

# Digital Intelligence Innovation

China Mobile actively grasps the wave of technological development, aiming to become a world-class information services and sci-tech innovation enterprise and a leading force behind China's leapfrog development of science and technology, making active contributions to the building of "Cyberpower" and "Digital" China. The Company continuously advances the "5G+" plan and embraces the "AI+" era. It constantly strengthens its network infrastructure capabilities, enhances the breakthrough of key core technologies, and innovates to build new infrastructure for emerging business scenario needs. By strengthening industrial and supply chain cooperation, continuously improving comprehensive security capabilities, and enriching and expanding new industries, new formats, and new models in information services, China Mobile aims to construct a new information service system, continuously empowering the digital transformation of production methods, lifestyles, and social governance.



**Leading New Information Services**



**Empowering a Digital-Intelligent Future**



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# Leading New Information Services

China Mobile is deepening the construction of new types of information infrastructure, systematically creating new types of information infrastructure with a focus on 5G, computility network, and integration platform. By actively leveraging the advantages of technological innovation, it solidifies the foundation for the digital transformation of the economy and society, effectively promoting the digital transformation and sustainable development of the entire society.

## Building a Leading Experience with “Dual Gigabit” Connection

The dual gigabit network 5G and gigabit optical networks provides users with gigabit access capabilities, whether they are on a mobile or a wireline network. It features ultra-high bandwidth, ultra-low latency, and advanced reliability, forming an integral part and the foundation of new infrastructure. China Mobile is building a high-quality “dual gigabit” network centered on user experience, continuously improving network quality, and providing high-quality network support for a diverse range of business applications.



### 5G Network

The Company is guided by customer needs and investment returns in forging our high-quality 5G network and expanding the construction and deployment of 5G network. Throughout the year, 480,000 new 5G base stations were added, bringing the total number of its 5G base stations to more than 1.94 million, including 620,000 700MHz 5G base stations. The 5G network now covers all prefecture-level cities and county urban areas nationwide, and has achieved effective general coverage of key locations, major parks, and popular areas in China.

Has built the **world's largest** 5G network.

Leading overall mobile network quality satisfaction rate of **83.85**, which maintains a leading advantage of 1.28 pp than the industry.

Proportion of 5G low-reception areas decreased by about **1.50 pp** from the end of 2022.

5G network offloading ratio was about **51.63%**.

Overall 5G time spent ratio was around **94.28%**, up by 7.56 pp from the end of 2022.



### Gigabit Network

The Company precisely constructs gigabit capabilities catering for different scenarios, prioritizing on the deployment of Passive Optical Networks (PON) in gigabit communities, expanding pipeline coverage to support precise marketing, and simultaneously improving resource efficiency and investment returns. By the end of 2023, 100% of Optical Line Terminals (OLT) in urban areas of cities and counties had gigabit platform capabilities.

Household pipeline covers over **640 million households**, among which gigabit broadband covers **390 million households**.

Household broadband user disconnection time kept within one minute, with an average satisfaction score of **77.08** for overall household broadband internet quality, up by 2.42 pp year-on-year.

Industry-leading activation time for dedicated lines and 5G dedicated networks, with an overall dedicated line network satisfaction score of **97.49**, up by 0.92 year-on-year.

Business broadband network satisfaction score was **96.23**, up by 1.37 year-on-year.

Optimized networks in **117,300** communities, provided “one household, one file” quality optimization service to **3,379,800** customers.

Supported gigabit service installation for **18,652,000** households in total during the year.

**Steadily Advancing the Commercial Deployment of 5G Lightweight (RedCap)**

5G lightweight (RedCap, short for Reduced Capability) technology forms a crucial foundation for achieving interconnectivity among people, machines, and objects with 5G. It not only inherits the characteristics of 5G network slicing and low latency but also features low cost and low power consumption, playing a positive role in constructing new IoT infrastructures.

In 2023, the Company launched the 5G lightweight (RedCap) “1+5+5” innovation demonstration cities, leading the industry in completing the most extensive, most comprehensive scenario, and most comprehensive industry RedCap end-to-end compatibility tests, driving more than ten manufacturers from end-to-end to have commercial capabilities.

5G Lightweight (RedCap) “1+5+5” Innovation Demonstration Cities

**One Industrial Cluster Innovation Center:** Relying on China Mobile’s IoT Open Lab and end-to-end product capabilities, to provide ecosystem partners with 5G Lightweight (RedCap) testing, verification, result transformation, and application promotion services.

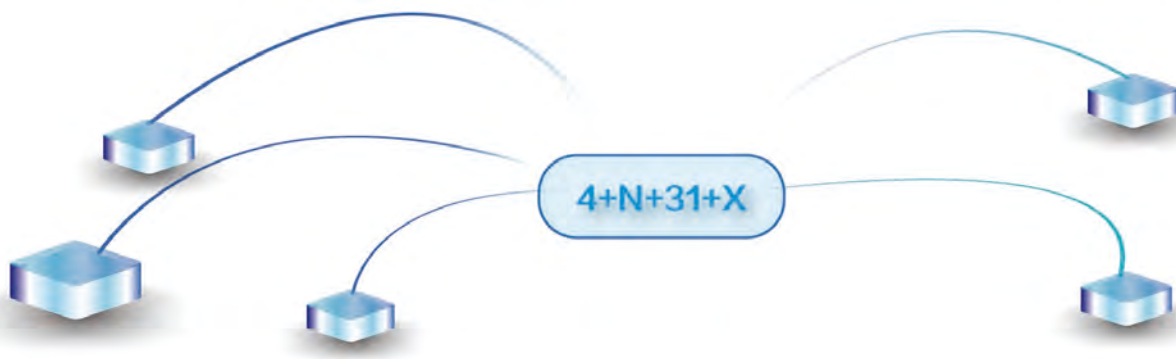
**Five Technological Innovation Cities:** Constructing 5G RedCap experimental demonstration networks in Shanghai, Guangdong Guangzhou, Zhejiang Ningbo, Hunan Yueyang, and Hubei Shiyan to conduct trials of new technologies and products, accelerating the mature commercial use of networks, chips, modules, and terminals.

**Five Application Demonstration Cities:** Developing a series of 5G RedCap benchmark projects such as Zhejiang Hangzhou’s Vision City, Jiangsu Suzhou’s Industrial City, Fujian Ningde’s Maritime City, Zhejiang Ningbo’s Park City, and Guangdong Shenzhen’s Innovation City, leading industry application innovation.

## Boosting the Integrated and Unified Computility Network

Computility refers to the capability of processing data, measured by the number of operations a device can perform per second—the more operations, the stronger the computility. Computility has become a crucial public infrastructure, representing the core productivity of the digital-intelligent economy era and the foundation for the entire society’s digital-intelligent transformation. With the rapid increase in demand for computility, China Mobile proposed the new concept of computility network in 2021. Centered around computing and based on the network, it deeply integrates “network, cloud, data, AI, security, edge, terminal, and blockchain” to provide integrated task-oriented services. It is characterized by collaborative, intensive and inclusive computility, and connects dispersed computing nodes into a comprehensive ubiquitous computing cluster through the network. This setup allows users to access any type of computing resources from any location as easily as turning on a tap. It iterates on big data and artificial intelligence capabilities, making computility a public service that is as accessible on-demand as water or electricity, aiming to achieve the vision of “ubiquitous networks, ubiquitous computility and ubiquitous intelligence”. Through relentless efforts, the computility network has become national strategic direction for emerging industries.

In 2023, China Mobile embedded the national “Eastern Data and Western Computing” strategy in its construction of the computility network, furthered the “4+N+31+X”<sup>1</sup> data center layout, promoted the cross-regional, cross-level, cross-kernel, and cross-entity integration and development of computility, and piloted a three-tier computility latency circle of approximately 20 milliseconds nationwide, 5 milliseconds within provinces, and 1 millisecond within cities. It built the largest single intelligent computing center among domestic operators and advanced the construction of 11 intelligent computing center regional nodes, providing large-scale training services to the entire network. By the end of 2023, the total computility reached **8 EFLOPS**, and the scale of cloud servers reached **924,000 units**.



1: “4” refers to the high-availability clusters deployed in the four core regions of Beijing-Tianjin-Hebei, Yangtze River Delta, Greater Bay Area, and Chengdu-Chongqing; “N” refers to the low-cost computing clusters planned within the data center clusters of the western computing hubs and the central nodes planned and deployed in key provinces; “31” refers to the mobile cloud resource pools distributed across all 31 provinces of China; “X” refers to the multiple edge computing nodes in various cities and towns.

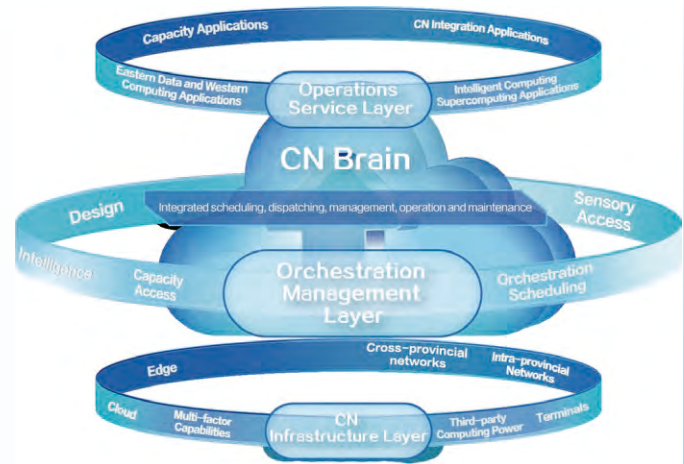
**Highlight**

## Breakthroughs in Key Technologies of Autonomy Computility Network

### Building the “CN Brain”, Promoting the smart operation of the Computing Network

As the intelligent hub of the computility network, the CN Brain is the core system for the unified orchestration, scheduling, management, and maintenance of computility and network resources. Upwards, the CN Brain can support the combination of atomic capabilities across various fields and the integration of computing and networking services. Downwards, it enables the cross-layer and cross-regional integration of ubiquitous computility and the cross-regional and cross-disciplinary connectivity of the network.

In 2023, China Mobile built the industry’s first CN Brain, achieving maximum computility supply, data processing, network connectivity, and business supply capabilities in the computility network. The CN Brain holds the four powerful tools and pioneers a new task-oriented service model for computing and networking, driving another leap in the capabilities of the computility network.



#### Computility On-Demand Distribution

General computility, intelligent computility, supercomputility, and quantum computility, including both proprietary and third-party resources, are pooled into a network. Based on user demands, computing tasks are distributed as needed, achieving global optimal matching and precise scheduling.

#### Security Collaborative Protection

A unified architecture oriented towards computing and networking security is constructed, enabling real-time perception of the security resource pool usage. Combined with business security needs, it supplies security resources on demand, erecting a solid barrier for data security.

#### Network Connection On-Demand

Relying on the SRv6 traffic engineering capabilities of the mobile cloud dedicated network, dynamic and flexible scheduling of network resources is achieved through an intelligent routing engine. Combined with express data capabilities, it enables on-demand network bandwidth usage, providing businesses with deterministic and elastic network transmission capabilities.

#### CN Integrated Scheduling

The computing and networking security orchestration and scheduling center is established, creating capabilities for computing and network security domain awareness, integrated fusion scheduling, and collaborative orchestration control. It coordinates both demand and supply, achieving the best match between business requirements and resource supply, and offers inclusive, secure, and green computing services.

By the end of 2023, the CN Brain has been trialed for commercial use nationwide, facilitating three minute-level changes to support 115 types of CN services such as “Eastern Data and Western Computing”, intelligent and smart computing, and express data delivery. It has been applied in areas like large-scale data disaster recovery storage, film and television rendering, astronomy, and pharmaceutical R&D. Building on the foundation of the CN Brain, China Mobile has developed the BaiChuan computing force grid platform, in collaboration with National Supercomputing Centers and leading industry cloud vendors. This effort integrates a broad spectrum of societal computility, including general-purpose computing, AI computing, supercomputing, and quantum computility, amounting to a total capacity of over 3.3 EFLOPS.

### Promoting the construction of backbone networks, and accelerating the realization of convenient ubiquitous computility services

The Company increased the deployment of 200G and above optical transport network (OTN) systems in the inter-provincial backbone transport network, and built the world’s first large-scale inter-provincial backbone 400G OTN network, which covers 86% of regional/provincial data centers.

#### Minute-Level Presentation

Offers a minute-level granular panoramic view of computility, storage capacity, transport capacity, and capabilities, including both China Mobile’s own computing resources across all 31 provinces, autonomous regions and directly-administered municipalities of the country and societal computing resources.

#### Minute-Level Resource Scheduling

Achieved minute-level activation, billing, and scaling of CN resources, innovating task-oriented services such as express data delivery. By the end of 2023, nearly ten million resources were scheduled between the East and West every minute.

#### Minute-Level Task-Oriented Application Development

Developers can easily utilize over 2,100 atomic capabilities made available by the CN Brain and develop an “Eastern Data and Western Computing” application within 10 minutes.

## Developing an Open and Shared Integration Platform

The integration platform is an innovative digital infrastructure that organically integrates data and technology elements to intelligently and efficiently serve business needs. Internally, the integration platform reduces costs, increases efficiency, and enhances quality, creating a positive cycle among internal resources, product services, and user demands. It injects intelligence into various aspects of production, operation, management, and service. Externally, it facilitates cooperation, mutual benefits, and intelligence empowerment, supporting social-wide, multidimensional data collection, big data analysis, and real-time data processing in society, thereby accelerating the digital-intelligent transformation of the economy and the society.

China Mobile has pooled high-quality internal and external capabilities and high-value data, leveraged its resources and integrated its high-quality capabilities in areas such as big data, artificial intelligence and blockchain that have been developed over the years. This consolidates into a unified capability view, establishing an open “Ability as a Service” (AaaS) integration platform service system unique to China Mobile.

### ※ Innovating the Creation of a New Infrastructure for the Integration Platform

By the end of 2023, the AaaS integration platform has launched over 1,000 capabilities in a variety of fields, including basic telecommunications, big data, artificial intelligence, security, and high-precision positioning. In 2023, it responded to more than 580.71 billion calls from both internal and external users, continuously bringing efficiency and benefits of innovation across the society.

#### Features of China Mobile Integration Platform (AaaS)

### A Balanced Approach to “Building + Operation + Application”

Driving structural reforms on the supply of information services

- ✓ Consolidation and Reuse of Capabilities
- ✓ Coordination and Collaboration
- ✓ Institutional Protections

### Internal + External Empowerment Digital-Intelligent Transformation and Empowerment

Contributing to the digital-intelligent transformation

- ✓ Internal and External Applications
- ✓ Complementary Capabilities
- ✓ Harmony and Synergy

数智能力+    生态开放+

规模效能+    融合创新+    泛在联接+

### “Hard + Soft” AaaS Capability Service System

Fostering flexible production relationships within enterprises

- ✓ Unified Operations
- ✓ Centralized Processing
- ✓ Physical Segregation

硬	软
CT能力	规范标准
IT能力	组织
DT能力	文化
	课程

Highlight

## Building the “Jiutian” General + Industry Large Model System

Artificial Intelligence (AI) technology is becoming a key driver of social and economic development nowadays, playing a vital role in enhancing production efficiency, driving technological innovation, and optimizing resource allocation. China Mobile has boldly taken on the responsibility of developing strategic new AI industries. Its layout in the field of AI began in 2013 with the establishment of the “Jiutian” AI team at the China Mobile Research Institute, focusing on breakthroughs in AI applications such as intelligent customer service and big data analysis.

A decade of dedication has yielded fruitful results. In 2023, centered around the original systematic AI technology system, China Mobile has constructed a comprehensive general + industry large model system, achieving full-chain core technology control and independent innovation in the domain of large model.

### General Large Model

Developed the Jiutian general-purpose foundational language large model suitable for a wide range of scenarios, with training data exceeding two trillion Tokens. It integrates specialized knowledge from eight major industries, including telecommunications, energy, steel, construction and transportation, featuring supply-side enhancement, continuous training, security and controllability, and flexible deployment across cloud, edge, and terminal environments. In 2023, based on the Jiutian general language foundational large model, the “Jiutian · Zhongqing Base Large Model” was launched with the support from several leading and key enterprises.



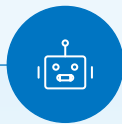
### Industry Large Models

Developed over 20 industry-specific large models, including Jiutian · Customer Service, Jiutian · HaiSuan Government Affairs, Jiutian · Network, Jiutian · Enterprise Communication, and Jiutian · Chuanliu Travel. Some of these models have already been applied in commercial use such as digital government and customer service.



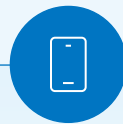
### Jiutian · HaiSuan Government Affairs Large Model Brings Efficient Governance Experience

In 2023, the Jiutian · HaiSuan Government Affairs Large Model was implemented in the digital government construction project of Heilongjiang Province, bringing an efficient governance experience to the local government.



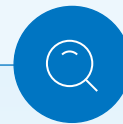
#### Government Big Screen Assistant

Interacts with users in the form of a virtual human, converting users' natural language into machine query language and vividly presenting real-time query results to users.



#### Intelligent Government Assistant

By adding conversational service capabilities to intelligent customer service, the government assistant's comprehension rate for complex questions increased by 45%, and the effectiveness of answers and the degree of personification improved by 17% and 24% respectively.



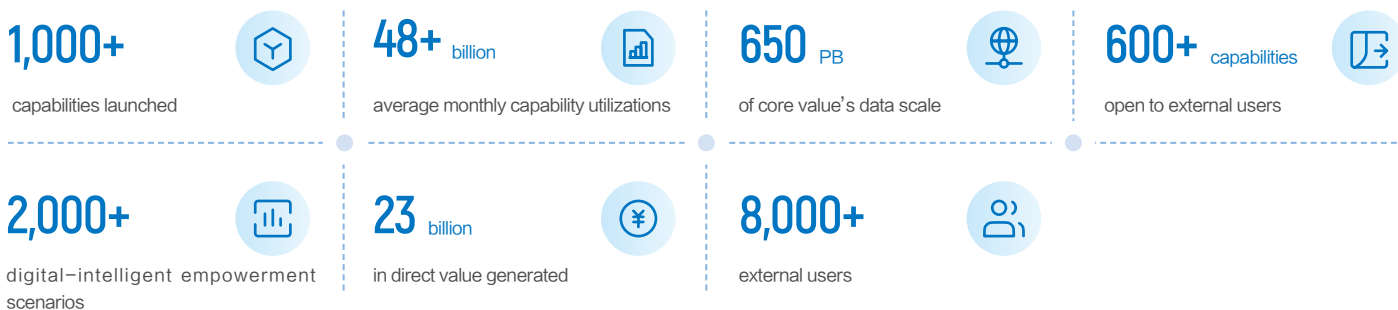
#### “LongZheng ZhiSou” Engine

Aggregates and creates an index for government data from various regions and departments across the province, and provides intelligent search services, allowing users to look up data as needed anytime, anywhere.

## ※ Establishing an Integrated and Open “Capability Supermarket”

To foster better integration and sharing on the integration platform, China Mobile leverages “AI+” to integrate production elements across the platform, and continuously enhances the level of intelligence and creativity of its capabilities. It has established a “Capability Supermarket” as a one-stop entrance to a suite of services, including “Efficient + Intelligent” capability guidance, service subscription, cooperation and exchange, and a “Central Kitchen” sharing model, all in a “what-you-see-is-what-you-get” experience.

The “Central Kitchen” caters for developers and users, enabling a one-stop capability application service system that offers unified packaging and flexible utilization of capabilities through the approach of “setting up the kitchen, preparing the kitchenware, and gathering ingredients”. Furthermore, it empowers partners to use capabilities more freely and create rich applications with higher quality and efficiency.



### “Wutong” Big Data Benefit Product Formation

In 2023, the Company refined its big data products and services, creating 10 benefit-driven products around three key areas: risk control, outreach, and insight, thus unlocking the value of essential elements.

#### “Wutong” Risk Control Products

Focused on multiple business scenarios such as financial lending, risk assessment and insurance risk control, providing banks, insurance companies and other financial institutions with scenario-based intelligent risk control services. By the end of 2023, these products had been called upon more than 1.6 billion times.

#### “Wutong” Outreach Products

Directed at governments and enterprises, offering services such as cultural promotion, precise recommendations and online advertising. In 2023, these products connected with over 50 mainstream internet media outlets, achieving over 1.5 billion exposures.

#### “Wutong” Insight Products

Intended for governments and enterprises, providing group insight analysis and monitoring services.

For example, during major holidays, the “Wutong” Insight Products supported the China Central Television News Center in launching a series of cultural and tourism reports focused on cultural tourism. Integrating authoritative data from the China Earthquake Networks Center and the National Meteorological Center, these products assisted the government in rapidly and accurately responding to emergencies such as earthquakes and floods.



Supporting the China Central Television (CCTV) News Center in reporting the development of tourism during the May 1st and other holidays.

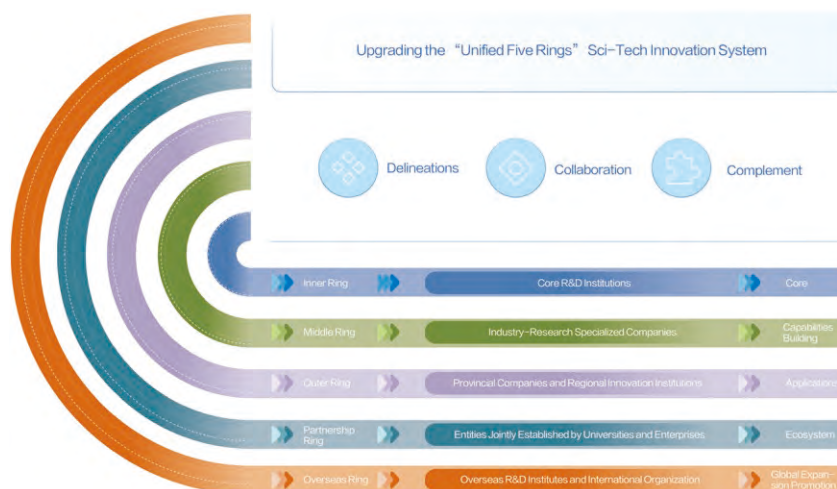
## Constructing a Cutting-Edge and Leading Sci-Tech Innovation Highland

China Mobile has stepped up as a pivotal force in turning China into a technologically advanced nation. By leading the way in developing a modern industrial ecosystem, it has fostered a collaborative environment that encourages various innovators within the industry to work together towards common goals. This collective effort is crucial in propelling China towards greater technological independence and strength.

### ※ Upgrading to the “Unified Five Rings” Sci-Tech Innovation System

In 2023, the Company continued to refine its science and technology innovation system, upgrading from the “Unified Four Rings” to “Unified Five Rings” overall strategy for scientific and technological innovation. A new international cooperation sphere was added to further strengthen open cooperation with the international industry, adopting an open-minded approach to technical exchanges and joint problem-solving.

The Company focuses on fostering a strong culture of scientific and technological innovation, aiming to set a benchmark as a leading enterprise science and technology association. By the end of 2023, it established 43 sci-tech association branches, 11 sci-tech association divisions, and 4 sci-tech association zones, with over 200,000 members. Additionally, it organized 530 Sci-Technology Workers’ Day, Sci-Technology Week, and other activities, reaching over 7 million people both online and offline.



### Upgrading the “10<sup>1</sup>-10<sup>2</sup>-10<sup>3</sup>-10<sup>4</sup>” Partnership Initiative

To further promote chain strengthening, supplementation, enhancement, and shaping, and to accelerate the construction of a cooperative and win-win industrial chain community, in 2023, the Company upgraded the “10<sup>1</sup>-10<sup>2</sup>-10<sup>3</sup>-10<sup>4</sup>” partnership initiative to help improve the country’s industrial basic capabilities and modernization levels.

**Jointly promote the upgrade to industrial layout to accumulate developmental potential.** Strengthen industrial layout, focus on expanding sub-chains such as artificial intelligence, security, vehicular networks, and the metaverse; establish an international chain working group, strengthen the Global TDD Initiative (GTI) international industrial cooperation platform, “import” international industrial capabilities and innovations, and drive the global expansion of “10<sup>1</sup>-10<sup>2</sup>-10<sup>3</sup>-10<sup>4</sup>” partners.

**Jointly promote the upgrades to resources allocation to boost development.** Set up a special research budget for strategic emerging industries, advance breakthroughs in innovative technologies; increase investment in digital infrastructure and promote the common development of the industrial chain.

**Jointly promote the upgrades to industry-investment coordination to enhance development efficiency.** Focusing on strategic emerging industries, core technologies and key links, promote the specialized integration of the industrial chain through equity investment; providing favorable services by upgrading special industrial chain financial products for “10<sup>1</sup>-10<sup>2</sup>-10<sup>3</sup>-10<sup>4</sup>” partners.

**Jointly promote the upgrades to base facilities to gather development force.** Accelerate the implementation of the 1+3+N<sup>1</sup> collaborative innovation base planning and layout, expand the China Mobile International Information Port main node to the Yangtze River Delta, Chengdu-Chongqing and Guangdong-Hong Kong-Macao Greater Bay Area regional nodes, layout provincial center battlefields nationwide, and fully support upstream and downstream R&D cooperation, innovation incubation and cluster-building along the industrial chain.

By the end of 2023, the “10<sup>1</sup>-10<sup>2</sup>-10<sup>3</sup>-10<sup>4</sup>” partnership initiative had gathered more than 1,300 chain-linked enterprises and formed a new industrial cooperation pattern led by central enterprises with wide participation from large, medium and small enterprises, and a cooperative and win-win industrial chain community began to take shape; laid out 14 sub-chains such as mobile communications and computility networks, distilled 99 key common industry-demands such as integrated sensing, storage-computing integration and Beidou integrated positioning; innovated “geese flying” collaborative problem-solving mode, forming 102 squads, achieving a series of breakthroughs; leading 5G technology evolution, tackling computility routing, hollow core fibers and other original technologies, achieving multiple industry firsts.

1. The 1+3+N collaborative innovation base planning and layout includes “1” Beijing International Information Port central main node, “3” Yangtze River Delta, Chengdu-Chongqing and Guangdong-Hong Kong-Macao Greater Bay Area regional center sub-nodes and “N” provincial company battlefields.



## ※ Launching the “BASIC6” Sci-Tech Innovation Plan

The Company positions sci-tech innovation as a key lever for building core competitiveness and enhancing its essential capabilities. It has launched the “BASIC6” Sci-Tech Innovation Plan targeting six strategic areas to accelerate the growth of strategic emerging industry clusters.





### Leading the 6G Innovation System

In 2023, the Company systematically accelerated 6G research and development, hastening the creation of original technology source for the next generation 6G mobile services.

**Actively Integrating into the National 6G Innovation System:** The Company undertook the significant responsibility of being the future industry and next-generation mobile communication technology originator for 6G, holding various leadership positions in the IMT-2030 (6G) promotion group, and being the enterprise with the highest number of leadership roles in the “National Key R&D Program” related to 6G.

**Breakthroughs in Core Technologies:** The Company made significant contributions to the 6G framework proposal by the International Telecommunication Union (ITU) and the Next Generation Mobile Networks (NGMN) 6G position statement; tackling more than 10 key technologies including novel network architectures and integrated communication perception, and proposing the world’s first systematic 6G network architecture. The “Air Interface AI Theory and Technology” was recognized as one of the top ten major technological advancements in the field of information and communication by the China Institute of Communications in 2022; jointly released over 10 prototype samples, with patents, papers, and other 6G innovative achievements ranking among the top global operators.

**Enhancing Collaborative Innovation:** In partnership with state-owned enterprises and industry-academia-research collaborators, we have developed a crowd-sourced, open 6G sensory computing fusion (crowd-sourced) R&D test apparatus. The released version 1.0 has established over 30 open capabilities, attracting 24 “crowd-sourced” partners to join our team. We have constructed a “8+2+1+1” systematic 6G collaborative innovation base, infrastructure, and experimental environment, including 8 technology R&D labs, 2 sets of infrastructure environments, 1 end-to-end testing system, and 1 globally leading 6G test network. This setup provides crucial scientific experimental devices and end-to-end network connectivity capabilities, collaborates with partners across the industrial chain, and fosters an independent and controllable 6G industry and application ecosystem.



### Leading the Deployment of Integrated Space-Air-Ground Networks

The integrated space-air-ground network is a crucial component of the intelligent comprehensive digital information infrastructure, with Non-Terrestrial Networks (NTN) representing a hallmark technology of 5G-Advanced (5G-A) and a foundational technology for the 6G architecture. In 2023, the Company made continuous contributions in the field of integrated space-air-ground technology, achieving several global firsts.

**Low Earth Orbit (LEO) Satellite Internet:** Developed the **world’s first** satellite base station prototype system based on the 3GPP R17 NR NTN international standard and the **world’s first** satellite 5G-A core network prototype system, “Xingyuan”, laying the groundwork for the **world’s first** integrated space-ground on-orbit validation system. Completed the **world’s first** mobile direct-to-satellite broadband trial and the **world’s first** satellite core network for mobile direct-to-satellite connectivity trial based on the 3GPP R17 NR NTN international standard. Completed the **world’s first** interoperability trial between a real low-orbit broadband satellite and a terrestrial commercial 5G network.

**High-Throughput Satellite (HTS) Internet in Geostationary Orbit:** Carried out **China’s first** 5G satellite backhaul trial and validation test based on a domestically developed satellite baseband system and a vehicular high-throughput phased array antenna, marking significant advancements in high-orbit satellite internet technology.



### Highlight

## Development of China’s First Reconfigurable 5G RF Transceiver Chip “Pofeng 8676”

In 2023, leveraging our leading R&D capabilities and our accumulated strengths in network technology, China Mobile collaborated with equipment manufacturers and chip design companies to develop China’s first reconfigurable 5G RF (Radio Frequency) transceiver chip—“Pofeng 8676”.

RF transceiver chips serve as translators between radio waves and digital signals and are key components in 5G network equipment. The research and development of RF transceiver chip is technically challenging while there is a significant and urgent demand for such chips in the industry, so it is also called as the “pearl” of 5G base stations. In 2021, the Company established a joint laboratory for chip R&D with partners. By undergoing research and development in chip design, system integration, and network application in parallel instead of progressing in a traditional, sequential manner, the Company has halved the time required for chip-to-system adaptation, and also accelerated system integration, and network application iterations, creating a closed-loop problem-solving system from chip selection to chip R&D and chip deployment. By the end of 2023, the “Pofeng 8676” chip had been integrated into equipment of several partners, filling the gap in the domestic RF transceiver chip sector and significantly enhancing the autonomy and controllability of China’s core 5G network equipment.



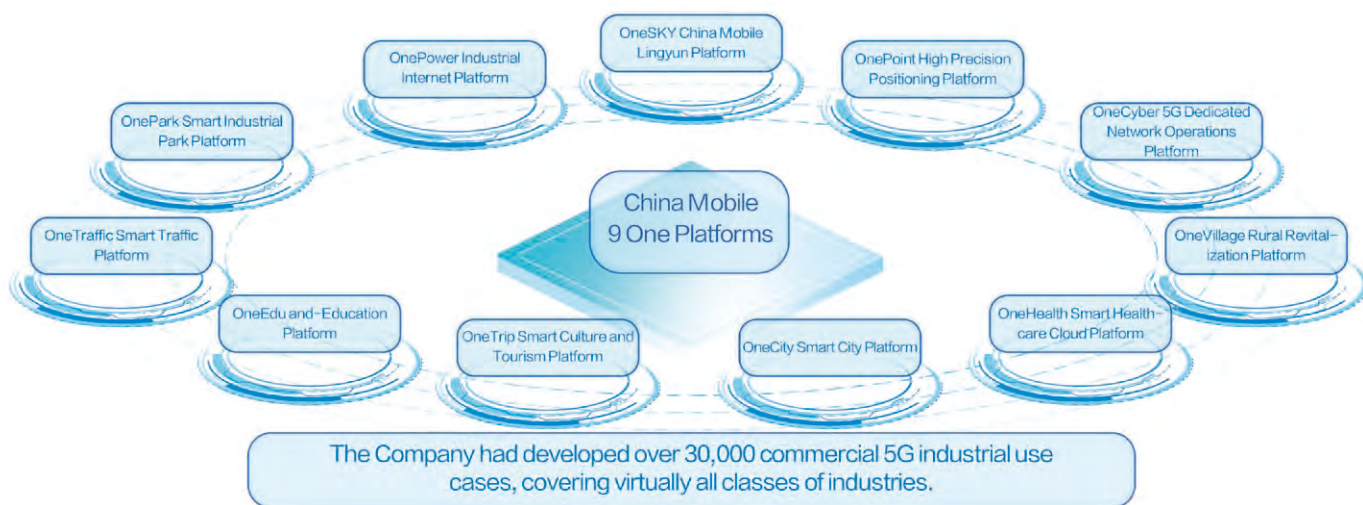
On August 30, 2023, China Mobile officially released China’s first reconfigurable 5G RF transceiver chip “Pofeng 8676”.

# Empowering a Digital-Intelligent Future

China Mobile innovatively constructs a new information services system of “connectivity + computility + capabilities”, continuously enriches digital-intelligent applications for production, life, and governance settings, produces outstanding products, innovates business models, showcases their applications, expands its scope of friends, establishes a strong barrier for secure development, deeply integrating information services across various industries and serving the public.

## Supporting Digital-Intelligent in Production

China Mobile is committed to driving the digital-intelligent transformation of all sectors of the economy, stimulating enterprises’ innovation and integrated development, and supporting the creation of a new wave of industrialization characterized by the integration of digital and physical realms, thereby strengthening and enlarging the real economy. In 2023, the Company continued to promote its self-developed 9 one Platforms, which consolidated key scenario capabilities to offer comprehensive solutions for industries, one-stop empowerment for partners and providing integrated delivery for customers.



### ※ 5G Smart Ports

Ports are crucial hubs for modern transportation. Leveraging 5G networks, high-precision positioning, and vehicle-road coordination technologies, the Company focuses on scenarios such as 5G port machinery remote control, smart tallying, unmanned horizontal transportation, and the informatization of port waterways to empower the digital transformation and upgrade of smart ports. By the end of 2023, the Company has helped with building **39** internationally-advanced 5G smart ports across **13 provinces, autonomous regions, and directly-administered municipalities**.



#### Supporting the Construction of an Innovative Smart Port Showcase at Meishan Port Area, Zhoushan Port in Zhejiang

The Ningbo-Zhoushan Port, connecting over 600 ports in more than 190 countries and regions, is an important comprehensive transportation hub on China’s southeast coast. In 2023, the Company supported the Meishan Port Area of Zhoushan Port in upgrading to a 5G smart port. Through the Company’s “four ones” 5G upgrade plan, which includes one ‘brain’ (port control brain), one ‘network’ (port 5G private network), one ‘chain’ (remote control of gantry cranes) and one demonstration zone (autonomous driving demonstration zone), enabled innovative applications of 5G such as full data collection from all production equipment and precise remote control of operations. This has reduced waiting times of gantry cranes by 17%, significantly lowered the accident rate, and supported the Meishan Port Area to become the port with the most unmanned container trucks globally. This could translated into over RMB 10 million costs savings per year and provided a replicable 5G+ smart port showcase for the transformation and upgrade of traditional ports around the world.



The Company helps the Meishan Port area of Zhoushan Port to build the smart port innovation benchmark.

## ※ 5G Smart Factories

The Company is accelerating the application of next-generation information technology in core aspects of production and operations, driving the end-to-end digital transformation of manufacturing processes. This transformation effectively enhances operational efficiency, reduces production and maintenance costs, and ensures production safety. In 2023, the Company promoted an upgrade of 5G to be more user-friendly and reliable, by setting-up specialized networks for offices, production, and industrial parks, as well as industry-specific networks to meet the demands for ultra-low latency, ultra-low jitter and ultra-high reliability networks in areas such as smart manufacturing. The OnePower Industrial Internet Platform was upgraded to offer services such as industrial learning and computation, industrial code generation, and industrial knowledge Q&A, significantly improving the level of intelligence in the contexts of quality inspection, remote monitoring, and scheduling. Leveraging large AI models as a technological foundation, the Company has developed new industrial forms such as 'industrial brains' and 'digital twins', provided more autonomous "self-driving" AI applications and solutions. These innovations facilitate the realization of the mature deployment of futuristic industrial scenarios such as large-scale customized production.

### Collaborating with the Midea Group to Create the First "5G Fully-Connected Factory" for Home Appliance Manufacturing

The 5G fully connected factory is an advanced factory that makes full use of the integration of the new generation of information and communication technologies represented by 5G to create a new industrial Internet infrastructure, build or transform production line, workshop, factory and other production sites, and form extensive connectivity of production units, deep integration of information operations, full utilization of data elements, and efficient enabling of innovative applications.

In collaboration with Midea Group, the Company has jointly built the world's largest 5G fully-connected factory at the Midea Group's third largest washing machine production base in Jingzhou, Hubei, achieving full 5G coverage across the entire park, full business 5G connectivity, and full process 5G integration. Based on the high reliability, wide connectivity and low latency characteristics of the 5G specialized network, more than 1,000 automated machines and equipment in the production workshop operate efficiently, and more than 3,500 5G customer front equipment (CPE) and other terminal equipment can realize "seamlessly connect", eliminating the complicated pipeline in the ordinary workshop. In addition, 5G signals in production equipment allow automated machines to run faster and make the production environment safer and more convenient.

By the end of 2023, the Midea factory in Jingzhou produces a washing machine every 10 seconds, with the direct shipment rate after production doubling, inventory decreasing by 50%, per-unit labor cost reducing by 30%, achieving the development goals of improving quality, reducing cost, enhancing efficiency, becoming more environmentally friendly, and ensuring safety. It has become **the most advanced and largest-scale 5G fully connected factory in the domestic appliance industry**.



### Building the World's First P-IoT Model Factory in Shandong

In 2023, in collaboration with partners, the Company established the **world's first model factory under an innovative project based on the Passive Internet of Things (P-IoT)** at the Haier's Sino-German Washing Machine Factory in Qingdao. By deploying P-IoT front ends and P-IoT tags, it has achieved full-transparency management in business scenarios such as automatic stock-takes as materials enter and leave the warehouse, locating materials in warehouse, automatic stock-takes for production line supplies and container location tracking.

### Building the First 5G Smart Factory in the Domestic Electrolytic Aluminum Industry

The Company integrates advanced technologies such as 5G, cloud computing, big data, and artificial intelligence, and through the 5G+POL dual gigabit private network, it has built an intelligent production and control industrial Internet platform for the Qingtongxia Aluminum Industry Branch of the National Power Investment Corporation Aluminum & Power Company (referred to as "Qing Aluminum Branch") located in Ningxia. In August 2023, the control center of Qing Aluminum Branch officially began operations, becoming **the first 5G smart factory in the domestic electrolytic aluminum industry**. In the 5G smart factory of Qing Aluminum Branch, information technology not only connects the entire production and operation process, realizing interconnectivity from design, production to sales, but also reduces manual intervention in the production line, improves the controllability and safety of the production process, and pioneers a new pattern of digital and intelligent development in the aluminum industry.

## ※ 5G Internet of Vehicles

The Internet of Vehicles (IoV) is an emerging industry formed by the deep integration of the automobile, electronics, information communication, and road transportation sectors, applying cutting-edge technologies such as 5G, artificial intelligence, big data, cloud computing, and blockchain. The Company is the only communication operator enterprise for the construction of a powerful transportation country approved by the Ministry of Transport. In 2023, the Company actively deployed end-to-end technology and product systems for the Internet of Vehicles, conducted research and verification of key 5G IoV technologies, and developed the “Internet of Vehicles Intelligent Connected Management Platform” to assist car companies in achieving capabilities such as connection + information services + real-name registration, striving to become the “leading provider of toV information services.” By the end of 2023, it had interfaced with over **80** car companies, with an average monthly call volume of **1 billion times**, and the number of IoV connections had a net increase of more than **13 million** for the year.



### Accelerating the Commercial Deployment of 5G Internet of Vehicles

Vehicle-Road Collaboration (VRC) is a key direction in the development of intelligent transportation. By using advanced communication, sensors, computer technology, etc., it achieves comprehensive interconnectivity between people, vehicles, and roads, providing strong support for enhancing traffic operational efficiency, improving traffic safety, and increasing road usage efficiency. In 2023, to accelerate the commercial deployment of 5G Internet of Vehicles, the Company, in partnership with equipment manufacturers, completed the country's first large-scale verification of 5G Uu Internet of Vehicles, using 5G to transmit roadside and vehicle-side information. The test results show that 5G's latency, reliability, and rate are sufficient to support typical Internet of Vehicles business scenarios. In collaboration with industry partners, the Company conducted commercial application practices of autonomous driving unmanned delivery based on 5G+AI cloud-edge-end computing network collaboration in Beijing Yizhuang, shortening the AI development cycle from weeks to days, and increasing the operational speed of unmanned vehicles from 15 km/h to 25 km/h. The company participated in the construction of **4** national-level Internet of Vehicles pilot zones, **10** “Dual Smart” pilot cities (pilot cities for the collaborative development of smart city infrastructure and intelligent connected vehicles), promoted the establishment of **35** types of standards for vehicle-road collaboration, and filed **32** national patents.



China Mobile, in collaboration with partners, constructed the world's first 5G-A Internet of Vehicles demonstration route.



### World's First Integration of 5G+BeiDou for Precise Navigation in Chongqing's Jiefangbei Underground Loop

Chongqing's Jiefangbei Underground Loop is the world's first mega underground loop traffic project in a central urban area, which is described as having a “magical 8D traffic” for its intricate layout. Leveraging its **world's most extensive, widest coverage and most cutting-edge “5G+BeiDou” high-precision positioning system**, the Company pioneered an indoor-outdoor seamless positioning and navigation system, offering pinpoint accuracy just like above-ground to drivers while underground, to address their common navigation difficulties, whether it be getting lost or missing the right exit. By the end of 2023, the daily traffic volume in the Jiefangbei underground tunnel increased from 2,000 to 12,000, and the indoor-outdoor seamless positioning and navigation system has vastly improved the efficiency of the underground loop.

## ※ Digital-Intelligent Transformation of SMEs

The Company is committed to fostering the innovative development of micro-, small- and medium-sized enterprises (MSMEs), by utilizing our extensive resources to promote their digital transformation and upgrade, and to help them reduce burdens, improve quality and efficiency, and enhance market competitiveness.

**Cutting Operational Expenses for SMEs:** The Company offers discounts to reduce their telecommunication costs in operations. In 2023, there was a notable **35.08%** year-on-year decrease in average business dedicated line tariff and a **25.76%** decrease in average business broadband tariff, with a cumulative concession of **RMB 1,408 million**.

**Offering Integrated Product Packages:** The Company Strengthened the integration of business broadband, cloud and innovative products and rolled out **11 million** integrated product packages in 2023, providing information services to over **27 million** MSMEs and improving their corporate governance.



### Launching Support for Small and Micro Enterprises through the “Hello Small and Micro Enterprises, Let's Go Together” Campaign

The Company, in partnership with the Zhejiang Provincial Department of Economy and Information Technology, rolled out the “Hello Small and Micro Enterprises, Let's Go Together” campaign throughout the province. This initiative sought to empower the high-quality development of MSMEs through ecological collaboration, platform-centric services, widespread support and digital-intelligent empowerment.

# Enriching a Digital-Intelligent Life

China Mobile focuses on digital consumer needs, actively leverages the efficacy of the next-generation information technology, strengthens integrated operations, and continually enhances customers' sense of acquisition, happiness, and security.

## ※ Innovating Digital-Intelligent Product Services

In 2023, the Company upgraded distinctive products such as MIGU Video, Mobile Cloud Disk, Cloud Gaming, and Super SIM, offering a rich, diverse and high-quality selection for digital-intelligent consumption.

### MIGU Video — The Leading Platform for Sports Live Broadcasting

On the basis of providing a vast array of high-quality content including movies, variety shows, short videos, and live streams, MIGU Video continues to push forward with live broadcasts of top domestic and international sporting events, innovatively applying multiple leading video technologies and assembling a luxurious “live broadcast supergroup”. It brings a “visual feast” of exciting events to users both in China and abroad, becoming **the preferred platform for ultra-high definition viewing**. In 2023, focusing on the “four competitions, five alls”<sup>1</sup> content strategy, it developed immersive ultra-high definition audio and video original technologies, achieving 5G service quality (QoS) acceleration, commercialization of the third-generation audio and video coding and decoding technology standards (AVS3), three-dimensional Audio Vivid, ultra-high definition capabilities, and Vivid HDR imaging commercial use. The event delay time was improved to 6 seconds, reaching **an industry-leading level**.



### Super SIM Card — Enhancing Information Reach

Compared to the ordinary SIM cards, Super SIM cards have greater storage capacity, more complex encryption algorithms, and can handle more applications and functions. Based on the core capabilities of Super SIM cards, it independently innovated the differentiated “must-reach” notification service with “priority display, prominent reminder, read receipt and interaction”, which is widely used in emergency, disaster relief, public governance, and other fields. By the end of 2023, Super SIM cardholders reached **105 million**, with over **20 million** monthly active users, among which core scenario active user count reached **8.67 million**.

### MIGU Quick Game — Enjoying 5G Cloud Gaming

MIGU Quick Game is a forward-looking, new type of competitive interactive entertainment platform built on the “5G+Cloud+Edge Computing” capabilities. It integrates functions such as edge node resource activation, game resource allocation, game cloudification, video stream encoding and decoding, and game portal generation. It has become the cloud gaming platform with the richest content, the most comprehensive scenarios, and the largest user base in China. In 2023, in collaboration with partners, it launched the world’s first glasses-free 3D cloud gaming solution. Based on artificial intelligence + glasses-free 3D technology, it created the MIGU Quick Game 3D version, allowing users not only to play premium cloud games in 3D but also to watch game live broadcasts in glasses-free 3D, bringing a new multi-dimensional integrated experience to users. By the end of 2023, it had launched over **2,200** premium cloud games and had a full-scenario monthly active user base of **117 million**.

### China Mobile Cloud Disk — Smart Life and Office Assistant

Based on the Company’s technological capabilities, China Mobile Cloud Disk offers users a secure, intelligent, mobile data-free personal cloud storage services with no speed cap. In 2023, utilizing network intelligent segmentation technology, it achieved a 100% real-scenario transmission success rate, with a 66% increase in transmission speed; launched an AI zone and AI tools such as “Picture to Cartoon”, “Old Photo Restoration” and “Picture Caption Generation”; launched mounted disks, addressing users’ space anxiety.

China Mobile Cloud Disk’s all-scenario active user base reached

**190 million**

1. Four Competitions refer to the 2023 FIFA Women’s World Cup, the 2023 FIBA Basketball World Cup, the 31st FISU Summer World University Games in Chengdu, and the 19th Asian Games and Asian Para Games in Hangzhou; “Five Alls” mean covering all age groups, all genders, full-day, all CHBN (customer, home, business, new) market, full-scenario and all-form.

**Video Ringback Tone —  
New Ways to Make Calls on 5G**

Video Ringback Tone is China Mobile’s innovative service. It integrates voice calls, social attributes, short videos, music, and other diverse elements to provide users with a new audio-visual experience, and has become a “golden window” to display personal and enterprise image. In 2023, the world’s first international standard for video ringback tones led by China Mobile MIGU was approved by the ITU Telecommunication Standardization Sector (ITU-T). In addition, the Company provides one-stop copyright protection services for original online works with its 5G video ringback tone rights confirmation capability. The Video Ringback Tone Overseas initiative also opens up new imaginative space of imagination for global 5G calls users.

Total Video Ringback  
Tone users

**402** million

The annual play volume of  
Video Ringback Tone

**236.504**

billion times



**New 5G Calls —  
“Speak Face to Face”**

Using Enhanced Voice Services (EVS) codec technology, it creates ultra-clear audio and video call services characterized by “ultra-clear picture quality, stereo voice and authentic sound”. Compared to traditional calls, new 5G calls are more stable and not interrupted by incoming calls. Additionally, new 5G calls offer audio and video AI processing capabilities, enabling intelligent translation, fun calls, interactive ringback tones and other value-added applications based on video calls on existing terminals. By the end of 2023, new 5G calls have been launched for trial in **30 provinces** (autonomous regions and directly-administered municipalities), bringing a new calling experience to **more than 3 million** users.

**Cloud Computing Terminal —  
Expanding Terminal Capabilities**

Leveraging its rich resources, China Mobile has created thin terminal products with cloud computility, such as cloud phones, cloud computers, mobile cloud HD, and fat terminal products with terminal computility as the main feature, such as prosperous computility hosts, home computility hosts. Combined with the integrated computility package of connection + capabilities + applications, it provides users with flexible configuration, freely combinable cloud, computing, and terminal integrated services.



**Innovative Tech at the Asian Games Delivers a Visual Spectacle**

China Mobile MIGU, as the official broadcaster for the 19th Asian Games and Asian Para Games in Hangzhou, is dedicated to offering audiences superior ultra-HD viewing experiences for live competitions. Utilizing the latest in the third-generation audio and video coding standard (AVS3) across both MIGU Video and its Love to Watch platform, it has established dedicated zones for both on-demand content and live broadcasts. It optimizes the automatic metadata generation algorithm of Vivid High Dynamic Range (HDR Vivid) to significantly improve the portrayal of bright and dark details and mitigate common issues like highlight blowouts and lost shadows. It elevates the ultra-HD video experience on MIGU Video and providing a clear and vivid visual feast for audiences.



Third-Generation Audio and Video Coding and Decoding Technology Standard (AVS3) + Vivid High Dynamic Range Imaging (HDR Vivid) Video Effects.



**Boosting High-Quality Content by Investing in Phoenix Media**

Jiangsu Phoenix Publishing & Media Corporation Limited, known as Phoenix Media, stands as one of the country’s most influential and largest publishers and distributors. In 2023, with an investment of around 2 billion yuan, the Company became the second-largest stakeholder in Phoenix Media. This investment, a strategic partnership, aligns with the “National Digitalization Agenda for Culture”, aiming to advance the digital transformation of culture and education sectors. Together, we are committed to offering an expanded range of digital cultural and innovative educational services to our users.

## ※ Elevating Customer Brand Engagement

The Company deeply analyzes the differentiated needs of various customer groups, deepens the integrated operations of “connection+application+rights”, and launches the “Mobile Love Homes” customer brand to enrich the digital experience of the customer brand. By the end of 2023, there were **330 million** customers integrated with rights, with a net increase of **42.76 million** customers.




The “China Mobile” brand was selected for the **18th consecutive year** in the “**Brand Finance Global Top 500 Most Valuable Brands**” ranking published by the *Financial Times*, ranking **32nd** in the global overall list and **4th** among operators.


China Mobile ranked **fifth** in the “BrandZ Top 100 Most Valuable Chinese Brands” list.

<p><b>Key Offerings:</b> Premier Travel Experiences, Exclusive Privileges, and Services</p>	
<p><b>2023 Highlights:</b></p> <p>The Company has enhanced the GoTone Premier Service Loyalty Program, introducing a suite of additional travel incentives for our customers. These benefits include discounts on international flights, hotels, tickets and car rentals, international roaming packages, covering the whole value chain of travel scenes (transport, accommodation, play and daily usage), and providing a one-step premium travel experience. By the end of 2023, the service boasted <b>5.5254 million users</b> and provided over <b>10.386 million</b> travel-related services. Furthermore, the Company has launched Marathon Privileges for seven elite marathon events, including offline competition quotas, on-site customized services, and 5G application benefits, to encourage more users to engage in fitness activities.</p>	

<p><b>Key Offerings:</b> Happy Filial Card and Delivery Riders Card by EasyOwn</p>	
<p><b>2023 Highlights:</b></p> <p>Tailoring the offerings to meet the unique needs of the general public customers, the Company introduced the Happy Filial Cards and Delivery Rider Cards, complemented by the Elderly Guard and Delivery Riders Guard initiatives. For the elderly, the Company has rolled out a suite of services designed to ensure comfort and ease, including products made with care, educational initiatives for the public good, thoughtful gift packages, senior-friendly online services, and designated rest areas in our outlets. For the delivery riders, the Company has provided a benefit package that includes helmet, battery, insurance, and enjoyment of membership perks, all to honor the protectors of cities. By the end of 2023, the EasyOwn brand celebrated a significant growth to <b>17.9331 million subscribers</b>, with an increase of <b>65.06%</b> year-on-year, including <b>8.4772 million</b> Happy Filial Card holders and <b>2.4601 million</b> Delivery Rider Card users.</p>	

<p><b>Key Offerings:</b> M-Zone Mango Card, M-Zone Trendy Play Card, M-Zone Cute Card</p>	
<p><b>2023 Highlights:</b></p> <p>Embracing the Intelligent Trend vibe, the Company innovated a fresh product strategy encapsulating Content, IP, Network, and Applications with the introduction of the M-Zone Mango Card, integrated multiple entertainment resources and full-scenario customized rights, produced collaborative discount tariff products, and provided young customers with an immersive experience. By the end of 2023, the M-Zone Mango Card had reached an impressive order tally of <b>11.4674 million</b>, achieving standout product status. The Company also actively engaged in niche activities centered around music, street dance, and esports, marking the brand’s 20th anniversary with standout events like the M-Zone Music Festival, M-Zone Street Dance Celebration, and M-Zone Esports Extravaganza. Nationwide, more than 100 Campus 5G Pioneer Matches and China Street Dance League Campus Tournaments were organized, drawing in <b>over 70 million</b> participants.</p>	

<p><b>Key Offerings:</b> Mobile Gigabit Broadband, Mobile Family Wi-Fi, Integrated Home Intelligence, High-Definition Mobile Services, Mobile Home Security, and Mobile Health Solutions</p>	
<p><b>2023 Highlights:</b></p> <p>The Company has introduced the All-Gigabit + Cloud-Based Lifestyle as a novel paradigm for smart home living, offering Connected - TV - Lifestyle as our core product trio aimed at creating fast, smart, and expertly tailored home living environments. By the end of 2023, there was a notable uptick in our smart networking capabilities, with an increase of <b>36.245 million</b>, Mobile Home Monitor subscriptions rose by <b>16.2166 million</b>, and voice remote control adoption surged by <b>25.124 million</b>, driving our total family IoT connections to <b>492 million</b>.</p>	







## Transforming Homes with Mobile Love Home's Trio of Innovations

The Company has redefined the home information and infrastructure landscape with the introduction of a comprehensive system comprising “one wire, one screen, one set of eyes, one home, one kilometer”, emphasizing security and computility within the household. Our goal is to spearhead the home IoT ecosystem, striving to furnish our customers with a “Gigabit+Cloud Life” smart home experience.

### Intelligent Network



**Intelligent Networking:** Mobile Family Wi-Fi adds features like home network manager, network cloud backup, Wi-Fi doctor, offering users seamless connectivity, security and reliability, housekeeping services, and expert home visits.

**Mobile Cloud Broadband:** Advance cloud broadband computing and fully integrate home broadband with contextual services, lowering the user barrier and enhancing gigabit broadband quality.

### Smart Television



**Mobile HD:** Bringing a new intelligent audio-visual experience to hundreds of millions of household users, achieving an upgrade from a single set-top box to various forms such as smart TVs, smart speakers, mobile screens, etc., transitioning from “watching” videos to high-quality diversified content consumption and immersive interactive experiences such as “watch, learn, listen, and play”.

**Smart Interaction (Mobile Remote Control):** Piloted “Xiao Yi Housekeeper”, recognizing user needs through natural language interaction, providing a variety of application services. By the end of 2023, it had 2.3664 million users, with an average monthly interaction of 66 times per user, a 22.08% increase compared to basic voice users.

### Smart Life



**Smart Home Solutions:** Through the Hejiaqin App, users can connect, control, and interact with smart devices at home, and enjoy a wealth of smart applications and family life services. As of the end of 2023, the Hejiaqin App has served 367 million users, with 167 million devices bound, and 492 million devices connected.

**Mobile Monitor:** Create four major artificial intelligence services including Time Trajectory Creation, Video Patrol, Intelligent Guard, and Smart Recognition, to assist video surveillance in upgrading from “seeing” to “understanding”, building a bridge for familial communication, and providing an intelligent and efficient living experience.

**Mobile Health and Care:** Providing smart services focused on health management, safety protection, and wellness entertainment, by the end of 2023, the mobile health and wellness solutions have been applied in 31 provinces, autonomous regions and directly-administered municipalities benefiting nearly 40 million users.



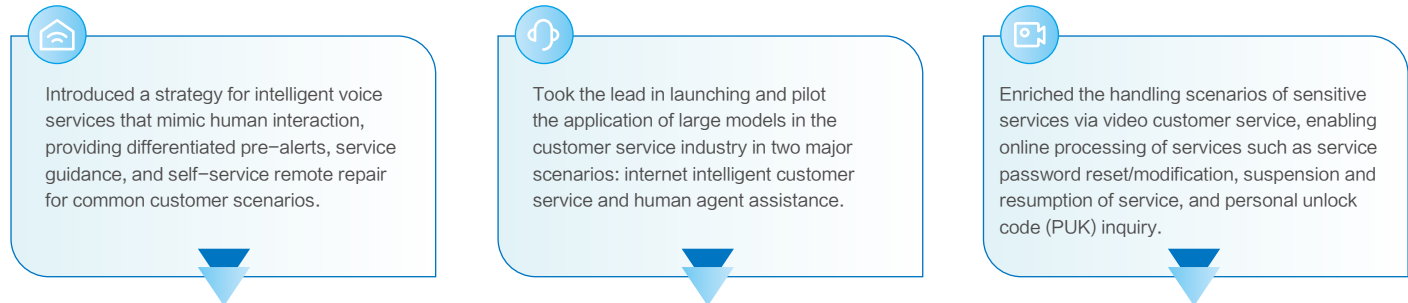
A staff member demonstrates mobile health and wellness solutions to an elderly customer.

## ※ Dedicating to “Heartwarming Service”

Under the guiding principle of earning customer trust through superior quality encapsulated in our “Heartwarming Service” initiative, the Company has dedicated ourselves to creating an all-encompassing service system that involves a “Three-All” (all-round, all-process and all-staff) suite of services. Our goal is to ensure the services are smart and personalized, fast and convenient, transparent in terms of consumption information. By the end of 2023, our overall customer satisfaction and complaint rate had led the industry for five consecutive quarters.

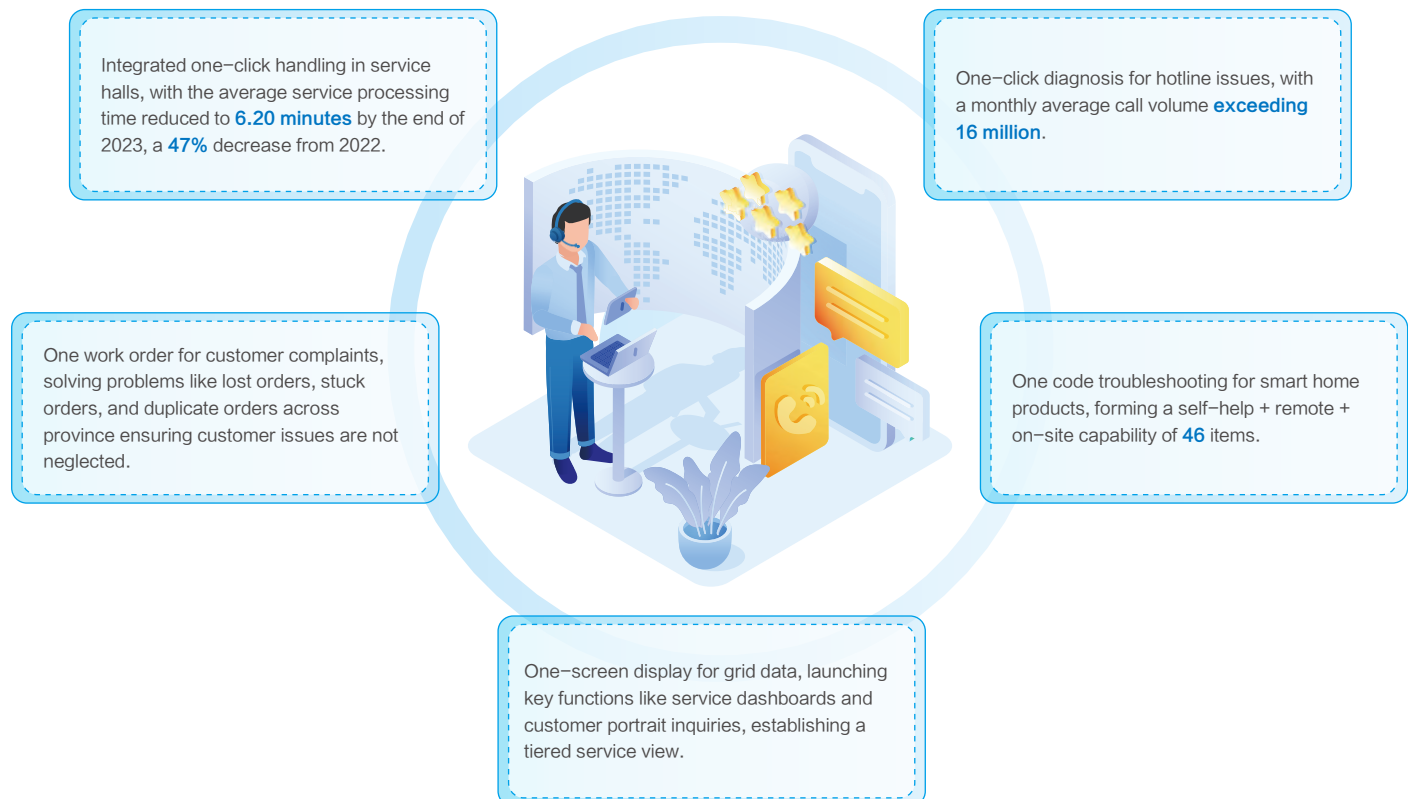


### Launching the 86 NEXT Advanced Service Portal




By the end of 2023, the proportion of intelligent services reached **38.06%**, and the first-call resolution rate of the 10086 hotline increased by 1.14 percentage points compared to the beginning of the year.

### “Five-Ones” Strategy for Enhancing Service Experience



### Expanding the Da Yin Platform's Reach

Focusing on the three major scenarios of unaware auditing, complaint early warning processing, and insight and prediction care, digital employees were piloted in 11 provinces, autonomous regions, directly-administered municipalities companies, achieving the capabilities of automatic handling of appeal results and automatic analysis of work order quality inspection reports.




Constructed a service tag integration system, with the service tag's monthly average call volume reaching **754 million** by the end of 2023, a **45.37%** increase year-on-year.

Built a model for low satisfaction in service halls, and optimize and upgrade the complaint prediction model.

Supported the efficient operation of service quality closed-loop improvement mechanisms such as "Complaint Resolution, Immediate Evaluation after Use, Listening to Storefront and Frontline Feedback", and implement the "Monitoring and Early Warning, Traceability and Rectification, Supervision and Accountability" mechanisms for complaint resolution. The complaint responsibility rate of 10080 has decreased by **6.94 percentage points** year-on-year, with the "Immediate Evaluation after Use" reaching an average of **330 million** customers per month.

### Attentively Listening to Customer Feedback

**Enriching Evaluation Methods:** Improving five types of evaluation methods, carrying out customer perception evaluation regularly through telephone evaluation, post-use evaluation, experience test, use measurement and etc. , covering more than 260 CHBN (customer market, home market, business market, new market) scenarios, and set more than 4,000 monitoring indicators to achieve larger amount, more accurate, more timely and deeper customer perception. By the end of 2023, the Listen in the Store campaign involved **129,300** participants, with **38,100** suggestions made and a **97.40%** completion rate of optimizations.



**Enhancing Evaluation Applications:** Focusing on marketing promotion, network quality improvement, product experience improvement and other key directions, strengthen the application of results, linking Da Yin platform and related production and operation systems, achieving full real-time transparent transmission of evaluation data after use; the post-use evaluation data will be deeply integrated into the production operation and management process to promote the closed-loop optimization of core shortages, and promote the continuous improvement of service quality. The satisfaction of the main contact channels such as the business hall and 10086 hotline has **remained above 90**, while the satisfaction of network quality and product quality has **continued to improve**.

### Protecting Customer Rights

Oriented by satisfying customer communication service needs, marketing activities are pre-audited according to layered and tiered management principles. By the end of 2023, **33,300** marketing services were reviewed, and full review and one-vote veto were strictly implemented.

Continued to promote the "Sunshine Action", through measures like weekly reports, monthly warning lists, and quarterly bulletins, to normalize the monitoring, analysis, and verification of business subscription dispute complaints, introducing new features such as real-time triggered task orders to enhance monitoring response efficiency. By the end of 2023, the complaint rate of business subscription dispute complaints decreased by **18.84%** from a low base.

By the end of 2023, the complaint rates for the four focus issues of unsuccessful business transactions, unclear promotions, questioned charges, and network problems decreased by **59.41%** compared to the beginning of the year.

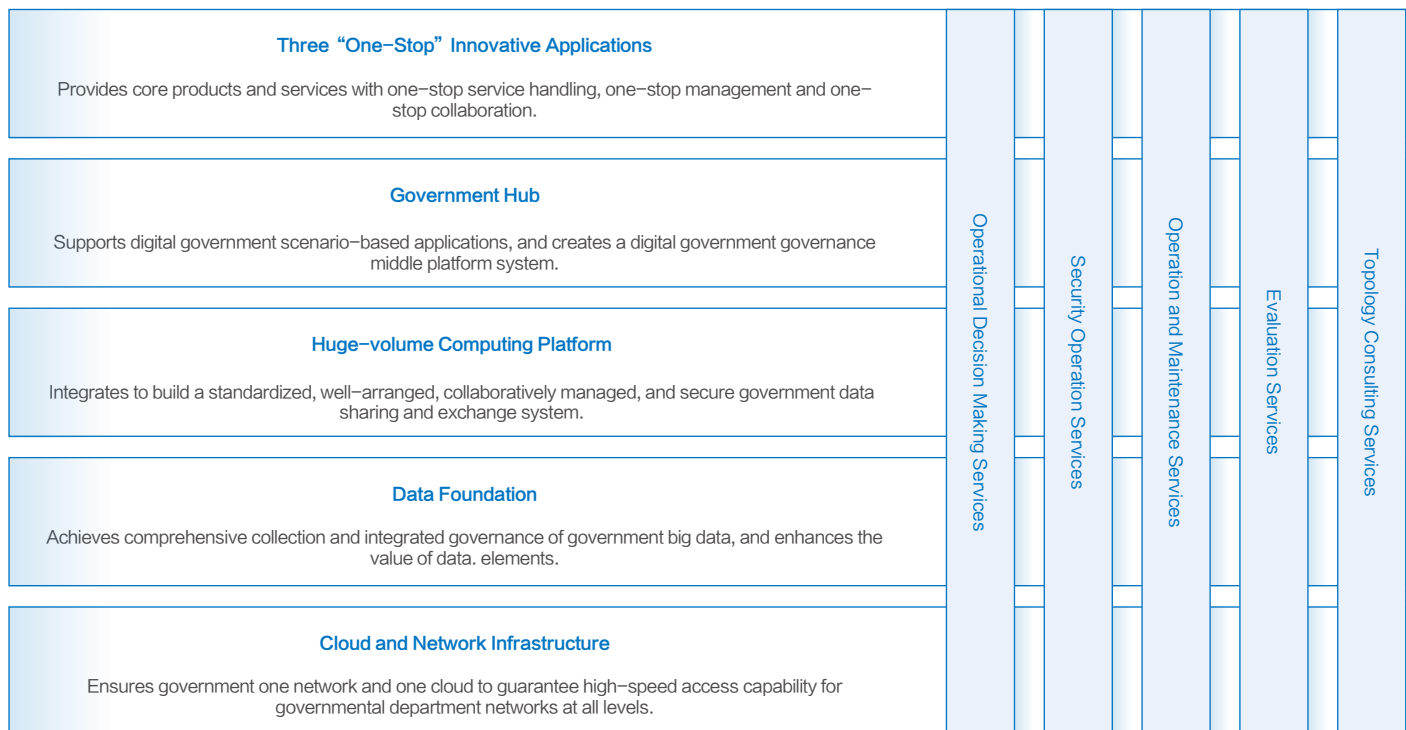
# Promoting Digital-Intelligent Governance

China Mobile, leveraging its information infrastructure that spans provincial, municipal, county, township, and village levels, along with massive, real-time, multidimensional data resources, strengthens application innovation in areas such as digital government, smart cities, and smart communities. This initiative empowers government management, social governance, and the improvement of people’s livelihoods with intelligence.

## ※ Serving Digital Government Construction

The Company has established a five-horizontal and “Five Horizontal and Five Vertical” Product Capability Layout for digital government, released a digital government capability construction map, held the first Digital Government Construction Forum, and during the China Mobile Worldwide Partner Conference, hosted the inaugural ToG sub-forum. These efforts comprehensively enhance the one-stop, full-process information service capabilities aimed at digital government. By the end of 2023, the Company has provided government information services to more than 300 cities in 31 provinces, autonomous regions, directly-administered municipalities, with over 1,800 information technology project construction cases, providing strong support for advancing the modernization of the national governance system and governance capabilities.

China Mobile’s Digital Government “Five Horizontal and Five Vertical” Product Capability Layout



### Setting Top Domestic Benchmarks to Forge Heilongjiang’s Six Best Service Brand

In response to the Heilongjiang Provincial Government’s challenges, including disparate standards, significant data barriers, limited support capabilities, low digital literacy, and duplicative construction, the Company launched a project in September 2022 to elevate Heilongjiang’s digital government framework. This initiative streamlined government interactions by over 50%, leveraging data interoperability and electronic documentation to notably reduce processes, paperwork, wait times, and the need for in-person visits. By the end of 2023, 30 systems had been put into trial operation, propelled Heilongjiang towards establishing a standout service brand for both businesses and residents, marked by the most streamlined operations, minimal paperwork, fastest processing, least expense, greatest ease, and utmost satisfaction.

“

*I just planned to ask about transferring my electricity meter at the service office today and brought no documents. I was amazed that a facial scan was all it took to handle my request—what a convenience!*

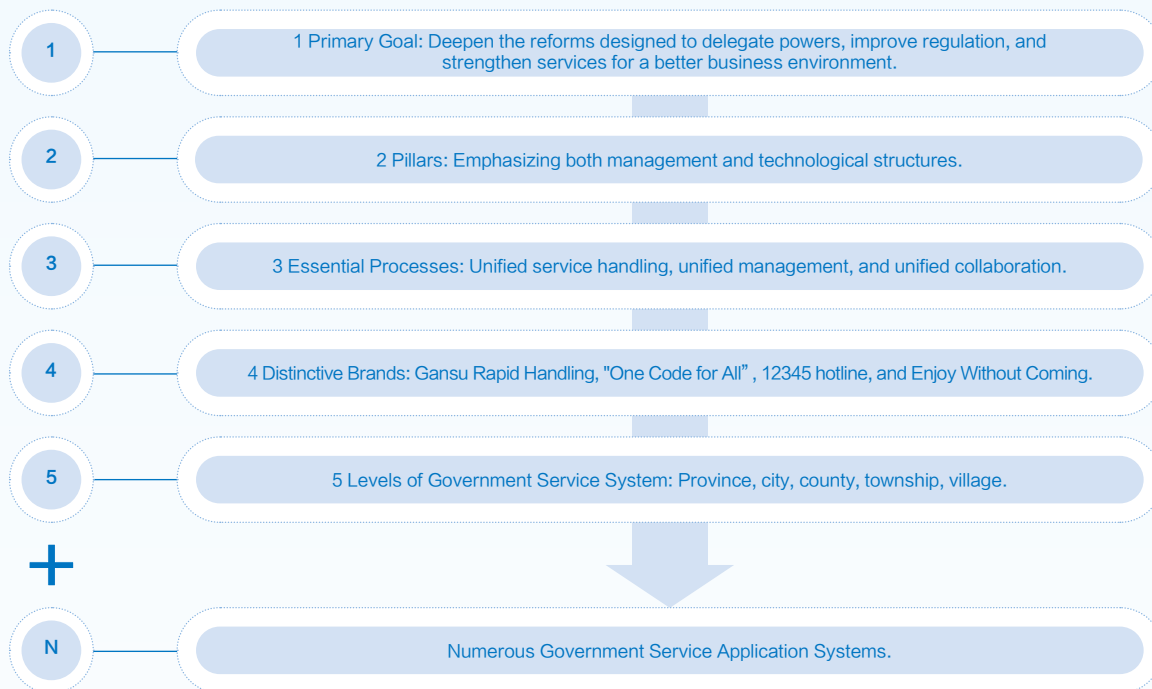
”

—Mr. LI, Raohe Town, Raohe County, Heilongjiang

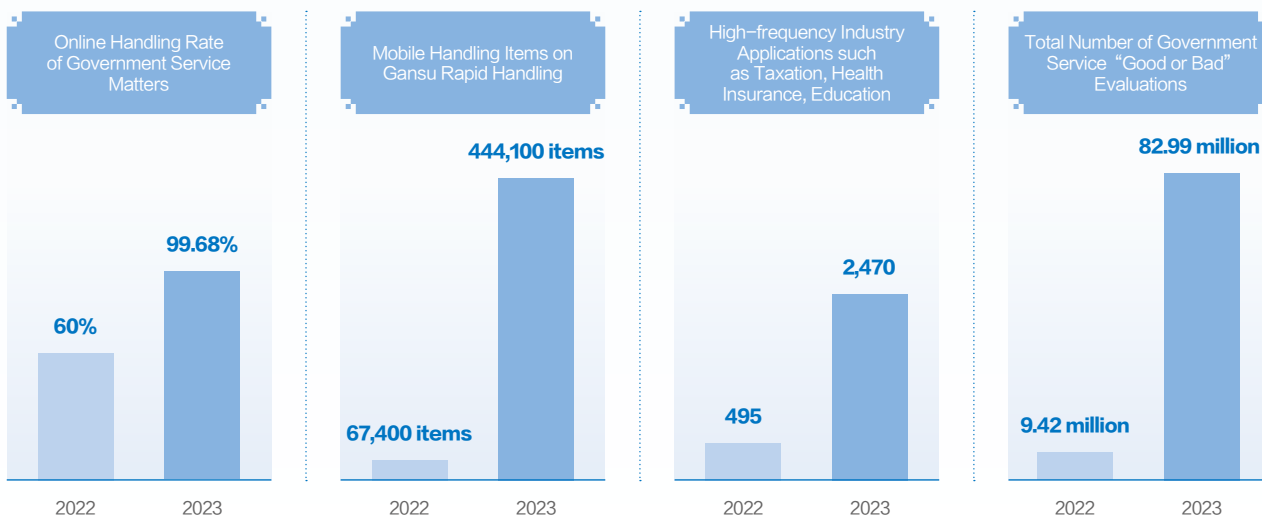
**Advancing Gansu's Digital Government to Streamline Public and Business Services**

Following the *Strategic Cooperation Framework Agreement on Digital Government Construction* with Gansu's provincial government in 2021, the Company spearheaded the development of the comprehensive "12345+N" digital governance framework. This initiative meticulously catalogued over a million administrative services throughout Gansu, ensuring consistent processing and standard procedures across the province. By October 2023, the successful completion and acceptance of 50 provincial digital government projects significantly advanced Gansu's ambition to establish a "leading in mid-west, first-class in nation" digital government. This effort significantly contributes to making government decision-making more scientific, administrative operations more efficient, public services more accessible, and social governance more precise.

**Gansu Digital Government "12345+N" System**



**Achievements of Gansu Digital Government Initiatives**





### Empowering Hefei's 24/7 12345 Government Hotline with Intelligent Solutions

The Company played a pivotal role in enhancing Hefei's 12345 government hotline with a sophisticated customer service system, elevating its efficiency and intelligence to ensure citizens' concerns are swiftly and successfully resolved.



#### Digital Workforce Panjiang

Introduced "Hexiao Zheng", a digital assistant proficient in analyzing call data and intelligently reviewing service requests within the call service system. This innovation addresses long-standing issues of manual inefficiencies, inaccuracies, and the complexities of inter-system cooperation, blending automated and human customer service seamlessly.



#### Cloud-Based Customer Service

Utilizing video hotlines, service agents can quickly capture and upload evidence to the cloud, allowing departments to promptly and clearly understand and respond to citizens' issues, thus delivering both quick and empathetic service.



#### Skill Development and Certifications

The establishment of a digital learning environment for service center staff enables them to quickly grasp necessary skills and knowledge through an integrated learning, practicing, and testing approach. By the end of 2023, a total of 2,778 training and 730 certification sessions had been conducted.



*Hefei's 12345 government service hotline aspires to ensure every case is acknowledged, every issue resolved. Leveraging China Mobile's Panjiang digital workforce, cloud customer service, and smart training capabilities, we've successfully interconnected AI-driven service, human interaction, and an extensive data knowledge base. This synergy guarantees quicker call handling, more precise task allocation, and more substantial resolutions.*



—Hefei City Government Service Management Bureau



China Mobile's 12345 hotline digital employee "Hexiao Zheng" performing efficiency analysis of operators.



### Innovating Baoding's Government Services

To advance the construction of Digital Baoding, the Company focused on reengineering the governmental service processes for 107 high-frequency, cross-departmental matters, implementing cross-departmental, cross-level, and cross-regional service process reengineering. This effort led to the full process online handling of 645 municipal-level and 15,757 county-level governmental service items, increasing the rate of complete online processing to **99%**. At the same time, supporting the 12345 complaint and request handling system to achieve one-number acceptance, one-platform processing, and one-network supervision, the response rate to complaints was increased to **99%**, successfully aiding Baoding in creating a new government service brand of "one thing done in one go".

## ※ Empowering Digitalization of Public Services

The Company actively supports the digital-intelligent transformation in vital livelihood areas such as education, healthcare, and elderly care, promoting the convenience and intelligence of public services, enabling the public to enjoy more detailed, precise, and efficient social public services.

### Accelerating the Digital-Intelligent Transformation of Education

The Company closely follows the digitalization movement in education, and for ten consecutive years, it has been the only telecommunications operator to undertake the construction of the National Education Resources Cloud Platform, aiding this platform in becoming the world's leading education resources platform. It focuses on creating unique digital and intelligent education applications, using digital transformation to advance the construction of a powerful education nation.

#### 5G Cloud Art Exams: Paving the Way for Art Students' Success

The Company has exclusively partnered with the Ministry of Education's Examination Center to launch a pioneering art exam platform characterized by innovative exam-review separation approach. This platform includes smart exam setup, AI-enhanced marking, anomaly warning, and comprehensive data analysis to provide a realistic examination setting.

Working closely with the Ministry of Education's Examination Center, the Company has set four industry benchmarks, including standardized guidelines for art examination hall and scoring, fostering a more regulated and efficient evaluation process.

By the end of 2023, the Company has developed more than **160** examination halls for music, dance and other fields had been built in seven provinces including Sichuan and Hebei, benefiting over **100,000** teachers and students.

#### Digital Student IDs: Simplifying School Life for Primary and Secondary School Students

The Company has developed an extensive digital student ID ecosystem, addressing essential needs such as communication and location services, and extending into digital identity, smart fitness, and transportation applications, impacting over **20 million** students.

Participated in drafting the Ministry of Education's Guide to the Application of Student Digital Identities and implemented the first trusted digital identity pilot in Guangdong nationwide, establishing a benchmark in the industry.

By integrating various educational and familial ecosystems, the Company has streamlined the digital student ID supply chain, building an ecosystem of "Hardware Entry + Platform + Applications + Resources" that drives forward industry progress.

#### Cloud Employment: Revolutionizing Job Search for Graduates

The Company has curated an expansive database with over **1.8 million** job listings, leveraging advanced big data and blockchain technologies to offer the largest job pool for campus recruitment.

Introduced AI-powered tools and resources for resume building and interview preparation, tackling the challenge of inadequate employment skills among college graduates.

Built a professional on-campus employment hubs providing an intelligent, convenient, and private written examination and interview environment.

Exclusively cooperated with the Ministry of Education, the Company launched a significant online job matchmaking event, bridging the gap between graduates and potential employers on a large scale.



### Undertaking the Construction of the Education Metropolitan Network to Improve the Level of Regional Education Informatization

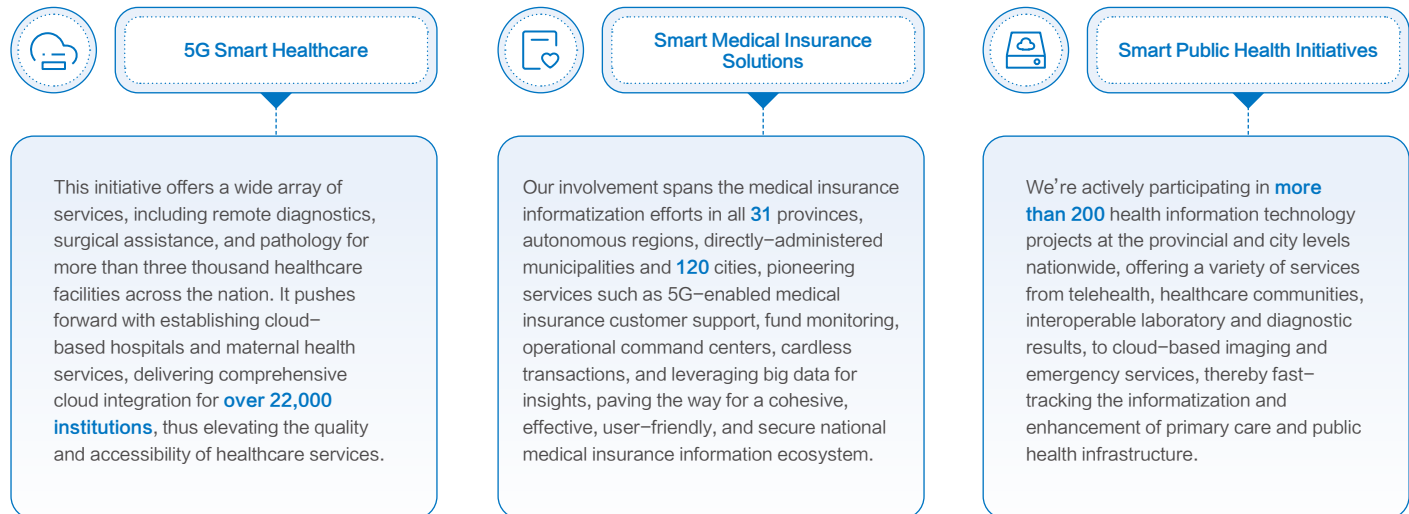
The Company actively participated in the formulation of technical specifications for educational metropolitan area networks and project construction, deploying basic network capabilities for educational metropolitan area networks. By the end of 2023, the Company had completed the construction of a total of 10 sets of educational metropolitan area network core aggregation and security equipment in 8 cities in Guangxi, covering 87 districts and counties, providing high-speed and secure dedicated educational network services to 1 million teachers and students throughout the region.



Guangxi Wanxiu District Educational City Network Achievement Exhibition.

Elevating Healthcare Service Excellence

Utilizing the OneHealth smart healthcare cloud platform, the Company has crafted a comprehensive 5G smart healthcare suite aimed at boosting the efficiency of medical operations and fulfilling the healthcare needs of the population. This initiative significantly contributes to the *Healthy China initiative* and the development of a superior, efficient healthcare service system.



**Leading the Way in Transforming Hospitals from “informatization” Towards “Intelligentization”**

In 2023, the Company took a significant step by deploying the first 5G medical dedicated network within Hebei province and establishing the nation's inaugural 5G-enabled dual-domain network for healthcare at the First Hospital of Hebei Medical University. Leveraging this advanced network, it developed several 5G-powered solutions, including ambulance services, emergency dispatch, drone-assisted medical deliveries, remote medical consultations, and VR-based remote visitations, setting a new standard in healthcare innovation.

- \* **Securing Critical Time in Emergencies:** The 5G-enabled ambulances are equipped with real-time tracking, automatic route optimization for the quickest possible arrival, and predictive time-of-arrival calculations. Additionally, 5G drones extend the reach of medical supplies, ensuring that patients receive hospital-level care the moment they board the ambulance, thus safeguarding their well-being during critical moments.
- \* **Elevating Patient Care Experience:** The introduction of portable 5G diagnostic tools allows for bedside patient examinations, with results quickly shared with the attending physician in as little as 15 seconds. This technology, combined with the use of 5G for rounds, remote diagnostics, and order management, substantially enhances the efficiency of patient care and treatment processes.



Utilizing the advanced 5G+VR panoramic high-definition camera technologies provided by China Mobile, the First Hospital of Hebei Medical University offers a close-to-live experience for remote visits by family members or healthcare workers, where patient safety permits.

**Empowering Traditional Chinese Medicine Innovation with 5G**

In November 2023, the Company played a crucial role in setting up the pioneering 5G Smart Hospital Innovation Lab at the Changzhou Traditional Chinese Medicine Hospital. This lab introduces patients to advanced treatments and diagnostics through smart healthcare applications such as VR acupuncture, tongue and pulse diagnostic devices, and a comprehensive TCM diagnostic support system. These technologies automate the gathering and intelligent analysis of key diagnostic data like facial expressions, tongue appearance, and pulse, which is then stored in the cloud for easy access. This innovative approach enables specialists to offer direct consultations to patients remotely, overcoming common challenges such as long waits and difficulty in finding qualified practitioners. It's a step forward in making premier TCM healthcare resources more widely shared and accessible.



## Smart Elderly Care for Happy Senior Years

The Company is dedicated to addressing the varied requirements of elderly care by developing intelligent, tailor-made products and services, aimed at enhancing a foundational, accessible, and varied elder care ecosystem.

### Trailblazing “Multidimensional Big Data Precision Sensing” in Elderly Care

The Company has set a precedent in the elder care sector nationwide with its groundbreaking implementation of Multidimensional Big Data Precision Sensing, delivering cost-effective, comprehensive cloud-based guardianship for seniors.

**The “Fuling” Brand:** In a joint effort with the Fujian Provincial Civil Affairs Department, the Company launched the Fuling wellness and care brand, leading the way in health-focused aging solutions across the country through a series of supportive activities for the elderly.

**5G+ Health Care Cloud Platform:** Collaborating with online hospitals, the Company provides the elderly with the convenience of managing chronic conditions like hypertension at home, alongside offering health data monitoring services to community health centers, facilitating a complete solution for at-home health management for seniors.

**12580 Elderly Assistance Hotline:** The 12580 service line offers around-the-clock care for the elderly, their guardians, and their families, ensuring immediate support and assistance.

**Educational Outreach:** Partnering with the Fujian Senior Citizens’ University, the Company has made available online classes for seniors living at home. By the end of 2023, with **3,813** classes rolled out, it has reached over **860,000** elderly individuals across the province.

### Launching the Nation’s First 5G+ Digital Elderly Health Integration Platform in Shanghai

The Company has partnered with the Dapujiao Sub-district Community Health Service Center in Shanghai to introduce China’s inaugural 5G+ Digital Elderly Health Integration Platform. This platform utilizes the cutting-edge capabilities of 5G, big data, and integrated cloud and network technologies to boost the operational efficiency of the health service center, offering the elderly more compassionate, less stressful, and safer healthcare options.

#### Health Information Data Dashboard Management

- \* The platform enables doctors to access and review comprehensive health profiles of elderly residents, facilitating daily, informed decisions on rehabilitation and treatment plans based on up-to-the-minute feedback.

#### Home-based Rehabilitation Services

- \* By integrating digital healthcare for the elderly with community-based medical services and home-centric rehabilitation management, along with non-invasive dynamic health.

#### Remote Healthcare by “Cloud-based” Doctors

- \* Elderly people living at home can achieve one-on-one online consultations and problem-solving with their contracted doctors through simple operations.

## Expanding Industrial Ecosystem

China Mobile steps up as the guiding force within the modern industrial ecosystem, serving as a pivotal leader in the symbiotic network of industrial chains. It champions comprehensive ecological collaborations across various sectors to forge an industrial framework marked by enhanced innovation, superior value, and robust reliability, thereby bolstering the advancement of societal and economic prosperity.

### ※ Fostering a Collaborative and Innovative Ecosystem

The Company is making comprehensive efforts in industrial collaboration, technological cooperation, strategic partnership, and international cooperation, constantly expanding the depth and breadth of collaboration with partners in the supply chain, industrial chain, and value chain. It aims to build a development ecosystem that is more equitable, inclusive, and constructive.

#### Journeying Towards New Industrial Collaborations

Since 2013, the Company has held the China Mobile Worldwide Partner Conference for **11** consecutive years, gathering formidable innovative forces to accelerate the evolution and upgrade of the information industry. In 2023, the Company advanced the integrated development of the industry chain with the Common Chain Action, upgraded the **“10<sup>1</sup>-10<sup>2</sup>-10<sup>3</sup>-10<sup>4</sup>” Partnership Initiative**, and supported high-quality industrial development with platform construction, mechanism support, and resource investment. It launched the “Mobile Love Home” ecological cooperation plan and the Mobile Preferred cooperation plan to jointly explore key areas such as smart homes and intelligent terminals. With an investment of tens of billions in resources, it introduced a multibillion-dollar product development plan and a multibillion-dollar rights pilot plan, collaborating with industrial partners to promote applications, create value, and share benefits.

#### Starting New Chapters in Strategic Cooperation

By the end of 2023, the Company has signed strategic cooperation agreements with local governments in all **31** provinces, autonomous regions, directly-administered municipalities across the country, **121** large enterprise groups, and institutions. Focusing on key areas such as new infrastructure construction, network technology evolution, platform and capability building, and 5G+ application scenarios, it further promotes the complementarity of advantageous resources and the expansion into strategic emerging fields.

#### Broadening the Scope of Global Collaborations

- \* The Company strengthens the global direct connection among operators. By the end of 2023, the comprehensive solution iConnect for the operator market has reached **1,100** cooperation clients, with **28** new direct connection operators added throughout the year, bringing the total number of direct connection operators to **359**.
- \* In September 2023, the Company held the 2023 China Mobile Southeast Asia Regional Cooperation Conference in Jakarta, the capital of Indonesia, and jointly released the **Southeast Asia Digital Economy Development Cooperation Initiative** to promote the transformation of regional industrial digital intelligence and help the development of digital economy in Southeast Asia.
- \* The Company signed a **memorandum of strategic cooperation with Singtel** to establish a new strategic partnership for mutual benefit and coordinated development in 5G, Internet of Things applications, system integration solutions of both the government and enterprise markets, products and services in the personal market, overseas equity and information infrastructure construction investment cooperation, technological innovation and research development cooperation, etc. Greater economic benefits and social value were created.
- \* As a cooperative platform for global operators, the **“Hand-in-Hand Plan”**, established in 2015, has always been committed to conducting member sharing and exchange activities, becoming an important international platform for global operators to discuss development and future together. In 2023, China Mobile International hosted the annual summit of the “Hand-in-Hand Plan” in Shanghai with the theme of 5G Digital Economy, attracting over 35 operators and more than 200 members and strategic partners worldwide.
- \* In March 2023, China Mobile International and its partners jointly launched the **“iSolutions Partner Ecological Alliance”**, aiming to create a new digital intelligence ecosystem with innovation, symbiosis and win-win effect. By the end of 2023, the “iSolutions Partner Ecological Alliance” has more than 200 partners worldwide.



At the 2023 Mobile World Congress, Mr. Yang Jie, Chairman of China Mobile, made a virtual appearance embodying the concept of a Digital-Intelligent Human.

### Building a New High Ground for Sci-Tech Cooperation

The Company optimizes industrial organization, aggregates industrial elements, and nurtures industrial ecology, strengthening the modern industrial chain of mobile information, driving innovation integration among upstream and downstream, large and small, domestic and foreign enterprises, continuously improving industrial base capabilities and the level of industrial chain modernization.

#### Synergizing Efforts across Academia, Industry, and Research

The Company deepens its commitment to integrating business leadership with academic and research excellence, fostering an environment where innovation thrives. This approach aims to speed up the conversion of scientific discoveries into tangible productivity gains.

- \* Takes the lead in building 5G Innovation Consortium and Computility Network Innovation Consortium, joining nearly 30 central enterprises to create an open innovation platform for element convergence and application linkage, implementing joint tackling tasks, promoting the sustained leadership of 5G and computility networks.
- \* In 2023, successively established five joint research institutes with Xi'an Jiaotong University, Harbin Institute of Technology, Hunan University, Nanjing University, and Contemporary Amperex Technology Co., Ltd., jointly conducting technical research, achievement transformation, and talent cooperation training around artificial intelligence, computility network, digital government, and smart industries.
- \* Fully upgrades the school-enterprise cooperation model, creating a co-investment, co-management, co-research and development, co-ownership of results, and co-sharing of benefits industry-education-research cooperation entity with university partners. Both parties dispatch full-time and part-time staff for localized management and operation in a quasi-entity form, selecting project teams through a competitive process to strengthen the implementation of outcomes.
- \* High-quality operation of the National Natural Science Foundation and the Ministry of Education funds, releasing guides for 26 corporate innovation development joint fund projects in 2023, supporting 20 top university research teams to carry out applied basic research topics.
- \* Jointly establishes the Pengcheng Laboratory Science and Education Foundation – China Mobile Sci-Tech Special Project with the Shenzhen Pengcheng Laboratory Science and Education Foundation, focusing on research and innovation in the field of information science, serving the national strategic scientific and technological objectives.



Kick-off ceremony for China Mobile's Co-Creation+ initiative that blends industry and education.

#### Three-Dimensional Mass Innovation and Entrepreneurship Incubation System

China Mobile has deeply promoted the development of the Mass Innovation, Mass Entrepreneurship industrial incubation system, aiming to build an interconnected innovation ecosystem. By the end of 2023, 10 AndSpaces have been established, covering 9 cities including Beijing, Shanghai, and Chengdu, incubating nearly 400 projects, and facilitating nearly RMB 300 million in financing for projects within the incubation. Additionally, the Company has developed two major event brands, the Independent Development Competition and the Hackathon, to gather forces both internally and externally, enhancing the impact of technological innovation.



The 9th Independent Development Competition.

- \* **Independent Development Competition:** Aimed at internal employees, the nine sessions of the competition attracted over 8,000 proposals, from more than 30,000 person-times and a total of more than RMB 7 million were paid in rewards.
- \* **Hackathon:** Aimed at external enterprises and university innovation and entrepreneurship teams, the eight sessions of the competition attracted over 27,000 teams, and relevant units of the Company reached cooperation with more than 150 teams.

## ※ Fostering a Self-reliant Industrial and Supply Chain

The Company is intensifying its efforts to bolster the resilience and competitiveness of its industrial chain. It's committed to creating a self-reliant, secure, and efficient industrial and supply chain, with the aim of developing a top-tier supply chain management framework.

### Boosting Self-sufficiency through Demand-driven Initiatives

The Company is driving towards self-sufficiency in its industrial and supply chain by enhancing demand-driven strategies to encourage innovation at critical stages of the supply chain.

- \* **Comprehensive Planning for Self-reliance:** Drawing up a detailed map of the mobile information industry chain to outline the present scenario, obstacles, and the pathway for future growth with a focus on autonomy.
- \* **Strengthening Support for Independent Policies:** As a leader in the industry chain, the Company is setting the pace by implementing specific guidelines for the adoption of independent standards and technology ratings, thereby fostering the extensive application of indigenous products.
- \* **Facilitating the Adoption of Independent Products:** Concentrating on upstream suppliers of network-coordinated products and equipment to systematically carry out compatibility tests for autonomous products across different network segments.
- \* **Refining Evaluation Strategies for Autonomy:** Employing both quantitative and qualitative assessment techniques to review technical expertise, R&D prowess, industry integrity, innovation capacity, and the robustness of applicable legal frameworks, thereby enhancing the Company's innovation and control capabilities.

### Reserving Key Resources to Enhance Supply Chain Risk Prevention and Control Capabilities

The Company has formulated the *China Mobile Supply Security Guide*, systematically constructing a layered defense system from demand design to order delivery. Comprehensive and dynamic risk management strategies are established for different categories, including the establishment of risk analysis and evaluation factors and weights, models and calculation methods. Various risk response tools such as component diversification and strategic reserves are developed to implement a supply business continuity management system at the operational level in a phased, scenario-specific, and tiered manner. This effectively reduces the risk of supply business interruptions, minimizes the time, scope, and impact of supply interruptions, and enhances the resilience and security level of the industrial and supply chain.

### Strengthening Supply Stability to Boost Supply Chain Resilience

In refining its approaches and strategies to collaboration with key supply chain participants, the Company amplifies the role of policies and incentives, clearly defines roles and duties, and ensures supply stability through a comprehensive control and assessment process, thereby fortifying the resilience of its supply chain.

#### Diverse Supplier Ecosystem

- \* Forge long-term, strategic relationships with key industry players, and ensure that our main products are sourced from at least three different suppliers. Deepen our collaboration with crucial and strategic suppliers, refine the management of our diverse supplier base, and explore more effective and quality-driven cooperation frameworks.
- \* Diversify our components and working closely with our suppliers to manage exclusive materials right from the design stage, with alternative plans available for more than 20 product categories.

#### Entire Process Supply Chain Collaboration

- \* Construct a unified China Mobile supplier portal to achieve one-point access, collaborative operation, data sharing, create a convenient Mobile Journey, realize full-process online interaction with strategic partners, and achieve key business online interaction with basic suppliers.

#### Pilot New Supply Chain Management New Model

- \* Establish a networked supply chain management model, build a global supply network collaborative mechanism, and improve the response speed and flexibility of the supply chain.
- \* Strengthen data-driven supply chain management, accelerate the construction of intelligent supply chain integration systems and capabilities.
- \* Establish a flexible supply chain procurement model to ensure rapid response and stable supply of key products, and improve satisfaction of demand for components.

#### Refining Supply Chain Operations

- \* **Demand Forecasting:** Collaborate with multidimensional databases, differentiate product demand forecasting models, improve product demand forecasting accuracy, and ensure accurate and timely supply. **Procurement Review:** Implement a product price linkage mechanism for some raw materials and components. **Delivery Execution:** Carry out intelligent supervision of product raw material manufacturing, production capacity, quality standards, etc., to improve supply quality and stability. **Evaluation Management:** Based on the evaluation results of suppliers, develop a differentiated incentive reward and punishment mechanism.

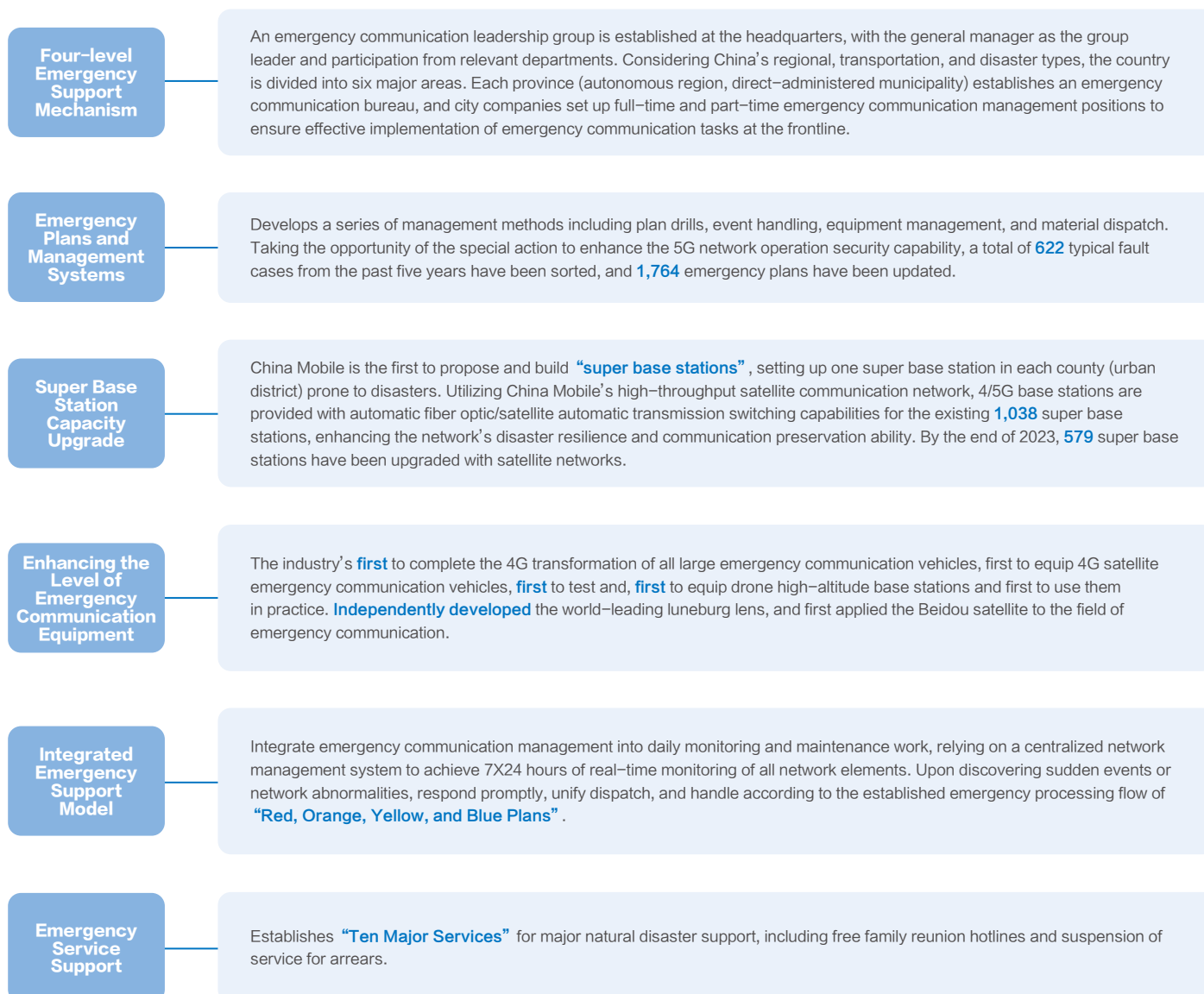
## Ensuring a Solid Security Development

China Mobile remains unwavering in its role as a foundational support for security, fully dedicated to providing emergency communication services during significant events, and steadfast in its efforts to combat telecom fraud and illicit content. The Company is committed to enhancing the protection of customer personal information, contributing to the creation of a safer online environment, and offering comprehensive support for the secure development of both the nation and society.

### ※ Emergency Communications Support

Throughout 2023, the Company has developed a highly efficient and cooperative emergency communication system, maintaining a cautious approach to successfully support major events like the China–Central Asia Summit, the 31st FISU Summer World University Games in Chengdu, the 19th Asian Games and Asian Para Games in Hangzhou, and the third Belt and Road International Cooperation Summit Forum. The Company achieved its support goals of zero major network failures, zero major network security incidents, zero significant customer complaints, and zero negative focus events.

#### China Mobile’s New Emergency Communication Support System





### Fully Committed to Ensuring Communication for the Hangzhou Asian Games and Asian Para Games

During the 19th Hangzhou Asian Games and Asian Para Games (referred to as Hangzhou Asian Games and Asian Para Games), the Company efficiently arranged the Asian Games Information System (AGIS) special network, Wi-Fi network, venue internet, fixed telephone special network, etc., “Ten Star” special networks, and applied multiple new technologies in this emergency communication protection.

- \* **The World’s First 5G “Self-Breathing” Elastic Network:** Based on new technologies such as distributed multiple input multiple output (D-MIMO), multi-frequency layering, ultra-large uplink, ultra-narrow beam antenna, etc., China Mobile built the super dense elastic “self-breathing” 4/5G network of the opening ceremony stadium of the 19th Asian Games in Hangzhou. The stand area is divided into 134 blocks, which can meet the extreme network needs of 100,000 audience and cast members.
- \* **Constructed the Strongest Brain – Unified Network Management System for Communication Networks:** A single screen overlooks all communication network visual information, fully satisfying the network monitoring, personnel scheduling, joint command, and protection display needs during the Hangzhou Asian Games and Asian Para Games, ensuring the event’s flawless operation.

- \* **Introduced Operation and Maintenance Large Model for the First Time:** By utilizing the large operational model, “chat-based” operational maintenance was achieved, and the efficiency of data extraction and analysis in key protection areas was improved by more than 10 times.
- \* **Used 5G walkie-talkie for the first time in a large international event:** Connected more than three thousand terminals across six cities, covering 2.2 million square meters of Hangzhou Asian Games and Asian Para Games venues.

Furthermore, the Company, around the organizing, watching, participating three core areas of the Hangzhou Asian Games and Asian Para Games, created 103 iconic achievements of the Intelligent Asian Games, such as the metaverse intelligent service platform, the world’s first 5G-A boutique demonstration deployment, and the Asian Games ticket expanded reality (XR) interactive experience, helping the Hangzhou Asian Games and Asian Para Games to be smarter, more exciting, and more popular.



China Mobile team monitoring network conditions in real-time at the Hangzhou Asian Games’ main stadium.



### Pursuing Dreams Amongst the Stars: Safeguarding Shenzhou-17’s Journey to the Cosmos

On October 26, 2023, Beijing time, the Shenzhou-17 manned spacecraft entered its predetermined orbit, and the launch was a complete success. The fail-safe achievement was inseparable from the meticulous organization and dedication of the China Mobile’s communication support team. A month before the launch, China Mobile had formed a hundred-person emergency support assault team, comprehensively testing and optimizing the network signals and optical cable lines around the viewing area and transportation hubs, activating 2 5G base stations, and inspecting and maintaining 158 kilometers of lines. During the spacecraft launch, field tests showed that the China Mobile’s 5G network download speed in the key support area reached 815Mbps, and the upload speed

reached 81Mbps; the 4G network download speed reached 78Mbps, and the upload speed reached 11Mbps, ensuring unobstructed network connectivity.

From 2003 to 2023, from Shenzhou-5 to Shenzhou-17, China Mobile personnel have accompanied and witnessed the twenty-year glorious journey of China’s manned space mission from dreaming, pursuing dreams to fulfilling dreams, and will continue to escort the development of China’s aerospace industry.

## ※ Enhancing Central Management on Inappropriate Content

The Company has deepened and enhanced its capability to manage undesirable information. By the end of 2023, it intercepted **13.421 billion** junk SMS/MMS messages, cumulatively identified and blocked **1.6277 million** non-compliant domains, and obstructed access **2.52 trillion times**.

### Monitoring and Sharing

- ◆ Compiled eight types of case collections such as the *Compilation of Network Attack Cases*, accumulating over six thousand cases with typical representativeness. A rapid linkage and sharing model covering more than 90 departments of the Company was established, forming a trinity sharing and alert mechanism that covers email, text messages, and WeChat. Throughout the year, **3,802** risk clues and **1,018** hot fraud events were discovered, with information shared internally more than **181,600 times**.

Management of Production

- ◆ **Production Management System:** A production management evaluation matrix in the realm of inappropriate information governance has been formed around three dimensions: personnel, system, and practical operations. This matrix scientifically assesses the health of production processes, promptly identifies and corrects weaknesses in regions, and improves the overall governance level across the network.
- ◆ **Campaign Against International Spam:** Dedicated teams across all 31 provinces, autonomous regions, directly-administered municipalities, and the China Mobile International were established. Hourly data analysis and time-segment strategy deployment were conducted, with traffic restrictions and complaint handling for illegal transfer operators. The annual reported volume of overseas spam SMS was **83,100**, with an average monthly complaint volume decreasing by **98.89%** compared to before the campaign.

Technical Innovation

- ◆ On the basis of handling illegal caller numbers, illegal advertiser numbers reserved in the messages were identified and extracted through automated means, and advertiser numbers that did not pass secondary real-name verification were shut down. Throughout the year, **16,600** advertiser numbers were identified, **7,642** numbers that failed verification were handled, with a handling rate of **48.31%**.
- ◆ For messages that only contain symbols or are unclear in meaning, scenario-based cluster analysis was used. The signature associated with the number's WeChat was automatically obtained through intelligent dial testing and pushed to the manual review team. Combined with sending behavior and signature information, judgment and disposal were implemented. In 2023, a total of **12,938,900** drainage text messages were identified and handled.

※ Protecting Users' Personal Information

The Company places great emphasis on the protection of users' personal information security. Led by the Cybersecurity Leadership Group, it coordinates the work of protecting users' personal information under the data security management system framework. On the basis of sound organizational leadership, system construction, technical means, and supervision and inspection for data security management, the Company has made explicit requirements regarding the scope of protection for users' personal information, principles of use, and the norms of collection and use. In 2023, 94 business personal information protection impact assessments were completed.



Regularly carries out training on user personal information security management, ensuring five 100% coverage for five types of personnel including network operations personnel, system operations personnel, front desk service personnel, complaint handling personnel, and third-party personnel.



Special inspections on external cooperation situations by all affiliated units, establishing a list of data external cooperation, signing eight security confidentiality agreements; conducts commercial reviews of big data, ensuring informed consent or anonymization for big data involving user personal information.



Monitors third-party user personal information events and conduct on-site evidence collection of monitoring results; track and verify suspicious events of selling user personal information in mainstream media and submit trigger reports.



Continuously carries out the enhancement work of personal information protection of own Apps, establish a management ledger for own Apps, conduct special assessments on personal information protection and centralized testing for Apps on the shelf, with over 2,500 own Apps tested throughout the year, identifying over 1,200 issues, all of which have been rectified.

※ Creating a Sound Cyber Environment

The Company is proactive in mitigating content-related risks by enhancing its middle platforms capabilities for content safety risk control and review. It has built content audit platform, content monitoring platform, position ledger management platform and content security situation awareness system to establish a comprehensive system for content security assessment and management, comprised of three major platforms and one major system, aimed at fostering a clean and vibrant cyberspace.



Promoting Safe Internet Practices Among Minors

China Mobile MIGU earnestly protects the mental and physical health of young people by launching a youth mode, enhancing self-discipline and content management, etc., striving to provide a safe and healthy online environment for young users.

- \* **MIGU Video:** The youth mode has been refined to limit daily screen time to 40 minutes and deactivate the service from 10 PM to 6 AM, requiring a guardian's password for access outside these restrictions. It aims to curb minors' online spending with features like viewing-only and blank screen modes, besides curating exclusive content pools for children and teens, regularly refreshed to ensure engaging and appropriate material.
- \* **MIGU Digital Reading:** The youth mode of MIGU Reading, incorporates features designed to prevent excessive use among younger users, such as reminders about usage duration and disabling social and promotional content, making for a safer and more user-friendly interface. Vigilant in screening its book selection, MIGU Reading applies rigorous standards to content that could expose minors to harmful material like cyber-bullying, cyber-violence or privacy issues, and investigate more than 20,000 recommended books throughout the year to ensure a vast yet vetted library conducive to a positive online ecosystem.

 Highlight

## Tackling Telecom Fraud

Confronting the serious challenge of telecom network fraud, the Company is steadfast in safeguarding the public's financial security and rights by utilizing our technological edge to enhance our fight against telecom fraud. The Company has developed comprehensive strategies, including the *China Mobile Deepening Efforts to Combat Telecom Fraud Action Plan (2023)* and the *China Mobile Guidelines for Combating Telecom Fraud*, focusing on dismantling the fraud ecosystem through targeted initiatives like Cut-Off Operation, Modem Fraud Crackdown Operation and Peace-of-Mind Operation, establishing robust measures and a sustainable approach to eradicating telecom fraud.

### Cut-Off Operation: Purifying the Source and Mitigating Risks

**Enforcing Real-Name Authentication Policies:** The Company has introduced a secondary verification process for high-risk cards to address the issue of inaccurate real-name registrations. Leveraging our anti-fraud data analytics, the Company is able to quickly identify and address potentially fraudulent numbers based on their network activity, call patterns, and roaming data.

**Implementing Credit Penalties:** To counteract the misuse of SIM cards in fraud schemes, the Company has set up a first-of-its-kind nationwide management system for individuals with poor credit across all 31 provinces, autonomous regions, directly-administered municipalities, limiting their ability to acquire new SIM cards, effectively cutting off a key tool used in fraudulent activities.

### Peace-of-Mind Operation: Prioritizing Prevention to Benefit Society

**Innovating Anti-Fraud Security Services:** A nationwide scam alert service provides SMS notifications to users when they receive international calls; offers users a high-frequency call harassment and scam call blocking service without the need for installing an app; super SIM cards ensure messages that can instantly interrupt scam calls, or redirect the calls to an anti-fraud center or to friends and family, blocking fraudulent activities.

**Carrying Out Anti-Fraud Promotional Activities:** Through diverse methods such as anti-fraud quality short videos, celebrity anti-fraud public service announcements, online anti-fraud promotions are carried out; distributing materials like *Anti-Fraud Propaganda Handbooks*, in collaboration with the police, 180,700 anti-fraud promotional activities were conducted, sending out 459 million pieces of promotional materials, reaching 591 million people. The *Beauty's Stratagem in the World of Anti-Fraud* was honored by the State Council Joint Office as one of the Top Ten National Quality Anti-Fraud Short Videos.



China Mobile proactively collaborated with local police stations in Jiaxing to conduct anti-fraud propaganda activities on campuses.

### Modem Fraud Crackdown Operation: Technical Management Combined with Police-Enterprise Cooperation

To tackle the problem of foreign criminals using wireless voice gateways (GoIP) and VoIP technology within the country for scam calls, the Company has developed a cutting-edge GoIP monitoring system. This tool swiftly identifies and addresses fraud-linked SIM cards and the locations housing such devices, enabling quick action against these fraud mechanisms.

scam calls were intercepted

**371** million

scam dens were cracked down with the collaboration with public security organizations

**7,890**

scam text messages were intercepted

**279** million

related to scams were seized

**20,600** devices

scam websites were intercepted

**8.8924** million

criminals were arrested

**15,000**

of the spread of scam-related apps being blocked

**1.9798** million times

financial losses to the public was prevented

RMB **24.012** billion

sent anti-fraud public welfare text messages through 10086

**27.041** billion

The case study *Innovative Intelligence Monitoring and Management, Fortifying Cyberspace Information Security Defenses* was selected as an Enterprise ESG Outstanding Case by the China Enterprise Reform and Development Research Association.