



DIGITAL EMPOWERMENT

Currently, AI is leading the new round of sci-tech revolution. The rapid development of generative large models accelerates the entrance to the AI era for digital technologies, thus bringing explosive growth of demands for computing power, and constantly giving rise to new scenes, new business forms and new models. Firmly seizing the development opportunities, China Telecom insists on the principle of network as foundation and cloud as the core, grasps the development direction of AI, and deepens the construction of digital information infrastructure with cloud-network integration as the core feature. The Company builds outstanding brands with high-quality digital products and services, to boost in-depth integration of digital technology and the real economy and empower economic and social digital transformation.



CONSOLIDATING DIGITAL FOUNDATION

The Company deepens cloud-network integration to promote the intelligent evolution and upgrade of digital information infrastructure.

Upgrades of various networks

The Company accelerates the construction of dual-Gigabit networks. In terms of mobile network, the Company worked together with the industrial chain to achieve breakthroughs in difficult technologies such as 5G multi-frequency coordinated networking and large bandwidth sharing. The Company fully completed the construction of the world's first co-built and co-shared superior 5G SA (stand alone) network with the largest scale. The number of 5G co-shared base stations in use exceeded 1.21 million, achieving contiguous coverage for townships and above and effective coverage for developed administrative villages. In terms of broadband network, the Company completed the construction of the world's largest Gigabit fibre network with 1.56 million newly-built 10G PON (passive optical network) ports, effectively supporting the development of Gigabit services in thousands of cities.

The Company accelerates the all-fibre upgrade of networks. The Company has built a domestic optical cable backbone network with a total length of more than 350,000 kilometres and carried out large-scale deployment of G.654E new optical fibre and cable to support the deployment of long-distance and high-speed transmission network. The Company further deepened the regional integrated networking and built a world-leading interconnected network of broadband, with the average latency reducing by 14%. The superior government-enterprise OTN (optical transmission network) network covered all cities nationwide and key China Telecom Cloud resource pools. The new metropolitan area network covered 22 provinces and 77 cities, enabling the building of edge ecology.



【“Water, land and air” three-dimensional network signal coverage of the Yangtze River channel】

Hubei branch and Yangtze River Administration of Navigation Affairs conducted 5G networking research along waters of the Yangtze River, comprehensively improved 5G signal coverage of the Yangtze River waters from the three dimensions of water, land and air, and achieved 5G + satellite + WiFi three-dimensional coverage along Yangtze River waters in Tianxingzhou, Wuhan. This created a network transmission channel that is “high speed, mobile, secure and ubiquitous” to support the launch of innovative applications such as digital twin, unmanned drone petrol, one ship one number, to boost the Yangtze River protection and high-quality development of relevant regions.



【Supporting Shenzhen to build a “super-fast pioneer city”】

In 2023, Shenzhen issued the *Action Plan for Construction of A Super-fast Pioneer City of Shenzhen* (《深圳市極速先鋒城市建設行動計劃》), which proposed to build a super broadband network with high speed, large capacity and low latency to realise the network construction goals of “dual-Gigabit, all-fibre network, 1 millisecond and Internet of Everything”, and become a domestic No.1 and world-leading super-fast pioneer city.

Shenzhen branch fully completed various indicators of the construction of a super-fast pioneer city ahead of schedule. In terms of pioneer access, the total number of 5G base stations reached nearly 25,000, surpassing the annual target. In terms of pioneer computing power, it built Greater Bay Area's first 400G all-fibre transmission capacity network, forming a “5 + 3 + 65” core computing power circle. In terms of pioneer sensing, it was the first to build a smart city sensing system of “5G + AIoT + digital twin capability” and completed the industry's first “5G + satellite” network integrating land, sea, air and space to boost the low-altitude economic development. In terms of pioneer applications, “dual-Gigabit” network applications were integrated into various social and economic fields. 16 network application innovations were selected as the first batch of “pioneer application” excellent cases in Shenzhen, continuously building the ecology of Industrial Digitalisation.

Ubiquitous computing services

The Company consistently implemented the national project of “East-to-West Computing Resource Transfer” and further optimised the “2(2)+4+31+X+0” computing power layout, with newly added intelligent computing power reaching 8.1 EFLOPS, bringing the total to 11 EFLOPS.

More than 700 IDC sites, 900 edge DCs and 36,000 integrated access offices have been built across the country, forming a “centre + edge” integrated layout of datacentres. The total number of IDC cabinets reached 563,000, with an increase of 50,000 during the year, maintaining the industry-leading position in terms of scale.

The Company built China Telecom Cloud 4.0 resource pools with large scale and multiple availability zones (AZs) in key areas such as Beijing-Tianjin-Hebei, the Yangtze River Delta, Guangdong-Hong Kong-Macau, Chengdu-Chongqing. The Company promoted China Telecom Cloud's expansion into Hong Kong, Macau and the Asia-Pacific region to provide customers with distributed cloud services with global coverage, efficiently-centralised high efficiency, as well as ultra-low latency.

The Company accelerated the construction of intelligent computing infrastructure, with nodes in Beijing, Shanghai, Jiangsu, Ningxia, Inner Mongolia and Guizhou possessing training capability of over a thousand GPUs.



【Lingang Public Intelligent Computing Service Platform was officially launched】

In 2023, the Intelligent Computing Conference of “AI Leading the Era and Computing Power Driving the Future” was held in Lingang New Area of Shanghai Free Trade Zone, where China Telecom Lingang Public Intelligent Computing Service Platform and domestic GPU Joint Innovation Base were officially launched.

The Company established Lingang Computing Power (Shanghai) Technology Co., Ltd. and carried out the construction of Lingang Computing Power Park. It plans to deploy 40,000 high-capacity cabinets suitable for intelligent computing and supercomputing in batches, which will provide better quality and more inclusive intelligent computing public services for numerous enterprises in Lingang, Shanghai and the Yangtze River Delta.



In terms of cloud capabilities, Zijin DPU (Data Processing Unit) 2.0 completed the R&D and launch of network, storage and virtualised software and hardware integration technologies, and CTyunOS (proprietary cloud server operating system) supported the launch of more than 30 core businesses, with the aggregate number of deployments reaching 100,000 units. Distributed cloud operating system TeleCloudOS 4.0 (China Telecom Cloud operating system) achieved breakthroughs in technologies such as unified management and scheduling of large-scale heterogeneous computing resources, all-domain and interconnected scheduling massive distributed storage, large-scale high-performance distributed cloud network. The R&D achievements won the first prize of Science and Technology Award of China Institute of Communications, and were selected as the innovative achievements in the field of fundamental software by the SASAC.

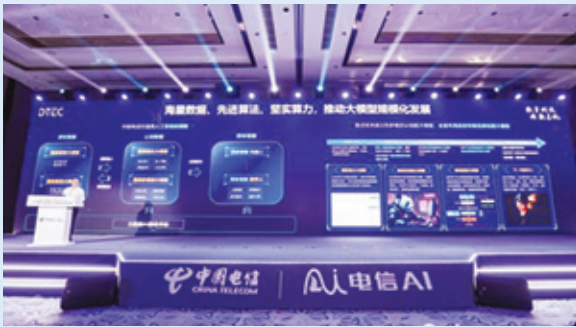
EMPOWERING DIGITAL TRANSFORMATION

The Company proactively seizes opportunities arising from the new-round of sci-tech revolution and industrial transformation and further strengthens sci-tech innovation. The Company continued to enhance the capabilities of digital products and platforms supply, to constantly promote the digital transformation of the economy and society.

Industrial Digitisation

Creating large vertical models

Leveraging its own edges in computing power, data, and industry application, the Company conducted proprietary R&D of Xingchen large language model relying on its AI capabilities and jointly developed large models for key industry use cases and segment use cases with partners. The Company created "1 + N + M" (1 refers to the general-purpose large foundation model, N refers to the number of large vertical models, M refers to the number of large models for own use) Xingchen large models series product portfolio and rolled out 12 large vertical models in vertical fields such as government administration, education and transportation. The "Xingchen MaaS (Model as a Service) platform" was launched to provide customers with large model services integrating intelligent computing power, general-purpose large models, large vertical models, capability tools and data sets.



【Release of Xingchen - large education/grassroots governance models】

Based on the massive service data accumulation, the Company trained and carried out commercial trial of a batch of large vertical models.

Xingchen large education model can output "precision large teaching model" equivalent to the national special-grade teachers in Chinese and English writing, which can complete scoring, comments and improvement suggestions on a writing in Chinese and English within 15 seconds, enabling each writing of each student to enjoy guidance from special-grade teachers. The time for scoring and review by teachers for each exam writing can be shortened from 4 hours to 30 minutes. This large model has been applied for 12,000 teachers and students in Henan province.

Xingchen large grassroots governance model has been launched and applied in a number of grassroots communities in Fujian and Jiangxi provinces, which mainly supports three scenes. Firstly, it acts as a dispute mediation assistant. With intelligent matching of 14 kinds of mediation means, the grassroots mediators can quickly get support when they come across difficulties and questions, with the success rate of mediation increasing by more than two times. Secondly, it acts as a legal expertise that equips each grassroots mediator with an "online legal adviser". Thirdly, it acts as an official document assistant that supports intelligent output of 7 categories of official documents. And it takes only 10 minutes to complete an official document report that used to take 1 hour.



【The first intelligent computing power vehicle】

The Company, together with Huawei, Fiberhome Communication and other partners launched the nation's first intelligent computing power vehicle solution, to provide enterprises with "intelligent computing power supply + power + model training" integrated solutions through the on-board container datacentres. A computing power vehicle can carry eight heterogeneous AI computing power server bases, providing 64 GPUs with about 20 PFLOPS AI computing power, supporting Ascend AI computing power service as well as training and fine-tuning of a large model at ten-billion parameter grade. Through multi-vehicle cascade, it can dynamically expand into an intelligent computing power vehicle cluster to provide larger scale computing power resources.

The intelligent computing power vehicle solution was awarded as "2023 Digital Excellent Solution" by Communication World.

"An intelligent computing power vehicle is like a 'mobile computing facility room', which can be on call to meet the 24-hour deployment within the province as well as the national cross-regional scheduling. It can also ensure data security. Privacy and security of data can be safeguarded through independent networking operation or connection only with the internal network of customers."

— Zhao Yiyang, employee of China Telecom Suzhou branch



Empowering industrial transformation and upgrades

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



SMART MANUFACTURING



【Enabling Nio to roll off a whole vehicle in 70 seconds】

Nio is a global intelligent electric vehicle company. The general assembly workshop of its advanced manufacturing base is located in Xinqiao Intelligent Electric Vehicle Industrial Park in Hefei. Anhui branch has applied 5G and Internet of Things (IoT) technologies to help NiO continue to promote the digital transformation of its factory.

5G electronic tightening gun, which achieves rapid positioning and accurate adjustment of auto parts and components and uploads the “tightening data” to the database in real time to facilitate subsequent traceability.

5G visual detection equipment, which achieves the real-time transmission server with high-definition images, timely analyses the picture data through AI algorithms, and realises the refined management of quality specifications of parts and components.

5G automatic guided vehicle (AGV), which accepts unified dispatching command with connection to the logistics management platform through 5G private network, quickly and efficiently transports materials, reduces the incidence of safety accidents and improves the logistics efficiency of the factory.



【Building a benchmark for smart manufacturing to co-build a 5G smart factory】

In order to enhance the brand competitiveness, Weichai Torch Technology Co., Ltd. (“Weichai Torch”) cooperated with Hunan branch to jointly build a 5G smart factory. Through the cooperation with Hunan branch, Weichai Torch gradually introduced advanced smart manufacturing means such as 5G customised network, 5G data collection gateway and control platform, AMR handling robot based on lidar, vision, texture positioning technologies, AI visual appearance detection, to support the digital transformation of the enterprise.



SMART AGRICULTURE



【Supporting Huiliang Group to build a smart agriculture demonstration base】

Huiliang Group's 5G + IoT Smart Agriculture Demonstration Base is the only glutinous rice digital industrial park in Eastern China, which integrates production, storage, processing, logistics, trading and cultural display.

Bengbu branch gave full play to its technological advantages in IoT, block chain, 5G and other aspects to support Huiliang Group to build the glutinous rice demonstration base. A seedling monitoring system was built to monitor the growth of seedlings and collect growth cycle data to provide real and effective data for the traceability system. A micro weather station was set up to monitor data such as wind speed, wind direction and light duration in real time, and transmit the data to the management platform through the IoT card. Soil moisture sensors were installed to analyse and detect pH value and soil nutrient content.

At the same time, relying on the technical capabilities of China Telecom Cloud, the Company collected and analysed massive data to realise automatic sensing of crop production information, monitoring and early warning, remote diagnosis, command and decision-making, and credible traceability and supervision of product quality and safety, and initially formed a digital agricultural application model with coordination of measurement, control, management.

“Through this system, we can use unmanned drones, assisted driving rice transplanters, seeders and fertilizer applicators to realise a network for unmanned farming and the organic integration of good farmland, good grain, good methods, good technology with Internet intelligence.”

— Zhou Anxiang, chairman of Huiliang Wisdom Agriculture Co., Ltd.





【Creating a “block chain + vegetable” innovation demonstration model】

With block chain technology as the core while integrating technologies such as 5G, big data, AI, IoT, Weifang branch joined hands with Weifang Bureau of Agriculture and Rural Areas to build the first “block chain + leek” quality safety application platform, achieving trusted digital management of the entire industry chain of vegetables, improving the level of vegetables quality supervision, and promoting the digitalisation process of the vegetable industry.

At the planting base, there are intelligent facilities and equipment such as intelligent machine integrating watering and fertilizer, monitoring cameras, IoT sensors, weather stations for the comprehensive chain management of the whole leek base, achieving the trusted digital management of the whole industry chain of vegetables from planting, input management, picking, transportation and sales, with visible, manageable and controllable data. Connecting with the online sales platforms, multi-field and cross-field cooperation has been conducted to build the operation system, and the “Traceable Vegetable Zone” was launched on China Telecom’s Bestpay app to promote the conversion of the “block chain + vegetable” integrated pilot achievements.



SMART HEALTHCARE



【Focusing on digitisation in the field of healthcare】

In June 2023, China Telecom Yikang Technology Co., Ltd. (中電信翼康科技有限公司) was set up, focusing on building digital platform capabilities in the fields of healthcare, medical care and health. Based on China Telecom’s capabilities and the healthcare Big Data platform with lake-warehouse integrated architecture, it built digital platforms such as regional healthcare, public medical care, smart hospitals, smart medical insurance to provide comprehensive informatised service capabilities for healthcare and medical care institutions at all levels.

In November 2023, the Company launched the industry’s first large medical insurance model. The Company provides the general public with intelligent services such as cross-region medical treatment, medical insurance fund reimbursement settlement, inquiry of related disease codes, and suggestions on medical insurance declaration information based on the medical insurance settlement data and the data in the “two databases” of the National Healthcare Security Administration.



【Opening up the “last mile” of the informatisation roadmap of primary healthcare】

Relying on the “China Telecom Cloud Computer” technology, Hengyang branch built an unified and efficient primary healthcare service platform, providing village doctors with high quality, fast, secure, convenient and systematic service, which enabled functions such as primary healthcare, healthcare follow-up, health records, electronic medical records, drug management, and medical insurance reimbursement, to facilitate the opening up of the “last mile” of the informatisation roadmap of primary healthcare.



SMART EDUCATION



【Facilitating quality and balanced educational resources through “Education Community”】

In 2023, Zhejiang branch cooperated with the Department of Education of Zhejiang Province to co-build an “Education Community” application platform. Based on this platform, Hangzhou Xingzhou Primary School and Central Primary School at Fengshuling Town of Chun’an County, carried out a series of cooperative events, including mentoring pair, off-site follow-up exercise, online and offline demonstration courses, etc., to convey advanced education concepts, methods and resources to the township school, contributing to the rapid growth of township school teachers and narrowing the education gap.



SMART TRANSPORTATION



【Enabling “smart civil aviation” to improve in-flight Internet experience】

The Company continued to improve the “land, sea, air and space” integrated communications network construction, completed the smooth transition of the aviation Internet from traditional satellites to high-throughput satellite networks, and accelerated the pace of in-flight Internet upgrade and intelligent cabins construction.

In 2023, satellite company released a new aviation Internet product (public version), offering in-flight Internet services for passengers with faster speed and better user experience. It has established a joint innovation mechanism with airlines to explore in-flight Internet products and improve passenger experience. By the end of 2023, it had provided in-flight Internet services to 665,000 flights and more than 17.5 million passengers.



SMART CULTURE AND TOURISM



【Unlocking new models for events viewing, where there are Internet and cloud there are hottest venues】

On 28 July 2023, the 31st Summer Universiade opened at the Dong'anhu Sports Park in Chengdu. Relying on China Telecom's applications and platforms such as 5G+8K+AI+VR/AR, the Universiade, with the help of innovative technologies such as ultra-HD video and free perspective, turned all premises with Internet into the hottest viewing stadiums.

Under the smart viewing mode, the Company adopted four-way six-eye cameras to achieve panoramic coverage of stadiums. 4K VR live broadcast realistically and perfectly restored the movement details, which were presented through three types of screens including small mobile phone screens, large TV screens and VR all-in-one. The audience could rotate at any angle in the free perspective live broadcasting mode and watch the movements of the athletes in an all-round way.

Digital society

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

Upgrade of digital home

The Company upgraded the digital home products portfolio to meet the constantly upgraded needs of customers for a better life. Home network was upgraded to all-fibre networking, providing green and energy-saving home network services. IPTV was upgraded from large-screen content to multi-screen interaction, creating an e-Surfing HD digital entertainment centre to provide high-quality video, education, games and other viewing and entertainment experience. The Company prompted the scene-based upgrade of Whole-home Intelligence to create intelligent scenes such as home security, elderly care and home appliance control, achieving the integration and linkage of digital home, smart community and digital village, and further integrating into digital cities.



【Breakthrough was made in the scale development of home business】

The e-Surfing Butler App, China Telecom's unified portal for digital home service, had 180 million subscribers. The total number of whole-home WiFi subscribers reached 140 million, of which FTTR (Fiber to The Room, all-fibre WiFi) subscribers exceeded 2.2 million. The number of e-Surfing HD subscribers reached 140 million, and the number of household ubiquitous smart terminal connections exceeded 330 million.

Operating smart communities

The Company strove to build e-Surfing smart communities tailored to the public security, political and legal affairs as well as grassroots government such as subdistricts to achieve “big governance” leveraging “small grid” by providing grid management, personnel management, emergency notification and other services. The Company provided intelligent access control, AI monitoring and other intelligent management tools for properties, condensing “big wisdom” into “small home”. For residents, by providing smart healthcare and 15-minute life circle services, the Company increased the level of convenience of residents’ lives, achieving “big well-being” through “small community”.



【Big wisdom in small community, China Telecom 5G “added data” to a better life】

In 2023, to support Loudi City, Hunan to build new smart community, the Company leveraged a number of digital and intelligent technologies and launched e-Surfing smart community platform integrating six scenes including property management, intelligent access control, vehicle recognition, video monitoring, firefighting and community governance, and smart services, forming integrated information services while injecting intelligence and providing empowerment to community governance.



Strengthening the e-Surfing Internet of Video Things (loVT)

The Company proactively developed the capability foundation of “one network, one cloud and one platform” for loVT and created a variety of industry applications such as security smart eye, smart urban management, healthcare supervision, smart park, emergency and environmental protection, to provide industry-leading loVT products and services. At present, the number of connected devices exceeds 60 million. The Company established e-Surfing loVT Technology Co., Ltd. (天翼視聯科技有限公司) to accelerate the construction of a national unified new video service infrastructure, and to build a national digital platform serving the economic and social development.



【Embracing supervision, “Kitchen Monitoring” brings lights into kitchens】

In 2023, Xinjiang branch proactively promoted “Internet + Kitchen Monitoring” project to provide integrated and visual video supervision platform for market supervision units. Leveraging AI technologies to assist supervision, the Company preset algorithms for various scenes such as chef hat, masks, smoking, regional intrusion and rat identification that can identify and capture inappropriate behaviour in real time and timely remind the same, so as to enhance food safety management of catering enterprises.



【Video + AI enabled urban security and environmental governance】

Xiamen branch built e-Surfing loVT video combat system based on video Big Data, to enable security and environmental governance of Xiamen.

Safeguarding water safety: the Company created anti-drowning application solutions to effectively strengthen inspection of key waters of lakes, seas, rivers and ponds through the alarm linkage mode of “regional intrusion detection + intelligent voice broadcast”.

Standardising the use of electric bikes: the Company built the first electric bikes AI benchmark community in Xiamen to regulate the division of parking areas of electric bikes and prevent the fire hazard caused by charging electric bikes “upstairs”.

Supervising garbage classification: intelligent applications such as overflowing garbage cans and garbage on ground management were achieved by adopting “video visualisation, callout function, AI intelligent alarm” and other functions.

Digital government administration

Taking "intelligent governance" achieved by intelligent technologies as the main line and guided by cross-use-cases, the Company promoted urban governance resources optimisation and consolidation, departmental information data sharing and empowerment, segments and blocks linkage and comprehensive coordination, and highly unification of instruction at all levels. The Company built a urban governance system featured "management via a single website" with all-domain coverage, full-time awareness and efficient handling.



【Solving management difficulties to help urban transformation】

After the launch and application of the 5G + smart urban management platform of Yangbi County undertaken by Dali branch, hot and tough problems in urban management, such as "difficulty in managing the business operation on sidewalks, difficulty in managing random parking of vehicles, difficulty in managing garbage dumping, difficulty in supervising illegal buildings, less informatisation as for comprehensive law enforcement, low efficiency and high cost of human patrol and vehicle patrol" were effectively solved, realising intelligent transformation and upgrade of comprehensive urban management.

Centring on core business scenes of digital government administration, the Company developed proprietary large vertical models for government administration to support the government to "optimise service experience and improve work efficiency" and integrate the service resources of various government departments to provide all-round government administration services for citizens in terms of policy understanding, intelligent customer service, assistant service, and multimodal assessment.



【AI large model of services via a single website supported efficient service of 12345 government administration hotline】

Based on the large model capability of Xingchen government administration hotline, the Company achieved intelligent answering, automatic form filling and automatic order distribution of the government administration hotline, enhancing the efficiency of drafting analysis report of hotline operation and relieving the training pressure of operators, with the response rate improving from 94% to 99%. The time of work order filling has shortened from minutes to seconds, effectively promoting efficient service capability of the hotline and digital operation level.

PROVIDING HEARTFELT SERVICES TO CUSTOMERS

The Company adheres to the philosophy of “Customer First, Service Foremost” and strengthens service awareness to comprehensively foster a brand image of “China Telecom is trustworthy”.

Protecting the rights and interests of customers

The Company earnestly implemented the relevant laws and regulations, such as the *Civil Code of the People's Republic of China*, the *Law of the People's Republic of China on Protection of Consumer Rights and Interests*, the *Personal Information Protection Law of the People's Republic of China*, the *Advertising Law of the People's Republic of China* and the *Law of the People's Republic of China on Combating Telecom and Online Fraud*, enhanced relevant internal system such as the *Administrative Measures for China Telecom on Brand Publicity*, and provided products and services in compliance with laws and regulations. The Company regulated tariff management, continuously optimised the service registration form displayed to customers, enhanced the integrated review and approval procedure relating to the price of goods, and made prompt response to market and customers' demands. It also further strengthened the compliance management of advertising and publicity, regulated wordings for publicity, and clearly stipulated that false publicity, exaggerated publicity, and comparative publicity are strictly prohibited, thus effectively protecting rights and interest of customers.

The Company carried out integrated governance on communications fraud, harassing calls and spam text messages. The Company intercepted a total of 969 million text messages suspicious of fraud, blocked 17,717,500 domain names suspicious of fraud and shut down 52,500 involved numbers during the year by continuously enhancing its technical prevention capabilities and strengthening monitoring and handling of key businesses and other measures. The Company conducted integrated online and offline fraud-prevention campaigns, which cumulatively covered 27 million person-times in total. The Company also intercepted a total of 3.3 billion harassing calls and 3.2 billion spam text messages during the year by carrying out compliance management and control, continuously enhancing its technical prevention capabilities, and providing users with nuisance calls interception as they wish. The number of subscribers for “e-Surfing Anti-Harassment” business reached 330 million. Complaints on harassment calls and spam text messages of the Company remained at a low level in the industry.



【Building a firewall against fraud leveraging “Fraud-prevention Business Card” to help fraud-prevention for the whole society with technology】

Relying on the resource advantages of cloud-network of China Telecom, China Telecom Best Tone Information Service Co., Limited launched the “Fraud-prevention Business Card” product, to extensively integrate technological innovation and sci-tech achievements and build a “firewall” against fraud for users.

The product sends the brand real name protection and connecting risk warning pop-up window to users before they answer calls. The “combined measures” against fraud achieved accurate fraud-prevention knowledge popularisation while users could receive calls with a peace of mind.

Enhancing customer perception

Adhering to the customer-oriented principle, the Company takes customer perception as the starting point and goal of its work, constantly improves the service mechanism and service flow of "Customers have the final say", continuously enhances its digital and intelligent service capabilities and further improves customer perception and service reputation.

Comprehensively carrying out instant review after services

- The Company extended instant review after services to various touchpoints such as hotlines, sales outlets, APP and instalment and maintenance, forming customers service appraisal penetrating in three levels of provinces, municipalities and counties and vigorously driving improvement of service quality across all touchpoints.

Optimising network service quality

- The Company implemented user-level perception repairing, targeted 11,434 areas with poor wireless quality, and accurately repaired broadband perception for 43 million households, as such the network quality advantages have been consolidated.

Improving digital service capabilities

- The Company developed digital intelligent service tools based on Big Data and AI algorithms, and launched intelligent services use cases such as intelligent voice, digital human and robot. The Company promoted "remote counter" in scale, serving over 8.6 million users, with intelligent services accounting for more than 70%, making substantial breakthroughs in digital service capabilities.



【China Telecom digital human — Opening a new space for intelligent interaction】

The Company continued to explore a variety of digital human forms to improve the rate of replacement services, which opened a new space for intelligent interaction at the scale of tens of millions of users.

Service digital human: achieved the full coverage of service handling and marketing process, and the star of customer service digital human, Weiwei, provided more exclusive privileges and premium service channels.

Salesperson twin digital human: enabled one-click switch between staff live broadcast and digital human broadcast for outlet live broadcast, to achieve 7*24 hours uninterrupted livestreaming marketing.

Outlet terminal digital human: shared pressure of traditional service for salespersons.

Customised exhibition hall digital human: supported Chinese and English interaction and proprietary knowledge base loading, to provide users with intelligent butler services such as shopping, dining and entertainment.

The Company continued to optimise customer complaint management and promoted the continuous enhancement of network quality and optimisation of business rules and processes, with a focus on improving handling standards for network and business complaints and controlling the time limit of complaint handling. The Company carried out user claim cause analysis to comprehensively enhance source tracing and governance and effectively enhance full-process service quality and customer perception.

Building an outstanding brand

In 2023, leveraging the brand-led action, the Company built an outstanding brand with scientific management, leading value which is industry-leading. The Company consolidated brand with quality and prompted development with brand. The Company constantly strengthened corporate brand operation capability to constantly form new brand competitive advantages and strengthened the brand connotation as a service-oriented, technology-oriented and secured enterprise. The Company continued to build a sound brand building system, mature brand promotion capabilities and advanced global brand operation model. The Company issued the *China Telecom's Action Plan on Benchmarking the World-Leading Enterprise Brands* to promote the implementation of four initiatives, i.e. brand leading, brand management, key elements of brand influence and brand internationalisation.



Brand leading

- The Company set up a brand leading action working group to strengthen strategy guidance and incorporated brand building into deepening and enhancing actions of SOEs reforms and the outline of the 14th Five-Year Plan of the Company.
- The Company penetrated brand awareness into the whole process of production and operation to promote the formation of core competitiveness with brand reputation.



Brand management

- The Company continued to strengthen the construction of compliance management system, with a focus on the management and protection of brand assets.
- The Company innovated brand communication and strengthened the construction of new media matrix. Our new media indicator ranked second among central SOEs.



Key elements of brand influence

- The Company held the second Cloud Ecosystem Conference and 2023 Digital Technology Ecosystem Conference and participated in 510 China Brand Day Expo to publicise and report its strategic and sci-tech innovation achievements on all fronts.
- The Company continued to build the brands of China Telecom Cloud as the national cloud, accelerated the cultivation and expansion of AI, quantum, security, Big Data and other "specialised, refined, distinctive and innovative" brands, highlighting their "gold content" in technologies.



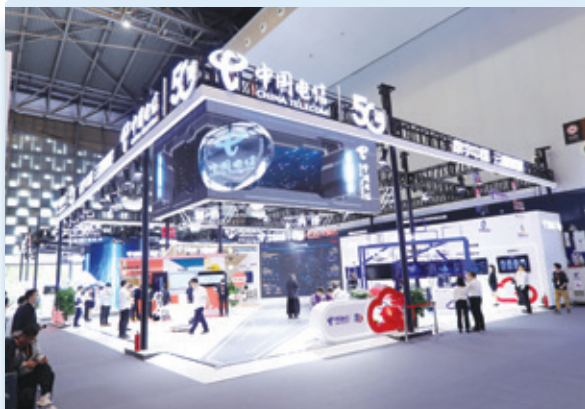
Brand internationalisation

- From a global perspective, the Company applied differentiation strategy into international brands and formulated the international brand strategic planning to improve its overseas communication ability.
- The Company carried out overseas trademark registration, proactively participated in international conferences in the industry, organised China Telecom Cloud overseas expansion conference, and built overseas social media communication matrix, to improve the overall operation capability of international brands.



【Brand-new upgrade of 5G brand】

Proactively grasping the development opportunities brought by 5G development, the Company promoted the integration of 5G network, cloud, AI and application in the new development stage of 5G, formulated the implementation plan of a brand-new 5G brand, and released the new 5G logo in the Digital Technology Ecosystem Conference, replacing "Hello" with "V", embodying the sublimation of our vision from acquaintance to value empowerment. V represents Vitality, Velocity, Vision, and more importantly, creating Value through technology to empower Victory in the future. With the brand-new 5G brand, the Company launched "six new" series of 5G new applications, i.e., new communications, new connection, new computing power, new intelligence, new security and new vision, to enhance communications and connection, improve computing power and security capabilities, realise AI intelligence and visual perception innovation, and meet more customer expectations.



【Serving Digital China with cloud intelligence, and creating a world-class brand with cloud-network integration】

Between 10 May 2023 and 14 May 2023, the National Development and Reform Commission, together with relevant departments and local governments, held the 2023 China Brand Day in Shanghai with the theme of "Chinese Brand Co-shared by the World; New Brand Power for Quality New Life".

During the period, with the theme of "Digital China Cloud Intelligence", the Company set up 23 exhibition items in three exhibition areas of service, technology and security, to display in an all-round way the brand image of China Telecom focusing on cloud-network integration, digital innovation, digital new consumption, intelligent life, aerial-ground integration, network and data security, quantum security and other capability clusters.