.

Double-Hundred Action

© MIGU Co., Ltd.

It built a dual-track career development system for management and professionals, and allowed employees to switch between the two. It also strengthened performance appraisal and professional assessment, making management positions vertically mobile. It also piloted the use of professional managers. MIGU’s media resources were in the first tier of the industry and took the broadcasting of the Beijing 2022 Winter Olympic Games as an opportunity to breakthrough its traditional audience demographic, attracting over 300 million viewers and over 15.5 billion views and topping the trending list of various social media platforms for 45 times.

© China Mobile Group Device Co., Ltd.

It built a large-scale and chain-based offline operation system and established a pan-terminal and omni-channel sales alliance. In 2022, for the first time, its operating revenue exceeded RMB100 billion.

© China Mobile Online Services Co., Ltd.

It made advances in integrated online operations and task-specific reform of the cloud customer service. In 2022, the online sales volume of its core businesses reached 754 million, representing an increase of 71.1% year on year.

Demonstration Action for Sci-Tech Reform

© China Mobile IoT Co., Ltd.

The company promoted “layered” reform, spinning off the chip team to set up Xinsheng Technology. It completed the first round of mixed-ownership reform, bringing in two strategic investors with a stake of more than 5% and also simultaneously launching an employee stock ownership plan.

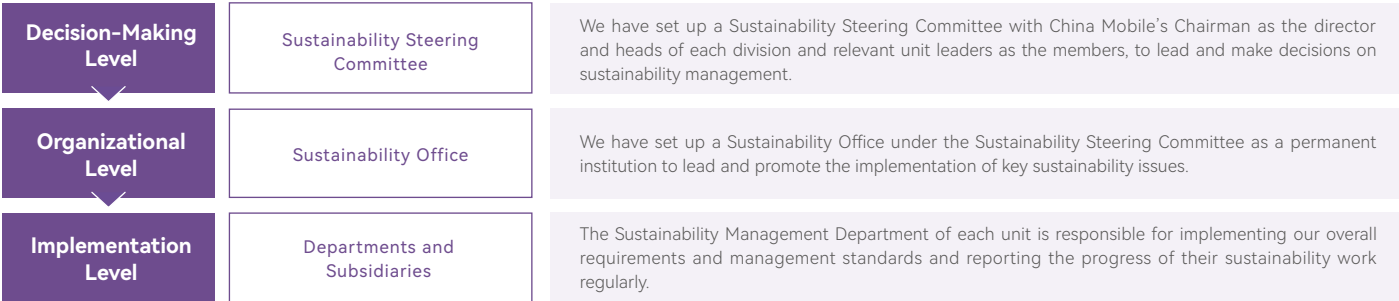
© China Mobile Cloud Center (also known as China Mobile (Suzhou) Software Technology Co., Ltd.)

The company carried out a “step-by-step” reform to accelerate business expansion. Since its establishment, the company gained over RMB 40 billion in cloud business revenue, representing a year-on-year growth of 65% and placing it among the first tier of the industry.

Continuously Advancing ESG Management

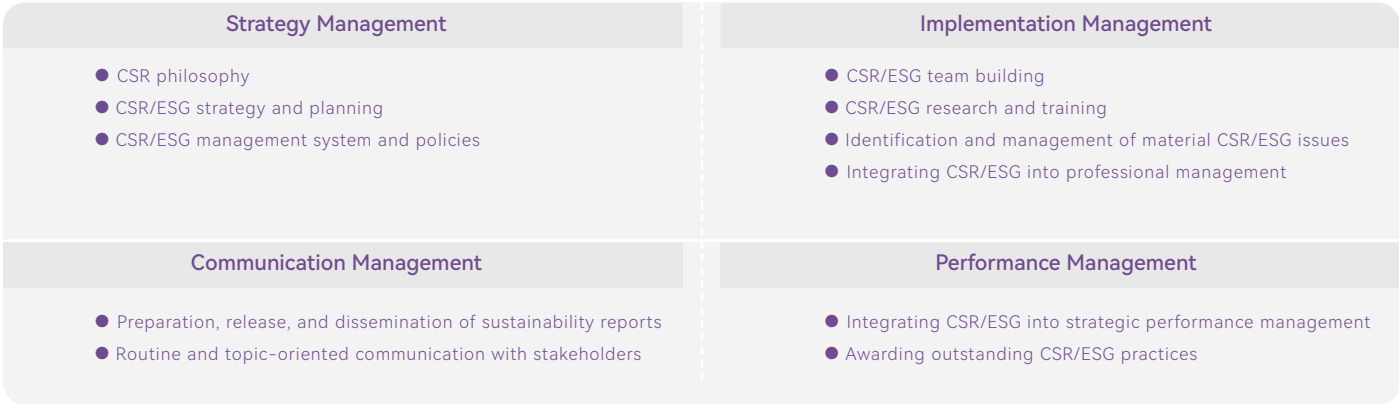
Guided by globally recognized standards and best practices for sustainability management, China Mobile has gradually set up a strategic sustainability management system since 2006. With effectiveness at the core, the system has been developed having regard to the realities of our operation and management and utilizes a suite of innovative management tools and approaches. We have set up the Sustainability Steering Committee and built a three-level sustainability management framework comprising “decision-making, organization, and implementation”, which enables the in-depth involvement of top leadership, horizontal coordination, and vertical collaboration. The Sustainability Steering Committee oversees decision-making, the Sustainability Office takes charge of management, and the specialized departments and subordinate units implement specific tasks. With clearly defined responsibilities and division of labor, our sustainability efforts are carried out in an effective manner.

China Mobile’s Sustainability Management Framework



China Mobile upholds the corporate governance principles of integrity, transparency, openness, and efficiency. We have gradually optimized a series of sustainability policy systems, internal control systems, and management mechanisms and processes. Moreover, we established a strategic, closed-loop sustainability management system consisting of the four modules of strategy, implementation, performance, and communication. Meanwhile, by regularly preparing and releasing sustainability reports, we have built a long-term ESG promotion mechanism covering all staff and processes.

China Mobile’s Sustainability Management System



With reference to mainstream ESG evaluation systems, China Mobile has established a regular benchmarking management system for key sustainability issues. The Development Strategy Department leads and assigns the management of sustainability issues based on the management responsibilities of the headquarters and relevant units, and all units collaborate to carry out benchmarking management, gap identification, and improvement. We actively participate in the formulation of ESG-related evaluation standards in the industry and continuously measure ourselves against the standards to improve our own benchmarking management system.

For 15 consecutive years, we organized the “Excellent CSR Practice Selection” among all subordinate units under China Mobile, greatly stimulating the enthusiasm, initiative, and creativity of employees at all levels. In particular, we set up the “Evergreen Practice Award” to encourage all the units to constantly promote and apply excellent practices.

In the past 15 years, we have received a total of **1,131** practical achievements submitted by the various units and rewarded **243** of them.



Preventing and Resolving All Kinds of Risks

Strengthening Compliance Management to Prevent and Control Business Risks

China Mobile strives to be a “practitioner, leader, and communicator” of compliance, continuously advancing compliance management at the strategic level. We closely integrated compliance management with promoting digital transformation and high-quality development, risk prevention and resolution, and governance capability building. The continual improvement in our compliance management system allowed us to consistently bolster operational compliance.

► Strengthening organizational leadership to promotes coordinated efforts

China Mobile highly prioritized compliance management and leveraged the “Compliance Management Enhancement Year” as an opportunity to further integrate compliance management into overall planning and implementation. We held a compliance management seminar in Hong Kong to promote the construction of a large-scale compliance management system, thus ensuring high-quality development of international business and concentrated supply of compliance management capabilities. The management team convened several meetings to study and deploy critical topics related to compliance system building. They also reviewed and approved the annual compliance management report for the fifth consecutive year, continuing to advance compliance management efforts on all fronts.

China Mobile

Released the *Compliance Initiative Proposal*

Managers at all levels and employees

Actively responded to compliance initiative and signed the *Compliance Initiative Proposal*

► Optimizing mechanisms and systems to deliver precise risk management and control

The Parent Company took the lead in instating a Chief Compliance Officer (CCO) and guided the subsidiaries at all levels to do the same to progressively formalize compliance accountability. We pushed for the establishment of compliance officers at the business departments of all levels, further integrating compliance management with business operations to ensure more effective risk prevention. We stayed abreast of domestic and international laws and regulations and international conventions and issued compliance analysis reports based on relevant rules such as the *Anti-Monopoly Law of the People’s Republic of China*, the *Anti-Telecom and Online Fraud Law of the People’s Republic of China*, and the *Regional Comprehensive Economic Partnership (RCEP)*. We continuously enhanced compliance risk prevention and control in key areas and issued compliance guidelines for online transactions and customer personal information protection. We revised and upgraded our customer registration agreements to better safeguard customers’ legal rights and interests. We also completed the fifth phase of our contract system construction and the fourth phase of our AI application R&D, continuously using digital methods to enhance the efficiency of contract management.

► Deepening compliance culture and expanding compliance education

Our management team organized regular theoretical studies on legal compliance, leading the Company to build a sound compliance culture throughout. We engaged our peers in dialogues on compliance to exchange experience and philosophies of compliance management, jointly building a compliance “ecosystem”. We also conducted a “Top Ten Compliance Courseware” collection and continuously released the “Compliance Safeguard” implementation notices to promote outstanding practices in compliance management.

Compliance training was actively conducted at all levels of the Company

For employees in key areas such as market and network

Provided compliance courses on topics such as market competition and cybersecurity to strengthen the risk prevention awareness of frontline employees.

For middle and grassroots-level management personnel

Provided courses on compliance theory and system construction to enhance the compliance management capabilities of leaders at different levels.

For international business units

Expounded on the global trends of compliance development, large-scale compliance system construction, and other related topics to enhance employees’ abilities to respond to risks and challenges.

► China Mobile's key measures in risk management in 2022



Improving the internal control risk management system

We formulated and released a top-level internal control risk management system, strengthened the full-process risk prevention and control, identified the path to digital intelligence risk control upgrade, and established a risk control standardization system to further regulate risk control. We updated the internal control manual, matrix, and various professional management systems, forming a better-constituted internal control standardization system with closer business connection, smarter management, and timelier updates.



Building an internal control risk management system

We launched a program to build an internal control risk management system to standardize risk management practices, incorporate outstanding management practices, and build a quantitative risk monitoring model. This program allowed a streamlined risk management process for risk reminder, alert, and supervision and management, thus enabling centralized risk supervision, 24/7 monitoring, and one-stop management.



Strengthening internal control management

We consolidated the line of defense responsibilities of the business management and intelligent risk control departments and promoted the mechanism of risk control process responsibility person. We extended the coverage from business and finance to market and network domains, increasing the coverage rate from 37% to 60%. We improved the mechanisms for information sharing and collaborative optimization of internal control systems among the business execution and business management departments and the intelligent risk control, audit, and supervision departments. We also strengthened the closed-loop management of audit, supervision, discovery, and application. In 2022, we issued 13 types of risk warnings, urging all units to improve their systems and strengthen execution in time.



Giving full play to the role of internal auditing

We actively explored and practiced research-based auditing and continued to improve the three-level internal audit system consisting of management systems, work norms, and practical guidelines under the guidance of the *Internal Audit Charter*. We strengthened precise and classified auditing and conducted internal auditing focused on core areas such as key CHBN businesses, information service facility security, financial revenue and expenditure, important cost items, and overseas operations. We intensified the transfer of problem clues and the coordinated supervision over problems identified during auditing and tightened internal audit rectification responsibilities.



Reducing risks by digital-intelligent technology

We promoted the use of digital intelligence technologies to drive the replacement of manpower with robots, thereby improving work efficiency and reducing operational risks. We applied RPA (robotic process automation), OCR (optical character recognition), NLP (natural language processing), blockchain, and other intelligent technologies at a deeper level and developed a series of digital intelligence offerings such as intelligent travel and intelligent auditing. With improved accuracy of problem identification, it helped us achieve "zero input errors, zero audit omissions, and zero payment risks". We boosted the digital intelligence transformation of contract management, completed five phases of contract system construction and four phases of AI application R&D, effectively improving the efficiency of contract risk management and control by digital intelligence means. As we strove towards digital intelligence auditing, we stepped up efforts to upgrade the "on-site + remote + cloud" auditing mode, thereby improving our cloud-based auditing capabilities and deepening the integrated construction of a digital auditing system and its application and promotion.

Prevention and Control of Workplace Safety Risks

Comprehensively coordinating development and safety, the Company strengthened the work safety responsibility of all staff and all-round workplace safety risk control, thereby maintaining a stable level of overall safety.

► China Mobile's key measures in safety risk prevention and control in 2022:

Consolidating the foundation of work safety management	<ul style="list-style-type: none">► We drive the implementation of work safety responsibility into every aspect of our operations, requiring all subordinate units to establish an all-staff work safety responsibility system that assigned work safety responsibilities to specific individuals and positions.► We completed the work safety management system and formulated detailed rules for implementing work safety management.► We continued to build stronger safety management teams. We compiled courseware such as <i>Case Collection of Typical Safety Hazards</i> and <i>Case Collection of Typical Safety Accidents</i> and offered safety management ability enhancement training courses to all the full-time safety management personnel.
Advancing the identification and mitigation of safety hazards	<ul style="list-style-type: none">► We further carried out the three-year drive to promote work safety and the "Year of Improving Work Safety" campaign, detailed the implementation of action plans and targets, and urged subordinate units to implement the key tasks.► We deepened the identification and mitigation of safety risks and hazards and undertook the annual work safety inspection. Furthermore, we urged and guided all units to carry out in-depth self-inspection and self-mitigation and completing safety supervision. We finished the inspection of 29 units through remote inspections via ViLin, on-site inspections by the headquarters, mutual learning and mutual inspections, etc. In 2022, we identified and addressed a total of 50,476 safety hazards.► We paid close attention to work safety across China, thoroughly mitigated major safety hazards, and carried out special mitigation of chemicals, safety inspections of major communication facilities, and re-investigation and re-rectification of safety risks and hazards. We deepened systematic and comprehensive treatment of safety risks from the source and made a tireless effort to contain major and serious accidents.
Strengthening the publicity and education of workplace safety	<ul style="list-style-type: none">► In a timely manner, we issued publicity and educational materials including information on national policies on work safety, analysis of major typical safety accidents, knowledge of work safety, important meteorological information, and significant safety risk and hazard warnings. With these materials, we ensured that both the management and non-management staff were adequately informed on the relationship between development and safety and built a strong awareness of work safety.► We set up the special section of "Overall Development and Safety" in the Online Talent Development Center and conducted online and onsite safety warning education. A total of more than 380,000 people participated in the learning throughout the year.► We carried out various learning activities and competitions, such as on the "National Safety Day" and during the "Work Safety Month" and the "Fire Protection Awareness Month", to improve our employees' safety awareness and safety risk management ability.► We carried out the three-year drive to promote work safety and the "Year of Improving Work Safety" campaign. We offered 5,409 training sessions on the <i>Work Safety Law</i> and urged the elimination of 86 major safety hazards through methods such as "Looking Back".
Improving workplace safety via information technology	<ul style="list-style-type: none">► We continuously optimized the safety management information system to strengthen the statistical management of various types of data, such as work-related accidents, and recorded a total of more than 1,400 pieces of safety information.► We expanded the application of the workplace safety supervision and inspection management system, effectively improving the efficiency of safety hazard inspection and mitigation and cumulatively recording more than 82,000 pieces of information on safety hazards.► Actively exploring the application of 5G in workplace safety, we built the smart workplace safety management and control platform and the "Guardian Cloud" safety information platform, increasing our capabilities of accident early warning and emergency response via information technology.

Prevention and Control of Tax Risks

We adhere to the principle of “paying taxes as required by law and supporting strategic transformation” in our tax management. After years of effort, we have established a preliminary tax management system that places emphasis on risk management.

► China Mobile’s key measures in tax risk prevention and control in 2022:

Standardizing the tax systems and measures

We strictly abide by relevant tax laws and regulations of the countries and regions where we operate or get listed, acting with integrity and paying taxes as required by law. We regularly updated/optimized tax management-related systems and methods in step with the actual circumstances to ensure they were accurate and compliant with applicable tax policies. In 2022, we revised/improved 51 system processes and updated 136 tax-related policy documents.

Building the tax management system

We actively optimized the relevant features of our tax management system and further automated and digitalized tax declaration management, taking measures to ensure that we fulfilled all our tax obligations in a standardized and compliant manner and instituted timely early warning.

Stepping up the training of the tax department

We regularly conducted sharing and training sessions on national fiscal and tax policies to improve our tax management personnel’s awareness of tax compliance and understanding of relevant policies, thus enhancing their tax compliance management capabilities.

Prevention and Control of Integrity Risks

China Mobile actively promoted the implementation of a closed-loop accountability system that emphasized responsibility awareness, responsibility fulfilment, and responsibility assessment and assignment. We organized the 2022 China Mobile Anti-Corruption Work Conference. Also, we urged for the implementation of relevant requirements and the instillation of accountability across all levels of the Company. We remained committed to eliminating all possibilities of corruption and increasingly improving the effectiveness of our anti-corruption efforts.

► China Mobile’s key measures in integrity risk prevention and control in 2022:

<p>Fostering a stronger integrity culture</p>	<p>We carried out centralized anti-corruption and integrity education activities themed “Performing Duties, Achieving Results, and Promoting Development”. A total of 11,500 study and educational sessions were conducted, covering more than 90% of the employees. We formulated and issued the <i>Opinions on Promoting a Culture of Integrity in the New Era</i> and developed 18 implementation measures.</p>
<p>Deepening the prevention and control of integrity risks</p>	<p>We organized special actions for improving the effectiveness of risk prevention and control and continuously optimized the construction of an IT-based risk prevention and control platform to enhance our ability to accurately identify and address risks and problems. By the end of December 2022, our risk early warning platform had collected more than 22,000 integrity risks in 20 fields of the headquarters and the various fields of all units, cumulatively triggering over 29,000 warnings.</p>
<p>Constantly improving workplace conduct</p>	<p>We undertook the “Looking Back” initiative to address the burden of formalism at the grassroots level and published 43 improvement measures, which produced concrete results.</p>

Performance Report

Economic Performance

Direct economic impact

► Management practices and main actions

Striving towards the new positioning of becoming “a world-class company of information service and sci-tech innovation”, we are committed to implementing the development strategy of building a world-class dynamic “Powerhouse” and following the guideline of making progress while maintaining stability. We worked to create a new information infrastructure centering on 5G, CFN, and capability middle platforms and innovatively built a new information service system integrating “connectivity + computing force + capability”. We continued to advance the comprehensive and integrated development of our CHBN markets and stepped up efforts to integrate information services into all industries and serve all people. Our operating revenue ascended to the top among global operators for the first time, and our profit maintained a sound growth based on a high base.

We strictly abide by relevant tax laws and regulations of the countries and regions where we operate or get listed, acting with integrity and paying taxes as required by law. We also keep up to date with any changes in relevant tax laws, regulations, and policies, ensuring that all taxes and fees are paid in full. Details of the financial subsidies the Company received from the government during the reporting period can be found in the annual report.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Operating performance				
Operating revenues	RMB 100 million	7,681	8,483	9,373
Taxes paid	RMB 100 million	342	359	373
Service scale				
Total number of mobile subscribers	Million	942	957	975
Number of 4G subscribers	Million	775	822	859
Number of 5G plan subscribers	Million	165	387	614
Number of wireline broadband subscribers	Million	210	240	272
Number of IoT smart connections	Million	873	1,049	1,328
Number of business customers	10,000	1,384	1,883	2,320
Network scale				
Number of 4G base stations	10,000	328	332	334
Number of 5G base stations	10,000	39	74	128.5
Number of cities with NB-IoT	Number	337	337	337

Performance indicator	Unit	2020	2021	2022
5G SA average download speed	Mbps	>750	>750	>750
Internet backbone bandwidth	Tbps	347	456	519
International services				
Number of countries and regions with 4G international roaming services	Number	207	212	218
Number of countries and regions with 5G international roaming services	Number	33	51	60
Number of countries and regions covered by our data roaming services	Number	255	264	264
YoY decrease in international data roaming charges	%	28.92	8.56	-6.10
International transmission bandwidth	G	90,898	105,683	123,000

R&D and innovation

► Management practices and main actions

China Mobile continuously places R&D and innovation at the center stage of our overall development. With a focus on the needs of social and economic development, we further implemented innovation-driven development strategy, mobilized efforts to achieve advances in key and core technologies, and led the formation of the 5G Innovation Coalition, working to be the leader of the modern mobile information industrial chain and a source of original technologies. We actively promoted the “Beacon” Improvement Plan for Patent Development During the 14th Five-Year Plan Period to keep improving our patent productivity and led the preparation of international standards. The number of our patent applications remained among the top tier of global operators. We made sustained efforts to improve the “One System and Four Rings” sci-tech innovation system, integrating innovations in the four areas of industry, academia, research, and application, and built a dual-cycle layout characterized by solid internal capabilities and expanding external cooperation. We made an innovative exploration in the “Two Inputs and Two Outputs” policy to deepen reforms in the systems and mechanisms of sci-tech innovation. We implemented the “Joint Innovation+” plan at a deeper level and built a new scientific research ecosystem featuring win-win cooperation with key universities, enterprises, and other partners. We stepped up efforts in entrepreneurship and innovation to foster a culture of innovation in the wider society and invigorate the innovation ecosystem.

Performance indicator	Unit	2020	2021	2022
R&D and innovation				
R&D investment ¹	RMB 100 million	129	186	217
Number of patent applications	Number	3,497	4,760	5,186

Performance indicator	Unit	2020	2021	2022
Number of newly granted patents	Number	1,659	1,886	2,258
Open cooperation				
Average number of daily authentication requests processed on the mobile authentication platform	100 million	14.44	17.77	18.73
Number of developers on OneNET	Number	197,582	247,507	292,641
Number of enterprises on OneNET	Number	13,917	15,049	15,414
Number of devices connected to OneNET	10,000	18,628.03	21,647.17	22,180.808
Number of developers on Lianying platform ²	Number	131,200	153,300	190,610
Number of enterprises on Lianying platform	Number	1,200	1,384	1,716
Number of GTI operator members	Number	139	141	142
Number of GTI industry partners	Number	247	250	254
Number of China Mobile's Smart Home Cooperation Alliance members	Number	360	473	515
Number of China Mobile's IoT Alliance members	Number	1,664	1,743	2,000
Entrepreneurship				
Investment in entrepreneurship and innovation support	RMB 10,000	6,969	5,692	3,770
Number of users of the entrepreneurship and innovation platform	10,000	17.1	17.9	19
Number of projects created from entrepreneurship and innovation events	Number	3,468	3,528	3,575
Number of teams participating in entrepreneurship and innovation events	Number	4,112	3,616	3,744
Number of teams participating in "HeChuang Incubation"	Number	141	191	238
Number of people participating in "HeChuang Incubation"	Number	577	645	786
Number of jobs created	10,000	216	217	205

¹R&D (research and development) investment includes both expense-based R&D investment and capital-based R&D investment.

² The Andlink platform has officially changed its name to "Lianying platform". The "Andlink" brand and other relevant services have remained the same.

Business ethics and anti-corruption

► Management practices and main actions

We scrupulously abide by business ethics, combat corruption, strengthen the institutional development of the organization, and institutionalize every facet of our anti-corruption and integrity efforts, so as to form a closed-loop accountability system that emphasizes responsibility awareness, responsibility fulfillment, responsibility assessment and assignment. We conducted 11,500 anti-corruption and integrity education events, covering more than 90% of our employees. We continued to deepen the development of embedded integrity risk prevention and control mechanisms and organized special campaigns to improve the integrity risk prevention and control achievements. We kept optimizing the information platform for integrity risk prevention and control to increase our ability to precisely identify and address integrity risks and problems and laid down 18 opinions for promoting a culture of integrity for in-depth implementation.

According to relevant regulations, corruption-related data of a company is classified information. Further information such as the number and outcome of publicly disclosed corruption cases can be accessed on the website of the CPC Central Commission for Discipline Inspection.

Our reporting channels include: mailing address: Building A, 29 Financial Street, Xicheng District, Beijing, China, 100033; on-site supervision and inspections; CEO mailbox is also open to employees and the public for reporting any violations or illegal conduct.

► Actions and performance

Performance indicator	Unit	2020	2021	2022
Anti-corruption and integrity education events held	Number	11,951	11,390	11,524
Number of people receiving anti-corruption and integrity education and training	Number	906,980	786,085	724,519

Value chain management

► Management practices and main actions

China Mobile adheres to the principles of fairness, impartiality, and transparency throughout all stages of procurement management. By formulating the *China Mobile Supplier Cooperation Guide*, we required cooperative suppliers to fulfill their tax obligations, pay social insurance, and comply with laws and regulations regarding lawful employment, labor protection, occupational health and safety, social responsibility, and environmental protection, among other areas. We incorporated the certification status of occupational health and safety and environmental management system standards such as SA 8000, ISO 45001, and ISO 14000 into our supplier selection scoring system. We also demanded all the suppliers involved in procurement sign an online integrity commitment to ensure any negative social or environmental impacts that may exist in the supply chain was properly addressed.

We formulated the *China Mobile Implementation Rules for Tier 1 Centralized Procurement Quality and Contract Fulfillment* and the *China Mobile Centralized Procurement Quality Management Measures*. We strengthened the quality management of suppliers through a combination of on-site quality inspections, inspections on arrival, and

unannounced inspections. In 2022, we launched the China Mobile structured procurement platform, which fully digitalized the operations of procurement managers, bidding agents, bidding suppliers, and reviewers and enabled synchronized operations and full-process supervision and traceability. It thus provided the necessary system support for conducting remove reviews, ensuring the fairness and impartiality of procurement activities.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Number of centralized procurement suppliers	Number	13,133	20,600	18,798
Number of Tier 1 centralized procurement suppliers	Number	818	842	754
Proportion of local suppliers in Tier 1 centralized procurement suppliers	%	100	100	100
Number of Tier 2 centralized procurement suppliers	Number	12,851	20,432	18,580
Proportion of local suppliers in Tier 2 centralized procurement suppliers	%	83.93	62.92	67.40
Number of information verifications on Tier 1 centralized procurement suppliers	Number	2,156	2,312	1,510
Proportion of Tier 1 centralized procurement suppliers receiving verification before establishing cooperative relationship	%	100	100	100
Number of on-site supplier verifications conducted	Number	1,107	1,784	1,271
Number of suppliers in Eastern China	Number	4,159	6,074	5,592
Number of suppliers in Northern China	Number	1,889	3,292	2,967
Number of suppliers in Central China	Number	1,911	1,909	1,813
Number of suppliers in Southern China	Number	1,542	2,391	1,746
Number of suppliers in Southwest China	Number	1,449	2,169	1,899
Number of suppliers in Northwest China	Number	1,053	2,286	2,000
Number of suppliers in Northeast China	Number	1,130	2,479	2,781
Number of registered experts in the e-procurement and bidding system	Number	129,420	133,824	137,964
Number of experts in China Mobile procurement evaluation expert pool	Number	53,886	50,617	49,901
Number of e-procurement projects in the year	Number	Approx. 46,000	Approx. 32,000	Approx. 32,000

Cybersecurity, data security, and privacy protection

► Management practices and main actions

Cybersecurity remains a top priority at China Mobile. We set up a cybersecurity leadership team and all subordinate units also established cybersecurity leadership teams headed by the principal leaders. We continued to improve the responsibility, operation, and value system of cybersecurity and constantly enhanced our cybersecurity capability and level. By implementing the concept of overall national security, we created Cyber-SRC, a cybersecurity emergency response system and an "integrated and full-process credible" CFN security system. As well as strengthening the protection of the Critical Information Infrastructure (CII), we also enhanced centralized cybersecurity operations and practical offense and defense capabilities while ramping up our capacity for cybersecurity management and emergency communications support under extreme circumstances. Upholding the people-centered philosophy, we improved the data security governance system, controlled harmful information in a centralized manner, and maintained a tough stance on cracking down on telecommunications network fraud. We led the industry in terms of the management efficiency of scam phone calls, nuisance phone calls, and spam SMS messages. In 2022, there was no major cybersecurity or information leakage incident at China Mobile.

We actively carried out the "Sunshine Action" for customer rights and interests protection and strictly implemented relevant management regulations of the *China Mobile Punishment and Accountability Measures for Violations of Customer Rights and Interests*, taking strong actions to govern behaviors that infringed on customer privacy, resulted in loss of customer information, etc. We continuously pushed forward the control checkpoints and strengthened joint prevention and control to further deepen customer rights and interest protection. We ensured that complaints related to privacy infringement and loss of customer information were properly addressed and resolutely guarded against any behavior that violated customer rights and interests.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Emergency communications support				
Number of times emergency communications support was provided	Number	4,887	6,173	4,743
Significant political/economic event support	Times	4,602	5,620	3,973
Significant natural disaster support	Times	204	304	334
Significant accident or catastrophe support	Times	32	44	39
Public health incident support	Times	47	192	394
Social safety incident support	Times	2	13	3
Number of emergency vehicles dispatched	Vehicle-times	7,064	8,709	6,155
Number of emergency support equipment installed	Set-times	11,455	10,549	11,128
Number of personnel involved in emergency support	Number	264,102	212,317	471,709
Spam management				
Number of scam phone numbers handled	10,000	12.6	15.2	15.1

Performance indicator	Unit	2020	2021	2022
Average monthly number of spam SMS and MMS messages blocked	100 million	3.6	5.2	5.9
Average number of illegal 5G messages handled per month	10,000	25	39	486
Number of nuisance call numbers handled such as "Husini"	10,000	> 32	> 18	>7
Number of illegal websites handled	10,000	> 19.4	> 35	>53
Number of malwares monitored and handled	10,000	> 28.7	> 37.1	> 21.2
Number of malware control terminals handled	Number	> 25,600	> 49,400	> 19,700
Number of SMS fraud alerts sent	100 million	50.0	81.9	348.9
Number of targeted covert fraud incidents identified and successfully intervened	10,000	3,547	1,301	2,734
Number of scam caller ID reminders sent	100 million	36	32	34.3

Network, product, and service quality

► Management practices and main actions

China Mobile scientifically managed the scale of 5G construction, taking into consideration the synergia of multiple frequencies, indoors and outdoors, 4G and 5G, wireline and wireless systems, and Internet services and strengthening the precise construction of scenario-based gigabit broadband networks to increase the network coverage rate. We established the Product Management Committee to coordinate efforts in CHBN product development and management system optimization. It assisted us in fully implementing the "Five-in-One" product management and operations system, i.e., development, operations, support, sales, and service. We organized the end-to-end management of product quality and optimized the quality standards for key products. We prepared the *China Mobile Measures for Product Quality Control V2.0*, and the closed-loop improvement rate of product experience problems reached 87.1%. We revised the *China Mobile Measures for Customer Complaint Management* to subdivide complaint handling and management responsibilities of each unit into ten aspects, thereby strengthening institutional guarantee and improving our service quality.

To prevent incidents related to illegal marketing and dissemination, we strengthened pre-service review of marketing cases, set up an audit team, and defined seven "veto elements" and 53 "basic elements" of service review based on dimensions that customers were most perceptive about, such as clarity, transparency, accuracy, and safety. The seven veto elements are informed consent for subscription, standardized outbound marketing, "equal treatment for new and old customers", "standardized promotion", "prominent reminders for critical terms", "full disclosure of charges", and "proactive renewal reminders". In cases where non-compliance is detected, our service department will veto the cases during the review process to ensure there are no violations of product and service information, identification, or marketing communication. We are committed to promoting responsible marketing practices and making sustained progress in this area.

► Key Performance

Performance indicator	Unit	2020	2021	2022
One-time resolution rate of problems over the hotline	%	89.4	89.7	92.0

Performance indicator	Unit	2020	2021	2022
Overall customer satisfaction ¹	Point	81.36	81.80	82.05
Number of customer spam reports handled	10,000	85	94	77
Number of customer receptions on CEO Customer Reception Day	Number	85,493	93,520	91,305
Number of complaints and inquiries handled on CEO Customer Reception Day	Number	79,336	86,735	85,710

¹ The evaluation of overall customer satisfaction in telecom service quality was organized by the MIIT, who also announced the results. The maximum score is 100.

Social Performance

Employment and compensation

► Management practices and main actions

Employment: In compliance with laws and regulations such as the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*, we formulated the *Manual of Typical Cases for Protecting the Rights and Interests of Employees*, the *Labor Management Regulations*, and the *Management Measures for Labor Dispatch Unit Cooperation*. We strictly prohibit illegal employment and discrimination in employment, continue to improve our employment management level, and effectively protect the rights and interests of our employees.

Compensation: Based on our principle of market-oriented and performance-based compensation, we formulated the *Labor Cost Management Measures of China Mobile Communications Group Co., Ltd.* and the *China Mobile Guidelines for Employee Compensation Management*, implemented a "performance-oriented and structure-adjusted" compensation system, and issued the *China Mobile Implementation Plan for Incentive and Guarantee Mechanism for Sci-Tech Innovation* and the *Guidelines on Strengthening the Construction of the Medical Security System for Employees*. With these efforts, we constantly improved the incentive and benefits system, stimulated employees' motivation, and significantly boosted their engagement, empowering them to grow and thrive together with the Company.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Total number of employees	Number	454,332	449,934	450,698
Number of full-time employees	Number	454,332	449,934	450,698
Number of full-time male employees	Number	-	-	213,527
Number of full-time female employees	Number	-	-	237,171
Number of full-time employees in the mainland of China	Number	451,963	447,849	448,226

Performance indicator	Unit	2020	2021	2022
Number of full-time employees in Hong Kong, Macao, Taiwan and overseas markets	Number	2,369	2,085	2,472
Number of part-time employees	Number	0	0	0
Number of part-time male employees	Number	0	0	0
Number of part-time female employees	Number	0	0	0
Number of long-term employees	Number	454,332	449,934	450,698
Number of long-term male employees	Number	-	-	213,527
Number of long-term female employees	Number	-	-	237,171
Number of long-term employees in the mainland of China	Number	451,963	447,849	448,226
Number of long-term employees in Hong Kong, Macao, Taiwan and overseas markets	Number	2,369	2,085	2,472
Number of temporary employees	Number	0	0	0
Number of temporary male employees	Number	0	0	0
Number of temporary female employees	Number	0	0	0
Number of temporary employees in the mainland of China	Number	0	0	0
Number of temporary employees in Hong Kong, Macao, Taiwan and overseas markets	Number	0	0	0
Number of employees working in non-guaranteed hours	Number	0	0	0
Number of male employees working in non-guaranteed hours	Number	0	0	0
Number of female employees working in non-guaranteed hours	Number	0	0	0
Number of employees working in non-guaranteed hours in the mainland of China	Number	0	0	0
Number of employees working in non-guaranteed hours in Hong Kong, Macao, Taiwan and overseas markets	Number	0	0	0
Proportion of employees under 30 years old	%	17.24	14.7	13.62
Proportion of employees between 30 and 50 years old	%	77.30	79.15	79.76
Proportion of employees over 50 years old	%	5.46	6.15	6.62
Number of employees in the mainland of China	Number	451,963	447,849	448,226
Number of employees in Hong Kong, Macao, Taiwan and overseas markets	Number	2,369	2,085	2,472
Proportion of technical personnel	%	29.06	34.87	36.8
Proportion of marketing personnel	%	51.22	47.2	45.35

Performance indicator	Unit	2020	2021	2022
Proportion of management personnel	%	7.58	7.02	7.35
Proportion of general affairs personnel	%	10.71	9.98	9.71
Proportion of other personnel	%	1.43	0.93	0.79
Number of new employees	Number	19,243	15,775	16,808
Number of new female employees	Number	7,398	6,032	6,747
Number of new male employees	Number	11,845	9,743	10,061
Number of employees who resigned	Number	10,044	11,376	7,985
Number of female employees who resigned	Number	5,024	5,173	3,478
Number of male employees who resigned	Number	5,020	6,203	4,507
Number of employees dismissed	Number	1,131	1,620	1,364
Number of female employees dismissed	Number	711	991	717
Number of male employees dismissed	Number	420	629	647
Employee turnover rate	%	2.21	2.53	1.77
Turnover rate of employees under 30 years old	%	6.03	8.93	6.92
Turnover rate of employees between 30 and 50 years old	%	1.50	1.52	1.02
Turnover rate of employees over 50 years old	%	0.29	0.18	0.21
Female employee turnover rate	%	2.07	2.17	1.47
Male employee turnover rate	%	2.37	2.93	2.11
Turnover rate of employees in the mainland of China	%	2.05	2.28	1.53
Turnover rate of employees outside the mainland of China	%	16.75	23.95	21.88

Diversity and non-discrimination

► Management practices and main actions

We embrace diversity and uphold non-discriminatory employment practices. Strictly abiding by the requirements under the *Special Rules on the Labor Protection of Female Employees* and other policies, we have upheld the principles of fairness, openness and impartiality in our recruitment process, and challenged and taken measures to prevent any form of workplace discrimination. The *China Mobile Recruitment Management Measures* mandate openness, transparency and fairness during recruitment, and we develop scientific and reasonable recruiting conditions according to the specific positions. We strictly prohibit discriminatory recruitment conditions such as race, ethnicity, gender, religion, height, appearance or any other conditions that are irrelevant to the work duties. We allocate more talent resources to organizations that implement national and local strategies such as the aid programs for Xizang, Qinghai and Xinjiang and rural revitalization.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Proportion of female employees	%	53.30	52.88	52.62
Proportion of female employees in senior management positions	%	16.55	16.48	16.08
Proportion of ethnic minority employees	%	7.15	7.24	7.30

Occupational health and safety

► Management practices and main actions

We always put people first and attach great importance to the occupational health and safety of our employees. We strictly observe the national laws and regulations on the prevention and control of occupational diseases, assume our full responsibility as an employer to prevent and control occupational diseases, and offer regular physical examinations to the employees to protect their health and safety. In 2022, in line with the requirements of the Notice on Launching the "Law on Prevention and Control of Occupational Disease" Awareness Week in 2022 (GWBZJH [2022] No. 116) issued by the National Health Commission, we carried out activities related to the *Law on Prevention and Control of Occupational Disease*. During this time, the employee health management room at the headquarters was opened to all employees to provide them with health consultation, guidance, check, and other services as well as immediate rescue and treatment for common diseases and sudden symptoms. We printed and issued posters for the Awareness Week and publicized the Law on Prevention and Control of Occupational Disease Awareness Week among the employees at the headquarters and relevant units.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Number of safety emergency drills	Number	1,233	11,170	12,116
Investment in work safety	RMB 100 million	24.88	23.03	22.21
Employee participation rate in safety emergency drills	%	87.1	94.3	92.3
Accident fatality rate per 1,000 employees	%	0	0.002	0
Number of fatalities due to work-related accidents	Number	0	1	0
Lost workdays due to work-related injuries	Days	31,331	39,611	32,519

Development and training

► Management practices and main actions

China Mobile provides platforms and well-established channels to support employees' growth. We work to "create an ability system that fits the needs of an empowerment-oriented organization during the period of transformation". With a focus on "improving leadership skills, remodeling core abilities, and forging frontline implementation capabilities", the Company offers training programs that are categorized and precisely implemented. The training is available both online and in person and uses a combination of theoretical classes with practical guidance to effectively enhance the employees' occupational skills. We formulated and issued the *Implementation Opinions on Further Strengthening the Talent Work* and the *China Mobile Talent Plan During the 14th Five-Year Plan Period*, and improved and issued the *China Mobile Standard Position Database (2022)*, so as to provide the employees with more career development paths and stimulate the vitality and drive of the workforce to boost the Company's high-quality development. To better serve employees via the Online Talent Development Center, we equipped the Center with "Jiutian" AI platform to create ten smart learning applications including intelligent recommendation and intelligent invigilation, and optimized the core learning functions of livestreaming, exams, certifications and subject-based learning to improve the practical results of online training.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Average training expenses per employee	RMB	1,730	2,115	1,957
Number of total employee participations in training	10,000	148.3	124.2	123.4
Number of senior management participations in training	Number	856	1,275	1,341
Number of middle-level management participations in training	Number	20,923	20,214	23,103
Number of non-management employee participations in training	10,000	146.1	122.1	121.0
Training participation rate of senior managers	%	99.2	100	100
Training participation rate of middle-level managers	%	98.4	99.7	99.9
Training participation rate of non-management employees	%	99.4	98.9	99.5
Training participation rate of female employees	%	99.8	98.8	99.9
Training participation rate of male employees	%	98.9	99.2	98.9
Total number of Online Talent Development Center users	10,000	48.1	47.3	47.6
Number of mobile Online Talent Development Center learners	10,000	37.8	33.9	37.5

Labor rights protection

► Management practices and main actions

In compliance with the *Labor Law of the People's Republic of China*, the *Provisions on the Prohibition of Using Child Labor*, and other applicable laws and regulations, we strictly prohibit the use of child labor and forced labor. We are committed to gender equality in employment, uphold fairness, openness and impartiality in recruitment, and challenge and take measures to prevent any form of workplace discrimination. In 2022, we formulated the *Division of Work for Implementing the Campaigns for Women in Sci-Tech Innovation* and effectively safeguarded the legitimate interests of female employees through such campaigns as "Heroines' Contribution", "Defense of Heroines' Rights", "Care for Heroines", and "Heroines' Growth".

► Key Performance

Performance indicator	Unit	2020	2021	2022
Number of CEO mailbox emails and letters	Number	573	540	626
Proportion of employees regularly assessed for performance and career development	%	100	100	100
Proportion of female employees regularly assessed for performance and career development	%	100	100	100
Proportion of male employees regularly assessed for performance and career development	%	100	100	100
Proportion of senior managers regularly assessed for performance and career development	%	100	100	100
Proportion of middle-level managers regularly assessed for performance and career development	%	100	100	100
Proportion of non-management employees regularly assessed for performance and career development	%	100	100	100
Physical examination rate of employees	%	97	97	97
Number of employees covered by "Happiness 1+1"	10,000	41.6	42	41.2
Proportion of unionized contract employees	%	100	100	100
Proportion of employees covered by a collective bargaining agreement	%	100	100	100
Proportion of female employees at the headquarters who returned to work after maternity leave	%	100	100	100

Local communities

► Management practices and main actions

China Mobile continued to provide aids together with the Parent Company in the form of funds, talent, education, consumption, industry and livelihood support. Focusing on rural industries, governance, education, healthcare, culture and finance, we fully leveraged our extensive reach nationwide covering and connecting cities, counties and grids to promote the construction of digital villages and facilitate digital transformation of rural areas in terms of production, life and social governance. We have established sound relationships with local communities that foster mutual prosperity and progress. Bringing our digital-intelligent capabilities into full play, we further enhanced the management of our volunteer work and continued to carry out the "And Seeding" and "And You" youth volunteer activities.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Public welfare activities				
Total number of registered employee volunteers	10,000	13.11	11.31	7.78
Total employee volunteer hours	10,000	94.52	80.62	57.78
Number of employees covered by the Employees' Mental Health Care Program ¹	10,000	> 32	> 40	> 40
Cumulative number of Employees' Mental Health Care ambassadors trained	Number	3,093	> 3,000	> 3,000
Cumulative number of stress-relief rooms and care rooms built under the Employees' Mental Health Care Program	Number	120	> 100	> 100
Cumulative amount of funds donated by the China Mobile Charity Foundation	RMB 10,000	38,840	42,110	45,940
Cumulative number of primary and secondary school principals in rural areas trained under the "Blue Dream" Program	Number	128,338	129,000+	130,000+
Cumulative amount of funds donated under the "Blue Dream" Program	RMB 100 million	1.978	2.198	2.451
Cumulative number of impoverished children receiving free CHD screening under the "Heart Caring" Campaign	Number	58,607	61,898	63,850
Cumulative number of impoverished children with CHD assisted under the "Heart Caring" Campaign	Number	6,574	7,069	7,446
Localization				
Proportion of local employees in Hong Kong subsidiary	%	88.1	86.5	84.4
Proportion of local management-level employees in Hong Kong subsidiary	%	63.9	65.0	60.6

¹ Employees' Mental Health Care Program: EAP changed its name to Employees' Mental Health Care and started to put the focus of employees' mental health care on key groups and events in 2022.

Environmental Performance

Greenhouse gas emission and energy use

► Management practices and main actions

We have thoroughly implemented the guidelines of the *Opinions on Completely, Accurately and Comprehensively Implementing the New Development Concept and Making Great Achievements in Carbon Peaking and Carbon Neutrality*, the *Action Plan for Carbon Dioxide Peaking Before 2030*, and a series of policy documents issued under the “1+N” model by relevant national ministries and commissions; and fully implemented the *China Mobile Energy Conservation Management Measures* and, by formulating and issuing the *Priorities for the China Mobile C² Three Energy Plan in 2022*, the *Performance Assessment Methods for the China Mobile C² Three Energy Plan in 2022*, the *Notice on Publishing the Results of Green Data Center Evaluation in 2021*, the revised *China Mobile’s Green Data Center Evaluation Criteria V2.0* and so on, ensured the full implementation of the latest national standards and specifications to do our part to protect the environment.

► Key Performance

Performance indicator	Unit	2020	2021	2022
Greenhouse gas (GHG) emissions				
Total CO ₂ emissions	Million tons	34.15	33.82	34.46
Total direct GHG emissions (Scope 1) ¹	Million tons	0.24	0.24	0.22
Total indirect GHG emissions (Scope 2)	Million tons	33.91	33.58	34.24
Reduction rate of carbon emissions per unit of data traffic	%	-	21	16
SO ₂ emissions	Tons	2.75	11.36	8.16
Carbon emissions from employee commuting	10,000 tons	43.88	40.24	37.13
Carbon emissions from business travel	10,000 tons	5.76	4.72	3.47
Direct energy use				
Natural gas consumption	Million cubic meters	8.5	13.4	12.8
LPG consumption	100 tons	1.3	1.6	1.5
Coal gas consumption	Million cubic meters	0.07	0.01	0.01
Coal consumption	10,000 tons	0.01	0.05	0.04
Total gasoline consumption	Million liters	83.3	84.7	77.9
Total diesel consumption	Million liters	16.1	10.5	9.3
Indirect energy use				
Total electricity consumption	100 million kWh	549.2	570.4	592.5
Purchased heat	10,000 GJ	363.3	404.6	405.0
Energy conservation				

Performance indicator	Unit	2020	2021	2022
Total electricity savings	100 million kWh	25.1	43.5	64.3
Equivalent GHG emissions reductions of the electricity savings	10,000 tons	155.1	265.4	366.7
Reduction rate of comprehensive energy consumption per unit of data traffic	%	21	21	15
Interprovincial videoconferences held by the headquarters	Number	762	970	915

¹The calculation primarily focuses on CO₂ emissions following the Guidelines for Accounting and Reporting Greenhouse Gas Emissions (Other Industrial Enterprises).

Waste discharge

► Management practices and main actions

We continuously strengthen the management of all kinds of solid waste. We have formulated the *Priorities for the China Mobile C² Three Energy Plan in 2022* and the *Performance Assessment Methods for the China Mobile C² Three Energy Plan in 2022* and set out clear requirements for waste management. We also actively identify the sources of waste and strictly observe all applicable national laws and regulations in connection with the storage, transportation, and disposal of waste to prevent and control the risks of environmental pollution and continuously improve our comprehensive utilization rate.

► Actions and performance

Performance indicator	Unit	2020	2021	2022
Waste				
Amount of general solid waste generated	10,000 tons	6.32	7.67	4.46
Amount of general solid waste comprehensively utilized	10,000 tons	6.94	7.88	4.63
Amount of general solid waste carried over from previous years comprehensively utilized	10,000 tons	1.17	0.45	0.68
Comprehensive utilization rate of general solid waste	%	91.32	96.89	88.61
Discharge intensity of general solid waste	kg/RMB 10,000	0.82	0.90	0.48
Amount of hazardous waste generated	10,000 tons	1.78	2.1	2.74
Amount of hazardous waste disposed of	10,000 tons	2.26	2.35	2.63

Performance indicator	Unit	2020	2021	2022
Amount of hazardous waste carried over from previous years disposed of	10,000 tons	0.61	0.35	0.37
Disposal rate of hazardous waste	%	92.06	95.45	82.35
Discharge intensity of hazardous waste	kg/RMB 10,000	0.23	0.25	0.29
Material use				
Total amount of materials used in production of terminal equipment	Tons	12,899	14,521	12,308
Amount of packaging materials used per production unit of terminal products	Ton/production unit	0.000489	0.00041	0.000408

Water resource management

► Management practices and main actions

Water is one of the essential resources humans rely on for survival, and China Mobile attaches great importance to water resources management and utilization. In full compliance with the applicable requirements of the *Water Law of the People's Republic of China* and the *Water Pollution Prevention and Control Law of the People's Republic of China*, we have strengthened the Company's daily water management, strictly controlled the sewage discharge, promoted water conservation, and encouraged the application of wastewater recycling technologies, to minimize water consumption. Water consumed by our offices and in our production and operations mainly comes from municipal water supplies, and we are not exposed to water resources risks.

► Actions and performance

Performance indicator	Unit	2020	2021	2022
Total water consumption	Million tons	38.31	43.32	35.97
Water use intensity	Ton/RMB 10,000	0.50	0.51	0.38

Environmental pollution prevention and control

► Management practices and main actions

We take active actions to implement national decisions and arrangements on fighting against pollution, specifying the responsible departments while establishing prevention and control measures and emergency response plans for major risk points in the Company's environmental management, such as air, water, soil, solid waste, electromagnetic radiation, and noise.

► Key Performance

In 2022, there were no major incidents in violation of relevant laws and regulations on environmental protection in the Company.

Green supply chain

► Management practices and main actions

We consistently work to extend the green concept to the whole lifecycle of our products and business activities, actively design and implement green procurement mechanisms, and encourage green supply chain innovation. In 2022, we continued to improve the green procurement standards. We identified 102 categories of equipment in the Tier-I centralized procurement catalogue, such as mobile communication network equipment, transmission network equipment, IT hardware equipment, power supply, and active environmental equipment. We promoted paperless and "contactless" procurement. We required all suppliers to sign the *China Mobile Procurement and Bidding Commitment for Pine Wood Nematode Disease Prevention* to push our strategic suppliers to use RFID tags, driving energy conservation and emission reduction in the supply chain with our initiatives and technologies.

► Key Performance

Performance indicator	Unit	2020	2021	2022
E-commerce transaction volume	RMB 100 million	5,252	5,717	6,339
Amount of paper documents was reduced due to the application of fully-electronic procurement processes	Pieces	Approx. 645,000	Approx. 699,000	Approx. 692,000
Proportion of new main equipment with green packaging	%	78	> 80	> 80
Amount of wood saved	10,000 cubic meters	16.4	26.2	26.8

Environmental products and services

► Management practices and main actions

We develop a diverse range of digital applications and services to meet the information needs of all industries and individual users, improve the efficiency of production, life, and social governance, and help communities to save energy and reduce carbon emissions. Through products such as MIGU Reading, ViLin, Mobile Cloud, Big-Screen Video-on-Demand, MIGU Video, Cloud Games, and And-Education, we reduced the energy and resource consumption generated by traditional ways of reading, meeting, entertainment, and learning while providing users with the convenience of being online. Seizing opportunities for developing next-generation technologies, we have created digital application demonstration programs for multiple industries to help them optimize their production and management models, thus effectively improving the efficiency of resource use while reducing costs and boosting efficiency. Through such efforts, we have empowered significant reductions in carbon emissions across sectors and industries.

About this Report

This report is the 17th sustainability report issued by China Mobile, which mainly discloses the sustainable development efforts of the Company in the economic, social, and environmental areas. This report is an annual report. Unless otherwise specified, the reporting period is from January 1, 2022 to December 31, 2022. The last report was released in April 2022.

Report Formats

Languages: The report is available in both Chinese and English. In case of any discrepancy, the Chinese version shall prevail. The English report is translated from the Chinese version.

Versions: The report is available in both print and electronic formats, and the latter is publicly available at www.chinamobileltd.com.

Reporting Standards

The report has been prepared to comply with industry-standard sustainability disclosure guidelines while highlighting the unique characteristics of China Mobile within its industry context. We primarily referenced the following standards in this report.

- *Guidelines for Self-Regulation of Listed Companies No.1 - Standardized Operation*, Shanghai Stock Exchange (SSE)
- *Environmental, Social and Governance (ESG) Reporting Guide*, Hong Kong Stock Exchange (HKEX)
- *2030 Agenda for Sustainable Development*, United Nations
- *GRI Standards*, Global Sustainability Standards Board (GSSB)
- Ten Principles of the United Nations Global Compact
- *ISO Guidance on social responsibility* (ISO 26000)
- Recommendations by the Financial Stability Board (FSB) Task Force on Climate-Related Financial Disclosures (TCFD)
- *Corporate ESG Report Preparation Guide (CASS-ESG 5.0)*, Chinese Academy of Social Sciences (CASS)

Reporting Contents and Boundaries

Following the principles of “stakeholder inclusiveness, sustainability context, materiality and completeness”, China Mobile determines material topics and boundaries through a materiality assessment. Please refer to page 87 in this report for the process and results of the materiality assessment.

Reporting Scope

Unless otherwise specified, all cases and data in this report are from China Mobile Limited and its subsidiaries. For detailed information about corporate governance structure, organizational structure, ownership and legal form, service markets, size of the organization, etc., please refer to the *China Mobile Annual Report 2022*.

Currency

All monetary amounts in this report are presented in RMB (Chinese *yuan*) unless otherwise stated.

Data and Information Disclosure

The senior management at China Mobile reviews the content disclosed in the sustainability reports. The data and information used in the 2022 report was mainly obtained through the following channels:

- Relevant internal data collection systems and statistical reports;
- CSR practice cases submitted by provincial subsidiaries quarterly;
- China Mobile's 2022 excellent CSR practice selection;
- Qualitative and quantitative information collection questionnaires based on the report framework.

Report Assurance

In 2022, China Mobile engaged SGS-CSTC Standards Technical Services Co. Ltd. to provide independent third-party report assurance services. See pages 84-85 for the details of this assurance report.

Reader Feedback

If you have any comments or suggestions regarding the report, you are welcome to send them to the China Mobile 2022 Sustainability Report Preparation Team by scanning the QR code below. We will carefully consider your feedback and commit to protecting your information from being obtained by third parties.



Independent Assurance Report



ASSURANCE STATEMENT

SGS-CSTC'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE CHINA MOBILE LIMITED'S 2022 SUSTAINABILITY REPORT

NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS-CSTC STANDARDS TECHNICAL SERVICES CO., LTD.(hereafter as "SGS") was commissioned by CHINA MOBLIE LIMITED (hereafter as "China Mobile") to conduct an independent assurance of the Chinese version of China Mobile's 2022 Sustainability Report (hereafter as "the Report"). An on-site and remote assurance process was executed for the headquarters of China Mobile Limited, China Mobile Yunnan Company Limited, China Mobile Fujian Company Limited, and China Mobile Shandong Company Limited.

INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all China Mobile's Stakeholders.

RESPONSIBILITIES

The information in the Report is the responsibility of the management and relevant functional departments of China Mobile.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all China Mobil's stakeholders.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognized assurance guidance and standards including the principles of reporting process contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) GRI 1: Foundation 2021 for report quality, GRI 2 General Disclosure 2021 for organization's reporting practices and other organizational detail, GRI 3 2021 for organization's process of determining material topics, its list of material topics and how to manages each topic, and the guidance on levels of assurance contained within the AA1000 series of standards.

The assurance of this report has been conducted according to the following Assurance Standards SGS ESG & SRA Assurance Protocols (based on GRI Principles and guidance in AA1000)

Assurance has been conducted at a moderate level of scrutiny.

SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

- GRI Standards 2021 (Reference)
- HKEX Environmental, Social and Governance (ESG) Reporting Guide

The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the selected key performance data listed below. Other data and information disclosed were not included in this assurance process. Financial data drawn directly from independently audited financial accounts have not been checked back to the source as part of this assurance process.

Economic Indicators	<ul style="list-style-type: none"> - Number of tier 1 centralized procurement suppliers - Number of tier 2 centralized procurement suppliers - Percentage of local suppliers in tier 1 centralized procurement suppliers - Percentage of local suppliers in tier 2 centralized procurement suppliers - Number of information verifications on tier 1 centralized procurement suppliers - Number of remote rural villages with broadband service newly launched in the "Universal Telecommunications Service Project" -Number of customer spam reports handled - Number of emergency communications support - Number of emergency vehicles deployed (vehicle-times) - Number of emergency support equipment installed (set-times) - Number of personnel involved in emergency support (person-times)
Social Indicators	<ul style="list-style-type: none"> - Cumulative number of rural primary and secondary school principals trained - Number of impoverished children who received free CHD treatment in 2022 - Number of training participations - Percentage of female employees - Percentage of ethnic minority employees - Total number of new employees

	- Number of resigned employees - Number of anti-corruption education activities - Number of participations in anti-corruption education and training
Environmental Indicators	- Total electricity consumption - Natural gas consumption - LPG consumption - Coal gas consumption - Coal consumption - Gasoline consumption - Diesel fuel consumption - Direct GHG emissions (Scope 1) - Indirect GHG emissions (Scope 2) - Carbon emissions from business travel - Carbon emissions from employee commuting - Number of inter-provincial video conferences organized by the headquarters

ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, remote interviews with relevant employees of the three provincial companies, on-site interviews with relevant employees and departments located at China Mobile Building of No.29, Financial Street, Xicheng District, Beijing, P.R.China. Documentation and record review and validation with employees relevant by login related systems.

LIMITATIONS OF ASSURANCE

Data tracing on headquarters and the selected three provincial companies' level, not including original data of all subsidiaries.

The assurance process only involved interviews with the heads of relevant departments and certain employees of headquarters and the selected three provincial companies as well as consultation with relevant documents. No external stakeholder is involved.

Only the key performance indicators selected were involved in the assurance process, and other information in the Report was not involved.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from China Mobile, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment.

FINDINGS AND CONCLUSIONS

ASSURANCE/VERIFICATION OPINION

On the basis of the methodology described and the verification work performed, the information and data within the assurance scope in the Report verified are accurate and reliable and provide a fair and balanced representation of China Mobile's sustainability activities in 2022. The Report can be used by the Reporting Organization's Stakeholders.

FINDINGS AND RECOMMENDATIONS

Good practices and recommendations for sustainability reporting and management processes were described in the internal management report which has been submitted to the management department of China Mobile for continuous improvement.

Signed:



For and on behalf of SGS-CSTC

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Sr. Director – Knowledge

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Mar. 17th 2023







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Stakeholder Engagement and Materiality Assessment

Stakeholder engagement

We engage our stakeholders on a diverse range of sustainability topics that they are most concerned about. We have identified six stakeholder groups that may have or have had a significant impact on the Company's business and operations. This process complies with our guiding principles for CSR management, namely strategic, comprehensive, systematic, and participatory. We also take the initiative to collect stakeholders' concerns while preparing the sustainability report and incorporate them into the Company's relevant decision-making processes.

At the same time, we attached great importance to studying corporate social responsibility (CSR). We actively participated in or organized CSR training and strengthened communication with CSR research institutes. We also took part in numerous CSR research projects and had a hand in the compilation of basic training and teaching materials related to ESG (Environmental, Social and Governance). In addition, we carried out a variety of CSR assessments and performance appraisals and collected excellent CSR practices from our stakeholders for 15 consecutive years to constantly enrich our CSR practices.

Stakeholders	Expectations and concerns (top 5) ¹	Channels for communication and feedback
 Customers	<ul style="list-style-type: none"> • Network, information security, and privacy protection • Service quality and customer rights protection • Network quality assurance • New infrastructure construction • R&D and innovation 	<ul style="list-style-type: none"> • Customer Reception Day • 10086 hotline • New media such as Weibo and WeChat • Online and mobile customer service platforms <p>Customer Satisfaction Survey Mobile App CEO Mailbox</p>
 Employees	<ul style="list-style-type: none"> • Employee rights protection • Employee growth and development • Humanistic care for employees • Network quality assurance • Service quality and customer rights protection 	<ul style="list-style-type: none"> • Employee Representative Conference • Regular training • Performance communication mechanism • MMS Magazine Mobile Weekly <p>Employee evaluation mechanism Employee complaint mechanism CEO Mailbox</p>
 Shareholders and investors	<ul style="list-style-type: none"> • New information service system • Business ethics and anti-corruption • Corporate governance and risk control • Promoting regional development • Supporting rural revitalization 	<ul style="list-style-type: none"> • Annual reports, interim reports, and announcements • General meetings of shareholders • Investor meetings
 Value chain partners	<ul style="list-style-type: none"> • Network, information security, and privacy protection • Network quality assurance • Service quality and customer rights protection • Responsible supply chain management • R&D and innovation 	<ul style="list-style-type: none"> • Procurement activities • Supplier's web portal, service site and hotline • Training and assessment • CEO Mailbox • Forums and conferences
 Government and regulators	<ul style="list-style-type: none"> • Network, information security, and privacy protection • Network quality assurance • New infrastructure construction • Technology-based disaster prevention and relief • Supporting rural revitalization 	<ul style="list-style-type: none"> • Regular reports and communication • Specific investigations and on-site meetings • Relevant forums and information exchange activities
 Representatives from communities and environmental organizations	<ul style="list-style-type: none"> • Network quality assurance • Service quality and customer rights protection • Network, information security, and privacy protection • Actions in support of the 30-60 Decarbonization Goals • Reducing consumption of environmental resources 	<ul style="list-style-type: none"> • Community activities • Public welfare platform • Mass media • New media such as Weibo and WeChat • CEO Mailbox

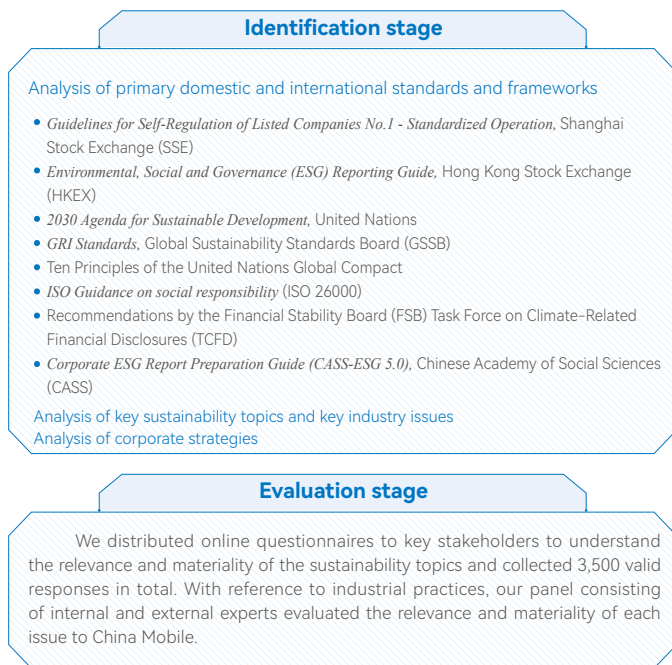
The top 5 expectations and concerns of each stakeholder group have been identified based on a 2022 stakeholder survey on key sustainability topics. The survey results can be found on page 87.

Indicators (unit)	2020	2021	2022
Number of participations in CSR training	926,288	781,393	579,131
Number of outlets hosting "CSR Communication Day"	3,504	2,929	3,800
Number of managers participating in "CSR Communication Day"	1,548	1,748	2,386
Number of customer participations in "CSR Communication Day" (10,000)	2.4	3.2	3.8

Materiality Assessment

We identify topics that are both important to our own development and highly relevant to the stakeholders from the two dimensions of “relevance and materiality to China Mobile” and “relevance and materiality to stakeholders”. We then develop issue management and disclosure strategies accordingly.

In 2022, based on various research and evaluations, we identified 25 material topics that significantly impact ourselves and our stakeholders. Based on our development progress and the latest sustainable development trends at home and abroad, we added six new topics compared with 2021, namely sustainable development management, ecosystem protection, humanistic care of employees, promoting digital intelligence inclusion, technology-based disaster prevention and relief, and promoting regional development. We upgraded “providing digital intelligence solutions” into “new information service system”, and “achieving 30-60 Decarbonization Goals goals” to “implementing 30-60 Decarbonization Goals”. No significant changes occurred in 2022 in terms of the issue boundary.



Materiality	No.	Issue	Boundary
Very high	10	Network, information security, and privacy protection	Customers; government and regulators; representatives from communities and environmental organizations
	6	Network quality assurance	Customers; value chain partners; government and regulators; representatives from communities and environmental organizations
	11	Service quality and customer rights protection	Customers; government and regulators; representatives from communities and environmental organizations
High	8	New infrastructure construction	Customers; government and regulators; value chain partners; representatives from communities and environmental organizations
	7	R&D and innovation	Customers; government and regulators; value chain partners
	9	New information service system	Customers; government and regulators; value chain partners; representatives from communities and environmental organizations
	4	Business ethics and anti-corruption	Employees; government and regulators; value chain partners
	22	Supporting public welfare and charity	Customers; representatives from communities and environmental organizations
	12	Implement 30-60 Decarbonization Goals	Customers; employees; government and regulators;
	3	Sustainability management	Customers; government and regulators; value chain partners; representatives from communities and environmental organizations
	23	Technology-based disaster prevention and relief	Customers; government and regulators; value chain partners; representatives from communities and environmental organizations
	21	Supporting rural revitalization	Customers; government and regulators; representatives from communities and environmental organizations

Materiality	No.	Issue	Boundary
High	5	Stakeholder engagement	Customers; employees; shareholders and investors; government and regulators; value chain partners; representatives from communities and environmental organizations
	24	Promoting regional development	Customers; government and regulators; value chain partners; representatives from communities and environmental organizations
	20	Promoting digital-intelligent inclusion	Customers; government and regulators; value chain partners; representatives from
	17	Employee rights protection	Employees; value chain partners
	18	Employee growth and development	Employees; shareholders and investors
	19	Humanistic care for employees	Employees; shareholders and investors
	1	Corporate governance and risk control	Employees; shareholders and investors; government and regulators
	14	Ecosystem protection	
	15	Waste management	Customers; employees; value chain partners
	13	Reducing consumption of environmental resources	Customers; employees; government and regulators; value chain partners
	16	Responsible supply chain management	Value chain partners; representatives from communities and environmental organizations
	2	Financial performance and tax payment	Shareholders and investors; government and regulators
	Low	25	Fulfilling CSR responsibilities overseas


















Report Disclosure Indexes

HKEX ESG Reporting Guide

Aspects	General Disclosures and KPIs	Page(s)
A. Environmental		
Aspect A1: Emissions	General Disclosure: Information on the policies and 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.	51-54, 81-82
	A1.1 The types of emissions and respective emissions data.	81
	A1.2 Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tons) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	81
	A1.3 Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	81
	A1.4 Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	81
	A1.5 Description of emission target(s) set and steps taken to achieve them.	54
	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.	81
Aspect A2: Use of Resources	General Disclosure: Policies on the efficient use of resources, including energy, water, and other raw materials.	57-58, 81
	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)	81
	A2.2 Water consumption in total and intensity (e.g., per unit of production volume, per facility).	82
	A2.3 Description of energy consumption efficiency target(s) set and steps taken to achieve them.	81
	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.	82
	A2.5 Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced.	82
Aspect A3: The Environment and Natural Resources	General Disclosure: Policies on minimizing the issuer's significant impacts on the environment and natural resources.	82
	A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	82
Aspect A4: Climate Change	General Disclosure: Policies on identification and response to significant climate-related issues which have impacted, and those which may impact, the issuer.	52-54
	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.	52-54
B. Social		
Employment and Labor Practices		
Aspect B1: Employment	General Disclosure: Information on the policies; and compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	46-47
	B1.1 Total workforce by gender, employment type (for example, full- or part- time), age group and geographical region.	78
	B1.2 Employee turnover rate by gender, age group and geographical region.	78

Aspects	General Disclosures and KPIs	Page(s)
Aspect B2: Health and Safety	General Disclosure: Information on the policies; and compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	49, 79
	B2.1 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	79
	B2.2 Lost days due to work injury.	79
	B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	79
Aspect B3: Development and Training	General Disclosure: Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	47
	B3.1 The percentage of employees trained by gender and employee category (e.g., senior management, middle management).	79
	B3.2 The average training hours completed per employee by gender and employee category.	79
Aspect B4: Labor Standards	General Disclosure: Information on the policies; and compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing children and forced labor.	46
	B4.1 Description of measures to review employment practices to avoid child and forced labor.	46
	B4.2 Description of steps taken to eliminate such practices when discovered.	46
Operating Practices		
Aspect B5: Supply Chain Management	General Disclosure: Policies on managing environmental and social risks of the supply chain.	75-76
	B5.1 Number of suppliers by geographical region.	76
	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.	76
	B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	60
	B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	60
Aspect B6: Product Responsibility	General Disclosure: Information on the policies; and compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress.	77
	B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	21
	B6.2 Number of products and services related to complaints received and how they are dealt with.	21
	B6.3 Description of practices relating to observing and protecting intellectual property rights.	29
	B6.4 Description of quality assurance process and recall procedures.	21
	B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	21
Aspect B7: Anti-corruption	General Disclosure: Information on policies to prevent bribery, extortion, fraud, and money laundering and compliance with relevant laws and regulations that have a significant impact on the issuer.	73, 75
	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.	75
	B7.2 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	75
	B7.3 Description of anti-corruption training provided to directors and staff.	75
Community		
Aspect B8: Community Investment	General Disclosure: Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	39-45
	B8.1 Focus areas of contribution (e.g., education, environmental concerns, labor needs, health, culture, sport).	39-45
	B8.2 Resources contributed (e.g., money or time) to the focus area.	39-45

UN Sustainable Development Goals (SDGs)

SDGs	Practices of China Mobile	Page(s)
 1 NO POVERTY	China Mobile continuously assisted six designated counties (namely Huanan and Tangyuan in Heilongjiang, Aketao, Shule, and Luopu in Xinjiang, and Baisha in Hainan) and offered paired-up support to two counties (namely Gaize in Xizang and Maqin in Qinghai), engaging in assistance activities in 1,434 counties and villages.	35
 2 ZERO HUNGER	China Mobile built an unmanned farm machinery system based on 5G+ BeiDou high-precision positioning technology, which realized fully mechanized, precise, and unmanned farming operations, saving seeds by an average of 2kg per mu and increasing the yield by an average of 80kg per mu.	38
 3 GOOD HEALTH AND WELL-BEING	China Mobile invested RMB 13 million to provide assistance in seven provinces in 2022, including Ningxia, Qinghai, Hebei, Guangxi, and Shaanxi, conducting screening for 1,952 impoverished children and offering free surgeries to 377 impoverished children diagnosed with CHD.	42
 4 QUALITY EDUCATION	China Mobile invested RMB 8 million in the "Blue Dream" Principal Training Program in 2022 to train 1,000 rural primary and secondary school principals in 10 provinces in central and western China including Xizang, Yunan, and Inner Mongolia using the "three-stage" training pattern; invested RMB 17.3 million in the "Blue Dream" Multimedia Classroom Program in five provinces including Sichuan, Shaanxi, and Guizhou, donating 331 multimedia classrooms to 240 primary and secondary schools in 31 counties.	42
 5 GENDER EQUALITY	China Mobile prioritized the protection of female employees' rights and interests, implementing the "Heroines' Contribution" campaign to encourage female workers to actively offer advice and suggestions for the company's transformation and development and the "Defense of Heroines' Rights" campaign to improve our abilities to serve female employees and defend their legitimate rights.	46
 6 CLEAN WATER AND SANITATION	China Mobile intensified daily water management, imposing strict controls on wastewater discharge, promoting water conservation, and encouraging the adoption of wastewater recycling and reuse technologies to reduce the use of water. The water used in the Company's daily operations and production mainly came from municipal water supply, and there was no water resource risk.	82
 7 AFFORDABLE AND CLEAN ENERGY	With a focus on the two areas of power generation from clean energy and intelligent distribution network, China Mobile created application scenarios such as 5G Intelligent Patrol Inspection, Three Automated Remotes for 5G Distribution Network, 5G Distribution Network Differential Protection, and 5G Intelligent Power Distribution Room. This helped power plants reduce the manpower needed and realize unattended operations while enabling highly automated power distribution which provided added reliability of power supply, and was a step forward for the power industry in digital intelligence transformation. We utilized our strengths as a telecom operator and co-compiled the 5G Virtual Private Networks for Electric Power White Paper: Network Security, in which we proposed a feasible and credible solution for ensuring the security of 5G virtual private networks for electric power.	15
 8 DECENT WORK AND ECONOMIC GROWTH	China Mobile established a diversified career development system, providing employees with broad prospects and well-established development channels to support their career growth. In 2022, we issued the China Mobile Standard Position Database (2022), which improved and optimized 283 non-managerial standard job positions to ensure that our employees' abilities and talents were best aligned with their positions so that they could utilize their potential to the fullest.	48
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	China Mobile thoroughly implemented the national "dual gigabit" network plan, refined the gigabit deployment strategy and promoted pipeline coverage by category in response to customers' needs in the market; prioritized platform capability building and set up ports by demand, enhancing the end-to-end network capabilities of our household broadband and creating a gigabit broadband boutique network connecting thousands of households.	09
 10 REDUCED INEQUALITIES	Caring deeply about special groups, China Mobile's "AndMessage" continuously invested in the field of accessible communication to address the communication needs of hearing-impaired people; we developed accessible calling products and established the "AndMessage" dedicated accessible zone; applied 5G + AI technology to create a new calling experience that offered speech-to-text and text-to-speech services during calls for hearing-impaired individuals to further address the communication difficulties they faced in their daily lives.	33
 11 SUSTAINABLE CITIES AND COMMUNITIES	China Mobile developed the "Harmonious Community", the OneZone Smart Community, and Andlink focused on urban communities to create "Four-Smart" communities with smart property management, smart owner homes, smart governance, and smart business in surrounding areas. The projects were designed to bring residents greater convenience and happiness. By the end of December 2022, they had been adopted in more than 112,000 residential communities across 31 provinces (municipalities and autonomous regions), positively impacting the life of over 16 million people.	22
 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	China Mobile instituted mandates for copyright, edition number, security audits of content, real-name authentication, and an adolescent anti-addiction mechanism on our 5G cloud game platform and took concrete actions to ensure that instances of non-compliance that could compromise the health and safety of minors when using the products and services were kept to a minimum and effectively addressed.	25
 13 CLIMATE ACTION	China Mobile kept pushing forward the "C ² Three Energy - China Mobile Carbon Peaking and Carbon Neutrality Action Plan" guided by the 30-60 Decarbonization Goals. With "energy conservation, clean energy, and empowerment" as the main course of action and green networks, green energy consumption, green supply chain, green office, green empowerment, and green culture as the paths of implementation, we continuously embedded green and low-carbon development into all aspects of our production and operating activities.	51
 14 LIFE BELOW WATER	China Mobile built and deployed an array of intelligent networks for prevention and control and supervision by virtue of breakthrough 5G technologies. Through intelligent image recognition technology, we achieved illegal fishing monitoring, early warning of violations along the shorelines of river and lake waters, sand excavation management, monitoring of floating objects on the river, and ecological flow monitoring of the river. With these efforts, we achieved 24/7 and all-round real-time monitoring, provided the local fishery administration with effective tools to manage the rivers and lakes and nipped the illegal and criminal acts in the bud, thereby contributing to the fishing ban and the environmental protection in the Yangtze River.	63
 15 LIFE ON LAND	China Mobile employed 5G+VR technologies to monitor the living environment, quantity, population distribution, and other key information of white storks in real time, thus assisting relevant departments to identify new ways to conserve oriental white storks.	63
 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	We have set up the Sustainability Steering Committee and built a three-level sustainability management framework comprising "decision-making, organization, and implementation", which enables the in-depth involvement of top leadership, horizontal coordination, and vertical collaboration. The Sustainability Steering Committee is responsible for overall decision-making, the Office takes charge of management, and the specialized departments and subordinate units implement specific tasks. With clearly defined responsibilities and division of labor, China Mobile carried out sustainability efforts in an effective manner.	69
 17 PARTNERSHIPS FOR THE GOALS	China Mobile worked to maximize the value of platforms, actively stepping up big data-based cooperation by opening up platforms, ecosystems, and portals based on the Wutong Big Data platform, thus giving full play to the value of data as new growth drivers.	13

GRI Content Index

Note	China Mobile has prepared this report with reference to the GRI Standards, covering the period between January 1 and December 31, 2022.
GRI 1	GRI 1: Foundation 2021

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2-15	Conflicts of interest	N/A
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2-18	Evaluation of the performance of the highest governance body	66
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GRI 3: Material Topics 2021		
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GRI 202: Market Presence 2016		
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GRI 203: Indirect Economic Impacts 2016		
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GRI 204: Procurement Practices 2016		
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GRI 205: Anti-corruption 2016		
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GRI 302: Energy 2016		
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GRI Content Index

GRI Standards	Disclosures	Page(s)
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302-5	Reductions in energy requirements of products and services	81
GRI 303: Water and Effluents 2018		
303-1	Interactions with water as a shared resource	82
303-2	Management of water discharge- related impacts	82
303-3	Water withdrawal	82
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GRI 304: Biodiversity 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	63
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GRI 305: Emissions 2016		
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GRI 306: Effluents and Waste 2020		
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GRI 308: Supplier Environmental Assessment 2016		
308-1	New suppliers that were screened using environmental criteria	60
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Governance: Disclose the organization's governance around climate related risks and opportunities	
a) Describe the board's oversight of climate-related risks and opportunities	52
b) Describe management's role in assessing and managing climate-related risks and opportunities	52
Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material	
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	53
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	53
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario	53

Recommended Disclosures	Page(s)
Risk Management: Disclose how the organization identifies, assesses, and manages climate-related risks	
a) Describe the organization's processes for identifying and assessing climate-related risks	52
b) Describe the organization's processes for managing climate-related risks	52
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	52
Metrics and Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material	
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	53
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	53
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	53



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