

Persist in green coordination,
co-build and co-share integrated
innovation achievements



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China Unicom thoroughly implements new development philosophies, continues to support rural revitalization, provides high-quality services for regional coordinated development, accelerates the green transformation of development methods, deepens integration and openness, enhances people's well-being, eliminates the digital divide, builds harmonious and mutually beneficial labour relations, and shares the results of social development with the people.



Measures adopted in 2024

- “Unicom Digital Village” platform covered 260,000 villages, serving 27.55 million village households.
- The Company promoted technological innovation and application in energy saving, carbon reduction, and zero carbon, with comprehensive energy consumption per unit of information flow decreasing by 27.9% compared to the end of the “13th Five-Year Plan” period.
- The capacity of submarine cables in the “Belt and Road” direction increased to 57.2T, and the capacity of cross-border land cables increased to 51.6T.
- The Company joined hands with partners to advance together, leveraging digital technology integration and innovation to drive industrial innovation and achieve new results in strategic cooperation.
- The Company actively engaged in public welfare undertakings, with 678 volunteer organisations and 103,778 registered volunteers.
- The Company cared for and supported the broad workforce, with an investment of RMB123 million for assisting employees in difficulty.



Actions to be taken in 2025

- The Company will focus on industrial revitalization, talent revitalization, cultural revitalization, ecological revitalization, and organisational revitalization to continuously create a new paradigm for comprehensive rural revitalization.
- The Company will continue to deepen 5G co-building and co-sharing, enhancing network coverage in key scenarios and user experience.
- The Company will embrace global partners with a more open attitude, continuously providing high-quality products, services, and solutions to global customers.
- The Company will leverage the governance advantages of integration and openness to embark on a path of high-quality development in collaboration with partners.
- The Company will continuously develop information accessibility technology products for assisting the disabled, suitable for various categories of disabled people, and deepen specialised elderly assistance services.
- The Company will continuously implement the promotion and incentive system, upgrade and optimise the talent management system, and create broader development opportunities for the employees.

Focusing on promoting coordinated development

China Unicom fully supports rural revitalization, solidly promotes the common prosperity of all people, intensifies the implementation of regional strategies, enhances regional development vitality, and contributes to the establishment of a complementary and high-quality regional economic landscape.

Promoting comprehensive rural revitalization

China Unicom is deeply advancing the national rural revitalization strategy by formulating an implementation plan for rural revitalization, promoting the construction of digital villages, carrying out consumption assistance, and strengthening the rural revitalization team. It is making positive contributions towards achieving the beautiful vision of comprehensive rural revitalization, strong agriculture, beautiful countryside, and prosperous farmers.

Implementing the rural revitalization strategy

China Unicom formulated the “Key Points of China Unicom 2024 Work to Assist Rural Revitalization”, focusing on industrial revitalization, talent revitalization, cultural revitalization, ecological revitalization, and organisational revitalization, continuously creating a new landscape for comprehensive rural revitalization.

Support the development and expansion of distinctive industries, contributing to industrial revitalization.

Strengthen training for frontline cadres to support talent revitalization.

Protect and inherit local ethnic culture, and assist in cultural revitalization.

Build livable and business-friendly beautiful villages to facilitate ecological revitalization.

Promote paired assistance and joint construction actions to support organisational revitalization.

Targeted Poverty Alleviation:

5

counties

52

townships

1,140

villages

Central units' targeted assistance work performance assessment continues to

Receive the highest rating of “Good” for 6 years

Stationed support personnel

1,572

people

The consumption assistance case was evaluated by the National Development and Reform Commission as

“National Consumption Assistance to Support Rural Revitalization Typical Case”

China Unicom held the 2024 Rural Revitalisation Promotion Conference in Chongqing, fully showcasing the latest achievements of China Unicom in supporting rural revitalisation through digital villages. At the meeting, Rural Revitalization Institute of Digital Industry Co., Ltd. was inaugurated, aiming to become a science and technology reform demonstration enterprise that benefits agriculture, rural areas, and farmers, satisfies the government, and leads the industry, contributing to the creation of a new engine for rural revitalization.



China Unicom 2024 Rural Revitalization Promotion Conference



The unveiling ceremony of Rural Revitalization Institute of Digital Industry Co., Ltd.

China Unicom Guizhou Branch assisted Ceheng County in Qianxinan Prefecture, Guizhou Province, in implementing three major projects: the restoration and protection of traditional architecture in ancient Buyi villages, the enhancement of village environmental landscapes, and the renovation of infrastructure. It invested aid funds to build the Banwan Village Cave Library, improving traditional public cultural infrastructure, supporting the development of Buyi intangible cultural heritage, helping local residents acquire unique handicraft skills, and creating employment for over 1,200 people.



China Unicom provided targeted assistance to Ceheng County in developing Buyi intangible cultural heritage, promoting rural revitalization.

Shaanxi Unicom has cumulatively dispatched 271 support cadres to build 28 new era civilization practise centres and other bases in the support villages, uniting the spiritual strength of the farmers. In Jingyang Anwu, the “First Metaverse Village” was established to promote the Qin merchant culture, utilising XR technology to disseminate historical culture, which has been warmly received by the “three rural people”.

Promoting the construction of digital villages

China Unicom seizes the strategic opportunity period for the development of digital villages to assist rural revitalization, leveraging digital intelligence advantages to enhance new momentum for rural revitalization, and continues to build the leading brand of digital villages. The Company focuses on addressing the shortcomings in rural infrastructure, improving the rural public service system, and strengthening support for rural construction to vigorously promote the construction of digital villages.

- Promoting universal rural telecommunications services. China Unicom is committed to promoting the “Broadband Frontier” construction, actively participating in the development of universal telecommunications services, and vigorously building fibre broadband and mobile networks in remote rural areas, meeting the network connection needs of over 30,000 remote rural areas with approximately 20 million people. Service channels are continuously extending coverage to more remote areas, offering more favourable tariff policies in township regions, significantly eliminating the digital divide between urban and remote rural areas.

- Accelerating the popularisation of rural digital governance. The “Unicom Digital Village” platform, starting from the actual needs of rural digital construction, empowers rural digital governance through centralised operation, scenario application innovation, and platform capability openness. Based on the Digital Village big screen, the platform focuses on aspects such as digital governance, digital economy, and services benefiting farmers. It creates nearly a hundred digital applications shared across the entire platform, promoting comprehensive agricultural upgrades, rural development, and supporting the realization of “cloud-based” production, “online” sales, “digital” lifestyle, and “AI” governance for agriculture, rural areas, and farmers.

Unicom's Digital Village Platform covered

260,000

administrative villages

Registered subscribers

27.551

million

Coverage rate of mobile network in township

100%

Coverage rate of mobile network in administrative villages

99%

In 2024 “Unicom Digital Village” platform innovatively introduced People's Daily featured content in various forms such as “General Secretary Time” and “Reading Newspapers in a Different Way” to convey mainstream values and demonstrates spiritual strength on the national digital rural large screens.



“Unicom Digital Village” platform digital screen displays People's Daily featured content

Suizhou Unicom in Hubei Province is extending the “Internet + Governance” initiative to rural areas by leveraging digital empowerment to create a “Smart Governance Sharing” demonstration village. Through AI camera monitoring, the governance of Guihua Village has transformed from human management to technological prevention, achieving informatization, precision, and intelligence in rural social governance, effectively injecting smart momentum into rural revitalization.



Digital Governance Platform in Guihua Village, Suizhou City, Hubei Province

China Unicom proactively serves and integrates into local economic and social development, innovatively conducting collective economic cooperation with 21,000 administrative villages, establishing communication cooperatives, and creating a new model of cooperative development for building, sharing, and benefiting from digital villages. In Jielong Town, Banan District, Chongqing, the “Telecommunications Cooperative” assisted over 600 families in upgrading to dual-gigabit networks, bringing an average annual income increase of RMB230,000 to the village collective.



Inaugural Meeting of the Chongqing Banan Jielong Town 'Communication Cooperative'

- Accelerating the upgrade of rural digital industries. The Company utilised comprehensive capabilities in “connectivity, computing, data, application, and security”, the “Big Data” and “Internet of Things” platforms for agriculture focus on key areas such as smart breeding, smart cultivation and farming, fisheries and fishery administration, and agricultural product traceability. They aimed to build an integrated smart agriculture sensing system and operational service capabilities, thereby facilitating the agricultural industry chain to achieve “good production, good sales, good management, and good service”.

1,500
agricultural service
projects in 2024

China Unicom carried out farmland project practice in Xianyu Township, Hetang District, Zhuzhou City, to promote local agricultural efficiency, farmers' income and rural prosperity.



Zhuzhou City Hetang District Agricultural Comprehensive Reform Management Platform Monitoring Equipment



Zhuzhou City Hetang District Agricultural Comprehensive Reform Comprehensive Management Platform Rural Governance Large Screen

Henan Zhumadian Unicom built a basic digital village module platform for the township where the targeted assistance village is located, aiding rural revitalization. In 2024, the digital rural platform cumulatively served 21,100 subscribers, with 345 new 5G base stations constructed in rural areas. Through broadband network upgrades, full coverage of 10 gigabit premium broadband network was achieved for administrative villages and above in rural regions.



Henan Zhumadian Unicom conducted in-depth research on cultivated land in the targeted assistance village.

Yunnan Unicom is contributing to the construction of a local smart coffee plantation base. By strengthening the construction of base planting management and promoting the digital smart and organic development of the coffee base, it has helped local farmers achieve transformation and upgrading of the coffee industry, improved farmers' planting skills and income levels, and injected new vitality into the local coffee industry.



Coffee Smart Plantation Base

- Accelerating the cultivation of rural digital talents. The Company established expert teams integrating government, industry, academia, research, and application for the Rural Revitalization Digital Industry Research Institute, Smart Agriculture Taskforce, and Smart Ocean Taskforce. With the goal of “training one digital village official per village and cultivating one rural broadcaster per village”, specialised training was organised, covering nearly 3 million participants. A total of 25,000 digital village officials were trained in full-time courses, and over 40,000 rural broadcasters were trained over two years. The live broadcasts assisted agriculture sales exceeding RMB180 million.

Rural revitalization live broadcast room.



China Unicom actively assisted targeted support and matched assistance regions. It carried out rural revitalization talent training to assist in training frontline cadres, rural revitalization leaders, and technical talents in poverty-stricken areas, forming a replicable and referable “rural revitalization training empowerment practise”.



Hold rural revitalization training classes

- Exploring the construction of a consumption assistance model. China Unicom comprehensively integrated and utilised internal and external corporate resources for consumption assistance, mobilising the entire group and various sectors of society to jointly promote consumption assistance. In 2024, a total of 260,000 employees participated in consumption assistance activities, with more than 700 units involved in centralised procurement. The “Assistance Mall” platform boosted agricultural product sales by RMB430 million.

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China Unicom actively purchases and promotes the sale of featured agricultural products from poverty alleviation areas, creating a strong support atmosphere.

Promoting Coordinated Regional Development

China Unicom thoroughly implements major national regional strategies and regional coordinated development strategies, fulfilling the mission of central enterprises and contributing to high-quality regional development through practical actions.

Serving major regional strategies

China Unicom actively implements major national regional strategies, focusing on the eight computing power hubs of “Eastern Data and Western Computing”, optimises the “5+4+31+X” resource deployment, accelerates the construction of high computing power data centres, and helps the Beijing-Tianjin-Hebei Region, the Yangtze River Delta, and the Guangdong-Hong Kong-Macao Greater Bay Area to better serve as sources of high-quality development, promoting regional integration and converged development.

Coordinated development of Beijing-Tianjin-Hebei

The Company accelerated the construction of the Beijing-Tianjin-Hebei integrated network, created a “Capital Half-Hour Technology Life Circle”, enhanced the deployment of computing power resources, established the Beijing Localised Independent Innovation Computing Power Centre “Jingxi Zhigu” in Mentougou, set up China Unicom (Huailai) Big Data Innovation Industry Co., Ltd., coordinated the scheduling and supply of computing power in the Beijing-Tianjin-Hebei region and Northern China, and strengthened the overall digital service capabilities of the Beijing-Tianjin-Hebei region.



China Unicom (Huailai) Big Data Innovation Industry Co., Ltd.

Yangtze River Delta Integration Development

- The Company continuously accelerated the construction of the 5G premium network, with more than 15,000 new outdoor 5G base stations added in three provinces and one city.
- The Company continuously improved the integrated data centre development in the Yangtze River Delta, assisting in the construction of a world-class low-carbon digital city cluster.

Serving the regional coordinated development strategy

China Unicom actively implements the national regional coordinated development strategy, fully leveraging its network and technological advantages to establish an integrated deployment with distinctive regional characteristics of “point-to-surface, coordinated linkage”. It strengthens the coordinated linkage between national hub nodes and non-national hub node areas, assisting in advancing the Western Development, comprehensive revitalization of the Northeast, rise of the Central Region, and leading development of the Eastern Region, forming a new paradigm of complementary advantages and coordinated development.

Rise of the Central Region

- The Company increased the advancement of Computing and Digital Smart Applications resource deployment to create integrated new data centres. In Shanxi Province, there is 1 provincial-level, 11 municipal-level, and 57 county-level data centres, with a total of over 10,000 cabinets, achieving a cloud pool “1+11+X” architecture; the first government-led, Unicom-invested, constructed and operated intelligent computing power cluster in the central region – the Zhengzhou Artificial Intelligence Computing Centre – was established, with the backbone cloud pool covering all 18 cities and prefectures in the province.
- The Company actively participated in the digital and intelligent construction of inland river terminals and navigation power hubs in river basins such as the Jiangxi section of the Yangtze River, and undertook large data centre infrastructure construction projects for Jiangxi Port Group Company.
- The Company become a support organization for network security and data security management in the field of industry and information technology in Hunan Province. The establishment of the Yongzhou Huisheng Footwear 5G+ digital factory has been recognised by the Hunan Provincial Government as the 2024 Hunan Province “5G+ Industrial Internet” model factory.

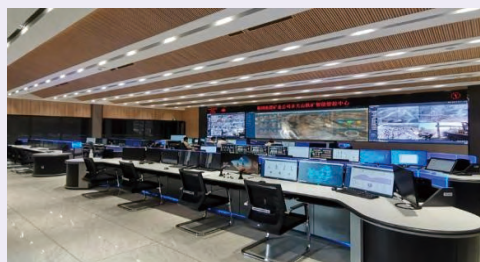


Under the empowerment of the China Unicom “Smart Fishery Cloud” platform, the Tonghu fishermen in Caidian have achieved a bountiful harvest.

Comprehensive revitalization of Northeastern China

- The Company strengthened the construction of digital infrastructure in regions such as Jilin, investing RMB140 million to plan and build 821 stations to ensure coverage of border areas and transportation trunk lines; established a “1+2+N” intelligent computing power layout in Harbin and Suihua, providing over 1,000 cabinets with high power density and low PUE value; deployed data centres in Jilin and Shengfu, investing RMB800 million to build the Changchun Big Data Industrial Park (Intelligent Computing Centre), forming a multi-level computing power supply capability.

- The Company made comprehensive efforts in multiple fields such as digital village, digital government affairs, digital governance, digital ecological environment, digital healthcare and smart transportation to advance projects in regions like Heilongjiang and Liaoning. These include the construction of beautiful villages, data guidance for modern industrial parks, upgrades to government extranet, government cloud services, natural disaster warning systems, ecological environment monitoring platforms, collaboration on medical insurance data elements, and the construction of medical communities and smart hospitals.



Ansteel Qidashan Mine Intelligent Control Centre

Accelerating the promotion of green development

Responding to global climate change

China Unicom accelerates the green transformation of its development approach, adopting proactive strategies to address climate change, and strictly complies with the Environmental Protection Law of the People's Republic of China and the Measures for the Supervision and Administration of Energy Conservation and Ecological Environmental Protection of Central Enterprises, among other laws and regulations related to environmental protection. It regularly assesses climate change-related risks and opportunities, and formulates environmental management goals and strategies.

Improving the green development governance system

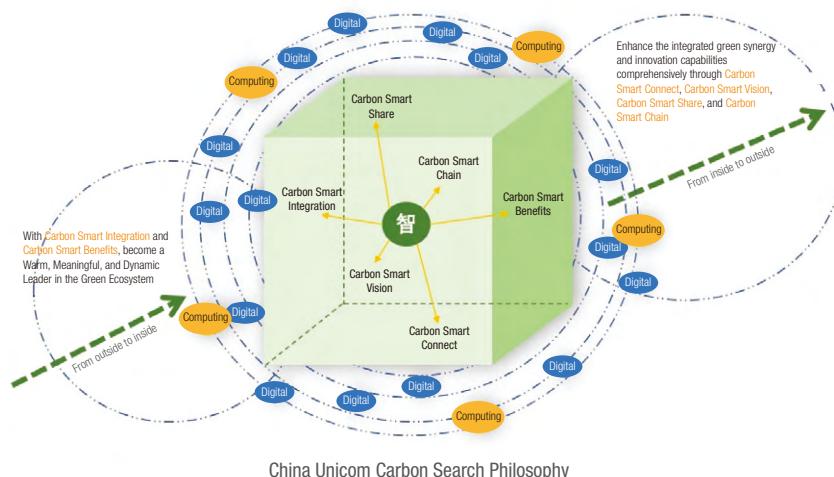
China Unicom integrates green development and climate change-related issue management into the corporate governance framework. The Board of Directors, as a decision-making body, fully plays its role in leading, coordinating, guiding, and overseeing. The Company management in charge of green, low carbon initiatives, energy conservation, and emission reduction work guides the establishment and improvement of the corporate energy-saving, carbon-reduction, and climate change management system, and periodically receives reports on climate governance, energy conservation, and emission reduction efforts. Each relevant unit takes respective responsibility, jointly advancing China Unicom's green integrated collaborative innovation capabilities to a new level.

China Unicom's Green Development Governance Structure and Supervision Responsibility

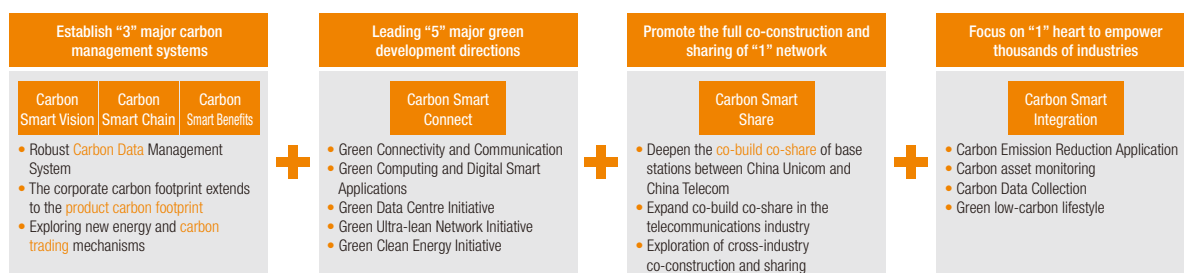
Governance Level	Responsible Organisation	Major Responsibilities
Top decision-making body	Board of Directors	<ul style="list-style-type: none"> Review and supervise significant matters related to long-term development strategies and safety and environmental protection in environmental management. When formulating operational plans and investment schemes, consider the impact of climate-related risks and opportunities.
Management Organisation	Network Operations Division	<ul style="list-style-type: none"> Take the lead in promoting and implementing the construction of the carbon peak and carbon neutrality capability system, establish and improve relevant management systems, and organise the implementation of energy-saving and carbon reduction work across the entire network. Periodically report to the board of directors or the responsible management on matters such as climate governance and energy conservation and emission reduction.
Execution and implementation	Responsible departments and relevant business departments for energy conservation and carbon reduction at headquarters/subsidiaries	<ul style="list-style-type: none"> Focus on areas such as carbon reduction in network infrastructure, carbon reduction in public services, and industry empowerment businesses, implement various environmental management measures, and promote the coordinated transformation and development of digitalization and greening.

Implementing green and low-carbon strategy deployment

China Unicom is deeply advancing the integration of green low-carbon and digital intelligence development. Based on the original “China Unicom ‘Peak Carbon-emission, Carbon-neutrality’ 14th Five-Year Action Plan”, the “China Unicom Carbon Search Green Action Plan (2024–2025)” has been newly upgraded, implementing the new “3+5+1+1” green action plan to lead the industry's green transformation and empower societal green development.



China Unicom Carbon Search Philosophy



Details of China Unicom's new "3+5+1+1" green actions

Strengthening climate risk and opportunity management

In response to the intensifying global climate change situation, China Unicom continuously strengthens the analysis, assessment, and management of risks and opportunities related to climate change. It incorporates climate change factors into the overall risk management process, conducts a comprehensive analysis of energy consumption information alongside the Company's overall development goals and operational conditions, and organises annual climate change risk identification assessments to formulate climate risk response measures.

China Unicom's Climate Change Risk and Opportunity Identification Process

- Collecting information on climate change-related risks and opportunities. Taking into account factors such as policies, regulations, strategies, technology, operations, and market, the Company collects, compiles, categorises, and evaluates relevant information.
- Assessing the impact of climate change. The Company evaluates the substantive impact of extreme weather conditions (such as earthquakes, floods, etc.) on communication network security, and analyses the types, scope, intensity, timing, and possibility of such impacts.
- Establishing a risk and opportunity matrix. Based on the likelihood and impact of climate change, the Company establishes a risk and opportunity matrix, and organises each professional department to identify related risks and opportunities according to categories such as network security operation and energy efficiency improvement, and changes in customer usage demands.
- Determining management methods and resource investment. Focusing on its overall development goals, the Company formulates a special plan for carbon peaking and carbon neutrality, promoting implementation from aspects such as dual carbon management, technological energy saving, and renewable energy application, scientifically and reasonably determining management methods and investment in energy-saving renovation projects.
- Defining substantial impact. Based on the scope, extent, and frequency of the impact, combined with relevant policy guidance and technology remediation development forecasts, the Company organises relevant professional departments to conduct a comprehensive assessment to define the substance of the impact.

Assessment results and countermeasures for climate change risks and opportunities

- In response to significant climate risks and opportunities, the Company conducted an in-depth assessment of the potential impact intensity, scope, and timing of various climate risks, as well as the possible financial implications for the business. A total of five risks and two opportunities were identified, with response measures formulated for each. The Company continuously improves its environmental management system, with several subsidiaries obtaining ISO 14001 certification. Among them, the short-term time range is 0 to 1 year, the medium-term is 1 to 5 years, and the long-term is over 5 years.

Climate Change Risks and Opportunities

Risk Category	Subcategory	Risk/Opportunity Description	Impact level	Location of occurrence	Time range
Transformation risk	Legal and Policy Risk	To achieve the goals of carbon peaking and carbon neutrality, stricter control measures for greenhouse gas emissions are being promoted.	Middle	The organisation itself, major suppliers, upstream and downstream of the supply chain	Short to medium term
	Technological risk	With the development of emerging high-density computing power business demands, there is an urgent need for breakthrough efficient carbon reduction and zero-carbon innovative technologies.	Middle	The organisation itself, major suppliers	Short to medium term
	Market and reputation risk	Consumer preferences have shifted towards choosing low-carbon products, which may raise market entry barrier.	Low	Downstream supply chain, end users	Medium to long-term
Physical risk	Acute risk	Floods, blizzards, earthquakes, and other extreme weather conditions have caused varying degrees of damage to the safe operation of communication networks.	Mid-to-high	The organisation itself	Short to medium term
	Chronic risk	Global warming affects the operation, maintenance, and power consumption of communication facilities, and rising sea levels cause damage to coastal equipment and facilities.	Low	The organisation itself	Long-term
Low-carbon opportunity	Resource efficiency	Use of low-carbon technologies to improve energy efficiency.	Medium	The organisation itself	Short to long term
	Products and services	Increased demand from customers for a green transformation of development.	Mid-to-high	End users	Short to long term

Impacts and countermeasures of risks and opportunities brought by climate change

Risk Category	Subcategory	Major Financial Impact	Main Business and Strategy Impact	Countermeasures
Transformation risk	Legal and Policy Risk	Increase in direct costs	Business Operation Adjustment	Actively follow up on policy research and regularly optimise key tasks related to dual carbon.
	Technological risk	Increase in direct costs	R&D and procurement	Research and develop new low-carbon technologies, enhance proprietary innovation capabilities, and promote the construction of a green supply chain.
	Market and reputation risk	Increase in indirect costs	Products and services	Pay attention to market changes, develop green and low-carbon products, promptly disclose the progress of the Company's ESG work, and establish a responsible brand image.
Physical risk	Acute risk	Increase in indirect costs, increase in capital expenditure	Infrastructure maintenance, products and services	Continuously improve risk prevention measures and emergency plans, and strengthen drills, etc.
	Chronic risk	Capital expenditure increased, with a special investment in energy conservation and emission reduction of RMB410 million	Infrastructure construction and maintenance	Continuously follow up on information collection and make necessary updates to risk prevention and emergency plans for relevant areas.
Low-carbon opportunity	Resource efficiency	Operating costs reduced, saving energy consumption 445,000 tonnes of standard coal	Operational efficiency improvement	Vigourously promote low-carbon technology and increase the use of clean energy.
	Products and services	Operating revenue increased	Products and services	Develop digital solutions for ecological protection and energy consumption management to support green development across society.

To ensure the effective implementation of the aforementioned response measures, the Company allocates resources to support talent development, assessment, and incentives, and establishes an emergency response plan for unexpected environmental incidents.

- The Company strengthens the talent pipeline in the field of green development, reasonably plans the talent structure, incorporates green development, energy-saving technologies, carbon peaking and carbon neutrality into training programmes, and focuses on enhancing the capabilities of the green development talent team.

- The Company establishes and improves the comprehensive assessment and evaluation mechanism for corporate green development and dual-carbon management, enhances the internal indicator warning and reporting mechanism, and incorporates carbon peak and carbon neutrality work into the assessment and evaluation system of branch (subsidiary) companies, clarifies the assessment rules, and strictly holds accountable and deducts points for negative incidents such as data falsification and environmental violations.

- The Company establishes an incentive mechanism for energy conservation and emission reduction management. Units with outstanding achievements in energy conservation and emission reduction will be commended and rewarded by the headquarters, and appropriate investment preference policies will be provided as necessary.

- An emergency response plan for environmental incidents has been established, and no issues of violations of laws and regulations in the environmental field occurred in 2024. The Company establishes and improves the system for identifying and addressing environmental safety hazards, conducts emergency drills, enhances early warning capabilities, and continuously refines the environmental management process from emergency preparedness, emergency response, post-event recovery, to information disclosure.

Scenario Simulation Analysis

To understand the potential impact of climate change risks on network facilities and business operations, and to assess adaptive capacity, the Company has established a scenario analysis framework to evaluate according to five types of climate scenarios.

Scenario 1: Extreme weather such as floods, snowstorms, and earthquakes impact the safe operation of communication networks.

Scenario 2: Chronic climate changes such as persistent high temperatures, changes in rainfall patterns, and rising sea levels caused by global warming impact the safe operation of communication networks in coastal areas.

Scenario 1 and Scenario 2 involve physical risks. As the scope and frequency of extreme weather events continue to increase, the potential damage to the secure operation of communication networks may also rise. It is necessary to continuously enhance the disaster resistance and recovery speed of communication network facilities, establish a more efficient emergency response mechanism and maintenance team, and adopt equipment and technologies with stronger disaster resistance capabilities.

Scenario 3: Extreme weather such as floods, snowstorms, and earthquakes affect subscribers travel, logistics distribution, and physical store operations.

Scenario 4: The popularisation of new green and low-carbon technologies impacts energy-saving retrofits and asset acquisitions.

Scenario 5: The growing demand from customers for industrial energy consumption management, digital empowerment of environmental governance, and green smart cities impacts the development of new products and new businesses.

Clarifying climate governance target indicators

The Company's greenhouse gas emissions are primarily associated with production and operational activities such as network operations, office and business operations, heating, canteens, and official vehicles. The main indicators used to measure and manage climate-related risks and opportunities include comprehensive energy consumption per unit of information flow and comprehensive energy consumption per unit of total telecommunications business volume. Among them, the type of greenhouse gas is carbon dioxide, and the sources mainly include indirect carbon dioxide emissions from electricity consumption and externally purchased heat, as well as direct carbon dioxide emissions from the consumption of petrol, diesel, natural gas, and coal.

Overall Objective

China Unicom promotes technological innovation and application in energy saving, carbon reduction, and zero carbon, elevating its green development to new heights and empowering society-wide low-carbon development to achieve significant results.

- During the "14th Five-Year Plan" period, the energy consumption and carbon emissions per unit of production capacity, as well as the energy consumption and carbon emissions per unit of revenue capacity, to improve year by year, with the increase in carbon emissions being lower than the increase in energy consumption.

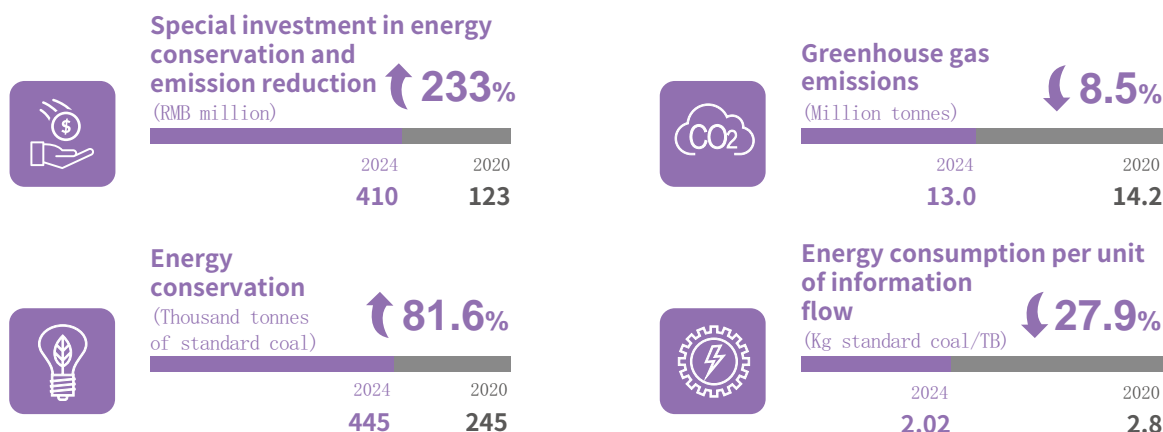
- By 2025, the comprehensive energy consumption per unit of telecommunications business volume will decrease by more than 15% compared to 2020, and the comprehensive energy consumption per unit of information flow will decrease by more than 20% compared to 2020, leading the overall development target of the industry.

Overall Progress

- The comprehensive energy consumption per unit of information flow decreased to 2.02 kg standard coal/TB, representing a reduction of 27.9% compared to the end of the "13th Five-Year Plan" period.

- 22 data centres were selected as national green data centres.

- The Company improved the energy saving and emission reduction statistics monitoring and reporting system, established a comprehensive energy saving and emission reduction statistics monitoring framework in each unit, strengthened the measurement and recording of energy consumption and pollutant emissions during production and operation processes, established relevant statistical ledgers, and prepared energy saving and emission reduction reports on a semi-annual and annual basis. Beijing, Shenzhen, and other branch companies have engaged third-party organisations to verify or certify data such as the Company's greenhouse gas emissions.



Continued deepening of co-build and co-share

Deepening China Unicom-China Telecom co-build and co-share

China Unicom, in collaboration with China Telecom, is advancing the co-build and co-share of 5G, 4G, and basic network resources. Together with the industry, they have achieved significant breakthroughs in shared technology, network architecture, operations, and management, providing a good example for global 5G scale construction and low-carbon emission reduction.

- Both parties jointly implemented the “Signal Upgrade”, promoted the enhancement of 5G coverage in key scenarios, advanced the deployment of 5G-A capability upgrades, and added a total of 165,000 new 5G mid-band base stations, with a cumulative total of 1.375 million in operation.
- On the basis of a single 4G mid-band network, both parties are continuously advancing the simplification of 4G low-traffic co-located sites. The number of shared 4G mid-band base stations exceeds 2 million, and over 100,000 4G stations have been simplified, effectively promoting network “reduction, quality improvement, and efficiency enhancement”.
- The Company carried out 5G-A capability upgrades, deploying carrier aggregation in key cities such as Beijing and certain hotspots, key scenarios, achieving RedCap scale coverage in over a hundred cities.

The co-build and co-share initiative has cumulatively saved the nation more than

RMB 370 billion

Savings in operating costs exceeded

RMB 43 billion/year

Reduced carbon emissions by more than

12 million tonnes/year

Launching the commercial promotion of 5G inter-network roaming across the entire industry

On 17 May 2024, China Unicom, together with China Mobile, China Telecom, and China Broadcasting Network, the four major telecom operators, jointly launched the commercial promotion of 5G inter-network roaming, further expanding 5G network sharing scope, reducing duplicate investment. When subscribers reach areas where the mobile number's operator does not have 5G network coverage, such as some remote areas, they can automatically connect to other operators' 5G networks. The entire process does not require changing SIM cards or phone numbers, and incurs no additional costs, effectively enhancing the overall efficiency of the 5G network and customer service perception.

Enhancing the energy efficiency of network infrastructure

China Unicom balances network development with safety and carbon reduction, issuing regulations such as the “Interim Measures for Energy Conservation and Emission Reduction Management of China Unicom”. It establishes a three-tier information and communication network energy-saving technology system based on network-level, site-level, and equipment-level structures. This system manages carbon emissions throughout the entire lifecycle of network planning, construction, maintenance, and operation, promoting green and low-carbon development of information and communication infrastructure.

Special investment in energy conservation and emission reduction

RMB 410 million

Building a green mobile network

Relying on the China Unicom Carbon Search Management Platform, the Company established and improved a “dual control” indicator system of total volume and intensity that aligns with the characteristics of telecommunications operators, consolidating the foundation for energy consumption and carbon emission data management. By combining visualisation methods with digital twins and AI support, the Company laid the groundwork for the output of intelligent management strategies, enhancing the level of dual-carbon digital management.

- The Company self-developed the 4G/5G collaborative intelligent energy-saving management platform and 5G intelligent power and management system based on AI and Big Data innovative technologies, adopting multiple measures to build a green 5G network.
- The Company issued the China Unicom 6G Green Network White Paper, proposing the development vision of “Ubiquitous Intelligence and Simplicity, Green Energy and Carbon Reduction”.
- Network planning fully considered environmental protection, avoiding the ecological protection red line.

Developing green data centres

The Company actively adopted various green and low-carbon technologies to create a greener data centre operational model.

China Unicom's Sanjiangyuan Big Data Base leverages Qinghai Province's abundant renewable energy resources such as photovoltaic power, adopting a combination of technology and market approaches to create a 100% green electricity intelligent computing integration demonstration park. With the three-fold coordination of "green electricity, green computing power, and green finance", it sets a new industry benchmark for green electricity intelligent computing with an average annual PUE below 1.17.



China Unicom Sanjiangyuan Big Data Base

Building a green and ultra-lean network

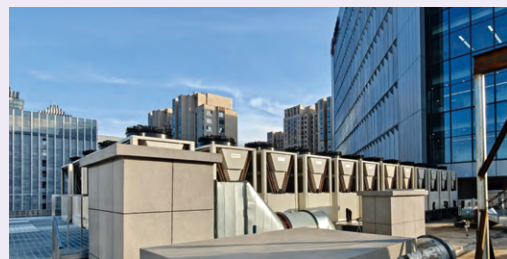
Since early 2020, China Unicom has fully implemented the streamlining of 2G and the reduction of 3G frequencies, refarming the vacated low-band and premium antenna resources to 4/5G, and launched a three-year special action for ultra-lean networks. The Company completed the creation of 61 ultra-lean network demonstration zones, with 30,000 architecture nodes consolidated nationwide, tens of thousands of outdated equipment streamlined and decommissioned, and an estimated annualised operating cost saving of RMB1.7 billion.

Guangxi Liuzhou Unicom utilises the Big Data Digital Planning Service Platform (DPSP) to address complex network operation planning issues and create an ultra-lean network. It vacated 66 machine rooms and 173 BBU equipment in Rong'an, Liuzhou, effectively reducing equipment energy consumption.

Accelerating energy-saving technology innovation

China Unicom leverages new technologies to enhance energy efficiency, self-developing power-saving and air-conditioning energy-saving technologies. "Unicom Lingbing" has applied for 9 patents, reaching an advanced domestic level. The self-developed high-efficiency energy-saving technology has been included in the "Recommended Catalogue of Energy-saving and Carbon-reduction Technologies and Equipment in the National Industrial and Information Technology Sector (2024 Edition)".

China Unicom relies on the R&D capabilities of China Information Technology Designing & Consulting Institute to develop proprietary VRM Intelligent dual-cycle (fluorine pump) multi-unit modular equipment room air-conditioning system, pioneering fluorine pump dual-loop technology and outdoor unit integration technology. The energy efficiency level reaches industry-leading standards, allowing installation under conditions of ultra-long distance, large height difference, and small footprint. In the Henan Unicom Zhengzhou Erchang Communication Cloud Data Centre Project, the PUE was reduced from 1.8 to 1.28. It was selected as the "2024 Outstanding ESG Case of Chinese Enterprises" and the "2024 Best Practise Case for Sustainable Development of Chinese Listed Companies".



Low-carbon technology applied at Qinghai Unicom Haihu Complex Building Hub Room Air Conditioner Outdoor Unit

Improving resource utilisation efficiency

China Unicom adheres to the circular economy principles of reduction, reuse, and recycle, enforcing strict control from the source of equipment procurement, advocating green consumption and green living concepts, promoting the use of green clean energy, and effectively enhancing the digitalization, intelligence, and greening levels of corporate operations. The Company's production process does not involve industrial wastewater and exhaust emissions, and it is not classified as a key pollution discharge unit.

Exploring new energy and carbon trading mechanisms

Actively responding to renewable energy development plans, the Company conducted research and pilot projects on various comprehensive energy utilisation technologies, actively participated in green electricity market trading, and advanced the deployment in carbon trading to gradually increase the proportion of renewable energy usage.

- The Company promoted the application of green clean energy, with a steady increase in the proportion of renewable energy consumption. According to equivalent sunlight duration and peak-valley electricity price differences, the Company promoted differentiated distributed photovoltaic power supply technology. We promoted pilot applications of various energy storage technologies such as lithium battery storage and vanadium redox flow battery storage, and used water-cooled energy storage technology in suitable data centres. We conducted research on comprehensive energy utilisation technologies such as waste heat recovery and multi-energy complementarity.

- The Company followed up on energy and carbon trading policies and market research. Beijing Unicom and Shenzhen Unicom have been included in the regional carbon trading market scope, conducted local carbon quota and CCER (China Certified Emission Reduction) trading, completed compliance on time, and guided green resource allocation.

Beijing Unicom actively fulfils its emission reduction obligations. According to the requirements of the Beijing Municipal Ecology and Environment Bureau that “the carbon emissions of key carbon emission units using green electricity purchased through market-based means are accounted as zero”. it consumed approximately 52 million kWh of green electricity in 2024, equivalent to a carbon reduction of about 31,000 tons (which can be used for carbon compliance). The Company was awarded the district-level green electricity application unit honour and received green electricity funding reward of RMB500,000.

Promoting the recycling of materials

The Company strictly abided by the Circular Economy Promotion Law of the People's Republic of China and other laws and regulations, and established management systems such as the China Unicom Fixed Asset Revitalisation Management Measures and the China Unicom Obsolete Material Disposal Management Regulations. In the areas of network construction, network operation and maintenance, and office operations, fixed assets are revitalised, waste materials are meticulously managed and effectively recycled, enhancing resource utilisation efficiency.

Promoting the revitalization and utilisation of fixed assets

- The Company closely integrated investment planning, material procurement, and asset disposal with the revitalization and utilisation of fixed assets. We prioritised the use of internal revitalization methods for incremental assets, implementing measures such as internal revitalization allocation, scrap for reuse, and asset transfer. We enhanced the integration of internal resources across departments and regions to achieve resource sharing and rational utilisation.
- The Company promoted the revitalization of network-related fixed assets, regularly organised business inspections and asset stocktaking based on the Company's overall network planning and asset efficiency to form revitalization lists, demand lists, and scrapping lists, and organised the implementation of revitalization.
- The Company promoted the revitalization of digital fixed assets, conducted testing and desensitisation of reused terminals, and utilised the asset revitalization platform to publicise inventory and manage usage, effectively improving the utilisation efficiency of hardware equipment such as servers, network devices, and terminals.

Classifying and processing waste

- The Company continuously strengthened the management of solid waste, revised and published the “China Unicom Scrap Material Disposal Management Regulations”, and regularly collected bidding information from the online bidding platforms and company-wide disposal data, categorising the status of material disposal to assist each branch (subsidiary) in improving disposal efficiency.
- The Company strengthened classification management. The generated waste was categorised by use into network type, digital type, etc., and by environmental impact into hazardous and non-hazardous waste. The hazardous waste primarily included storage batteries, fluorescent tubes, and toner cartridges, while non-hazardous waste mainly comprised office waste and telecommunications equipment and IT equipment not involving chemical waste.
- The Company continuously deepened the online auction disposal of scrapped materials, seamlessly integrated China Unicom's supply chain platform with internet auction platforms such as Alibaba Auction and Zhongbo Auction, achieved digital collaboration, publicly released information on China Unicom's scrapped materials, and promoted the dual circulation of internal enterprise resources and social renewable resources.
- In terms of the disposal of digital waste, a complete process has been established for assessing the reasons for material scrapping, submitting material scrapping applications, conducting technical identification and review of scrapped materials, and handling the accounting of scrapped materials. A monthly reporting and scheduling mechanism has been set up to strengthen the demagnetization and desensitisation treatment of storage media in scrapped equipment, promote closed-loop disposal of scrapped materials to prevent environmental pollution, and expedite the recovery of asset residual value.
- The Company promoted the reduction and harmless disposal of hazardous waste. When disposing of battery waste, the Company strictly followed environmental protection regulations, and had qualified recyclers with hazardous waste certificates bid for disposal. Additionally, the Company completed the transfer procedures according to local requirements. The Company recycled toner cartridges and ink cartridges, and when they could not be used, they were dismantled in a harmless manner, while materials such as metals and plastics were recycled and reused. Used lamp consumables were collected centrally by professionals for easy reuse.
- The Company strengthened the reduction and classification of non-hazardous office operational waste and advocated employees to reduce consumption at the source to minimise waste. The waste was disposed of according to the local waste classification regulations in each region. The headquarters and directly affiliated units adhered to the relevant standards for waste classification in Beijing. After classified collection, the waste was transported to the processing system for resource utilisation, incineration, or landfill. Large waste, construction waste, recyclables, and other dry waste undergo coordinated pretreatment; kitchen waste, garden waste, and other wet waste undergo coordinated resource treatment.

Income from disposal
and recycling

RMB **680**
million

Advocating for lightweight and reduced packaging

During the renovation and modification of the Unicom business outlets, including fixtures and fittings, environmentally friendly materials are strictly selected and used. The use of packaging materials is minimised through reasonable design, with a preference for degradable materials. Centralised procurement and unified packaging are implemented, and materials are recycled and reused after project completion, striving to reduce environmental impact while ensuring quality and safety.

Promoting green consumption

The Company collaborated with multiple mobile phone manufacturers to launch the “Unicom Trade-In” service, providing users with more affordable trade-in subsidies to enhance the convenience of recycling. Users can enjoy one-stop services at offline business outlets, establishing standards in areas such as “satisfactory pricing”, “secure data”, and “hassle-free service”, thereby accelerating the participation of idle old devices in the green recycling cycle.

Inner Mongolia Tongliao Unicom held 18 and 51 trade-in internal purchase events at self-operated and township offices, respectively.



Implementing green office

China Unicom advocates green office and green operations, promoting paperless office, online meetings, energy-saving renovations of office buildings, and other low-carbon measures. It encourages the concepts of green consumption and green living, creating a green and healthy office environment to reduce resource consumption in office activities.

- Enhancing the paperless service experience. China Unicom APP was upgraded to version 12.0, with 2.65 billion online transactions conducted throughout the year, issuing electronic invoices to save 19.64 million sheets of paper, enhancing service experience through green and low-carbon operations.

- Implementing paperless office. The Company implemented the digitization of official documents using the digital archive system, and continuously explored and promoted the filing and management of various types of electronic document files in a single set system.

- Strengthening water conservation management. The Company's production process primarily uses domestic water and water-cooled air conditioning circulation water. In terms of water-saving management of the air-conditioning system, the water supply equipment adopts a tiered pump group configuration, automatically controlling the number of water pumps started, and operates with variable frequency and speed. In terms of daily water conservation management at China Unicom Building, the renovation of the building's water system achieved 9% energy savings, and the renovation of domestic water supply pumps achieved energy savings of 2% to 5%. Rainwater and leftover drinking water are collected for recycling. Equipment maintenance and inspection are strengthened to prevent leakage. The Company establishes living waste water treatment system, pre-treats wastewater before discharge, ensuring compliance through discharge monitoring. The total water consumption for the year was approximately 15.68 million tonnes, with the headquarters and affiliated units discharging 260,000 tonnes of domestic waste.

- Strengthening office energy consumption management. China Unicom Building adopts a smart energy management system to intelligently manage daily energy consumption. Relying on the intelligent control algorithm for cold sources, the Company enhanced the data access and intelligent control levels of water, electricity, and environment, thereby reducing equipment energy consumption. The Company refined management of operation period, indoor temperature settings, etc., to reduce air conditioning energy consumption. We conducted “green lighting” activities, strengthened daily inspections and lighting management in office and public areas, and reduced lighting energy consumption.



China Unicom APP 12.0 new version brings a green and low-carbon service experience

Recycling of water at
headquarters and
affiliated units

206 tonnes



China Unicom accelerates the construction of its energy and carbon management operational system

Empowering low-carbon living

China Unicom, leveraging the account capabilities of its payment company, took the lead in launching the “Unicom Carbon Life” carbon inclusive application. The carbon emission reduction calculation model was the first to be certified by a national authoritative institution, filling the gap in the personal carbon account field within the telecommunications industry and empowering the green transformation of the lifestyle of hundreds of millions of subscribers. “Unicom Carbon Life” was selected into the “Collection of Excellent Green and Low-Carbon Practises of Central Enterprises” by the SASAC of the State Council and won 11 domestic and international honours including the International Finance Forum’s “5th IFF Global Green Finance Innovation Award”.



“Unicom Carbon Life” empowers the green transformation of subscribers lifestyle

Promoting green culture

In conjunction with the themes of the National Energy Conservation Publicity Week and the National Low-carbon Day, various promotional activities were organised, including “Low-carbon Micro Experience” activities for employees. News related to the achievements in green and low-carbon development was reported by multiple media outlets such as People’s Daily Online, People’s Posts and Telecommunications News, and Sina.com. Beijing, Chongqing, and other regions sent public service SMS messages promoting energy conservation to the general public, supporting society-wide energy conservation advocacy.



Guangdong Unicom Energy Saving Promotion Sign

Chongqing Unicom business outlet area energy saving publicity

Serving the joint development of the “Belt and Road”

China Unicom has continuously contributed to the construction of the Digital Silk Road, formulating and deeply implementing the Belt and Road Initiative action plan for seven consecutive years.

Striving to build an extensive international network system

China Unicom, as a major operator of the global backbone three-dimensional internet network and a key builder of the new digital infrastructure under the “Belt and Road” initiative, continues to contribute its strength to creating a new space for win-win development that is of higher level, more resilient, and more sustainable.

Renewing and upgrading digital infrastructure

China Unicom has revitalised and upgraded digital infrastructure, continuously promoting interconnectivity of network facilities. The number of overseas PoPs has reached 140, with 57 PoPs located along the Belt and Road regions, further enhancing the assurance capability of PoP network routes.

- In 2024, the allocated capacity of submarine cables in the direction of “Belt and Road” increased by 10.9T to 57.2T; in the direction of Asia, Africa and Europe, the capacity increased to 12T; and the capacity of cross-border land cables in mainland China increased to 51.6T.

- The Company vigorously promoted the balanced distribution of Internet traffic towards the ‘Belt and Road’ direction, with the proportion of traffic in the ‘Belt and Road’ direction increasing from 47% to 53%, an increase of 6 percentage points. The two major indicators of international internet packet loss rate and internet latency have maintained a good level.

- IP Transit focuses on Singapore, Bangkok, Phnom Penh, and other key cities along the “Belt and Road” initiative, as well as 15 other important hotspot cities, achieving comprehensive resource upgrade and optimisation to ensure that local access users can access over 95% of local content via the shortest path.

Continuously enhancing interconnection

China Unicom continuously expands its range of operational services and accelerates the enhancement and strengthening of branch offices along the “Belt and Road”. Currently, 39 branch offices have been established globally, including 24 in the Belt and Road regions, providing comprehensive coverage and support for the northern, central, and southern routes of the Belt and Road countries and regions.

- The Company strengthened the deployment in the Middle East, South America, Central Asia, and the Greater Bay Area, with the establishment of 6 new branches in the Belt and Road region, including the Peru Representative Office, Saudi Branch, Middle East Company, Uzbekistan Representative Office, Macau Company, and China Unicom (Hong Kong) Innovation Research Institute Limited.

Continue to provide excellent and high-quality global customer service

China Unicom continuously embraces global partners with a more open attitude, striving to provide high-quality products, services, and solutions to global customers, and jointly build a digital future.

Attentive service for global customers

China Unicom fully leverages its international network resource advantages and global operational service capabilities to continuously provide high-speed, stable network connectivity services and integrated information solutions combining computing, network, and data security for enterprises along the Belt and Road. It has become a trusted international digital value creator for its customers.

- Relying on China Unicom Digital Technology's Co. Ltd.'s self-developed capabilities, we continue to excel in iconic projects and “small but beautiful” projects, including the ASEAN Thailand Midea 5G Smart Factory project, Vietnam TCL Tongli ICT project, Cambodia Empire Factory and Office Building Weak Current Integration project, Middle East and Africa Egypt Suez Economic and Trade Cooperation project, Saudi Meituan Opening Package project, Russia Kingsoft Cloud project, etc. Throughout the year, we dispatched special teams of 30 people in total to companies in countries along the “Belt and Road” region, supporting the implementation of more than 20 projects.

- We provided customised services tailored to the different industry characteristics of corporate clients along the “Belt and Road” initiative, such as offering firewall, intrusion detection, DDoS security protection, IDC and supporting value-added services for the digital new media industry; for the financial and science and education industries, we provided financial premium network, disaster recovery backup data operations and maintenance, as well as overseas intelligent computing comprehensive services. These services fully meet the diverse needs of enterprises across various industries, helping corporate clients enhance operational efficiency and business continuity.

Supplying high-quality international products

China Unicom actively provides overseas customers with Connectivity and Communications and Computing and Digital Smart Applications products as well as global solution services, continuously enriching the structure of international business and enhancing the development of excellent products.

- In the consumer market, the Company developed the “Belt and Road” international roaming monthly package and multi-day package products. In the overseas mobile services, we used the “one card two numbers” products to serve Singapore, accelerating the reach across the entire ASEAN market.

- In the government-enterprise market, international express lines products have achieved business coverage between 31 provinces domestically and 12 cities in the “Belt and Road” regions, optimising the delivery period from 31 provinces to cities such as Singapore, Ho Chi Minh City, and Hanoi, reducing it from 26.2 days to 24.9 days.



China Unicom has newly launched the CUniq SG mobile service in Singapore, offering customers high-quality products and considerate services characterised by “more, faster, better, economical, and extensive”.



During the Paris Olympics, an 8-day roaming package for ten European countries was launched, including Italy, Russia, and other countries along the Belt and Road.

Continuously deepening international cooperation

China Unicom, guided by technological innovation and driven by open cooperation, continues to deepen strategic partnerships with ecological partners along the Belt and Road Initiative, jointly exploring new models of ecological cooperation in international markets.

- The Company continuously strengthened cooperation with overseas operators through inter-system API integration, joining the global operators' organisation MEF, and unifying the use of Sonata API as a standard, to achieve interconnectivity, continuously promote digital transformation, integrate resources among operators, expand the ecosystem, and enhance cooperation efficiency.
- China Unicom Global Limited (CUG) has developed the UP Programme international operator cooperation platform with “U” as the main theme, launching the UP Programme initiative. This involves partnering with like-minded partners to share successful experiences, advanced business models, and innovative applications through the UP Programme, exploring new trends, new directions, and new hotspots, thereby enhancing synergies and achieving mutual success in cooperation.

Carrying out compliance and integrity management

China Unicom conducts various activities overseas in compliance with laws and regulations, strictly adhering to local market order, business rules, social customs, and cultural practises. In 2024, CUG continued to deepen the construction of the overseas compliance management system, combining with the actual situation of overseas operations to effectively ensure global compliance operations.

- The Company continued to deepen the construction of the overseas compliance management system, conduct compliance training and risk identification and inspection based on the actual situation of overseas operations to ensure compliant operations.

- The Company safeguarded the legitimate rights and interests of local employees and addressed local employment issues. The number of local employees employed by CUG was 1,272, with a localization recruitment ratio of 98.07%.

- CUG successfully obtained the ISO 37301 international compliance management system standard certification.



China Unicom was awarded the 2024 GSMA Best Mobile Technology Breakthrough – Asia award



China Unicom was awarded the Best IoT Solution Award at the 2024 CC-Global Awards

Warmly providing meticulous overseas livelihood services

China Unicom has always adhered to its original intention of rooting in overseas markets, serving local communities, and enhancing people's well-being, injecting momentum into improving the welfare of people in countries along the Belt and Road.

Opening the door to cultural exchange

China Unicom actively engages in various cultural exchange activities overseas, striving to build a bridge connecting China and the world, fostering the broadest consensus for cooperation and mutual success among different civilizations, and contributing Unicom's strength to the construction of a community with a shared future for mankind.

In the United Kingdom

- The Company organised the “China Unicom Cultural Tour” event, inviting over 20 teachers and students from the University of Reading in the UK to visit and exchange at China Unicom (Europe) Operations Limited. Through various forms such as on-site visits, lecture sharing, and one-on-one interactions, the Company provided young students with practical opportunities and career guidance, allowing them to gain in-depth understanding of the latest developments and corporate culture of Chinese telecommunications companies overseas, building a bridge connecting education with practise, and China with the world.



Teachers and students from the University of Reading in the United Kingdom visited China Unicom Europe.

In Singapore

- The Company actively hosted the second “Unicom Rongsheng Investment Cup” Badminton Friendship Tournament and the second “Unicom Cup” Football Friendship Tournament organised by the Chinese Enterprises Association in Singapore, actively fulfilling the responsibilities of overseas central enterprises. Through a variety of cultural and sports activities, it provided a platform for communication among employees of Chinese enterprises, enriched their leisure life, strengthened their physical fitness, and united Chinese enterprises in Singapore. It deepened exchanges and cooperation between enterprises, enhanced cohesion, and contributed to the overseas development of Chinese enterprises with practical actions.



Group photo of the second “Unicom Rongsheng Merchants Cup” Badminton Friendship Tournament

In Cambodia

- The Company organised the sub-forum “China-Cambodia Digital Economy and Youth Development” of the “2024 China-Cambodia Youth Dialogue”, gathering outstanding student representatives from more than ten top universities in China and Cambodia, including China Foreign Affairs University and Royal University of Phnom Penh. The attending guests engaged in in-depth exchanges and interactions with the youth representatives, building a valuable bridge for mutual learning and sharing of wisdom between the youths of the two countries.



“China-Cambodia Digital Economy and Youth Development” event site

Heartwarming participation in overseas charity

China Unicom actively engages in diverse social welfare activities within local communities, effectively conveying the care and warmth of overseas central state-owned enterprises to local citizens.

On 11 April 2024, China Unicom held the “China Unicom Community Care – Beware of Telephone Scams Seminar” event in Hong Kong, aiming to enhance the community residents’ awareness of telephone fraud prevention and improve the public’s ability to use telecommunication services wisely. Residents expressed their sincere gratitude to China Unicom for its care and concern for community residents.



Hold the “China Unicom Community Care – Beware of Telephone Scams Seminar” event

On 29 June 2024, at the significant moment of celebrating the twenty-seventh anniversary of Hong Kong's return to the motherland, CUG Volunteer Team actively organised and carried out social welfare activities with the theme of "Promoting filial piety and extolling the kindness of parents, China Unicom Parents' Fun Day". This action has been highly recognised by the elderly and community residents, who expressed that China Unicom's care and concern made them feel the warmth and respect of society.



Carrying out the "Promoting Filial Piety and Extolling the Kindness of Parents, China Unicom Parents' Fun Day" social welfare activity

Jointly building a cooperative ecosystem

China Unicom adheres to the strategy of integrated innovation, leveraging the governance advantages of integration and openness, actively cultivating new growth drivers with partners, accelerating the development of new quality productivity, and jointly pursuing a path of high-quality development through collaboration and integration with partners.

Strengthening strategic cooperation management

China Unicom strengthened strategic cooperation under strategic guidance, further improved the strategic cooperation management system, continuously expanded the breadth and depth of strategic cooperation, and consistently promoted new achievements in high-level openness.

Improving the strategic cooperation management system

According to the "China Unicom Strategic Cooperation Management Measures", a tiered and classified management of group-level strategic cooperation is implemented, clarifying responsibility interfaces, standardising cooperation processes, and establishing a full life cycle closed-loop management of cooperation proposals, agreement drafting, cooperation signing, and execution evaluation. The Company established a sound cross-departmental coordination mechanism for strategic cooperation, formed a strategic cooperation working group to drive comprehensive enhancement of strategic cooperation through the effective implementation of major cooperation projects and regularly follow up on the progress of strategic cooperation work to ensure its successful implementation.

Expanding the breadth and depth of strategic cooperation

The Company focused on its main responsibilities and core businesses, comprehensively deepened open cooperation, established mutually beneficial partnerships with various partners, created new value for Connectivity and Communications, and explored new Blue Ocean for Computing and Digital Smart Applications. In 2024, China Unicom established strategic cooperation relationships with nearly 200 ministries and commissions, healthcare institutions, universities, central enterprises, and top industry clients in fields such as technological innovation, intelligent computing, digitalization, 5G applications, and global development.

China Unicom, in collaboration with China Agricultural University, launched the UniAI Fan Li model 2.0. This model is a paradigm of smart fishery, covering all dimensions and the entire life cycle of aquaculture, achieving full application scenario coverage for 59 species. The model integrates multi-modal data such as text, video, and images, realising intelligent automation of control and monitoring.



China Unicom, in collaboration with China Agricultural University, released the UniAI Fan Li Large Model 2.0

China Unicom, in collaboration with the National Museum, leveraged the advantages of digital twin, 3D modelling, and edge-cloud rendering technologies to apply metaverse technologies such as full-real image, digital humans, and VR virtual museums to the “Chinese Civilization Cloud Exhibition” project. This initiative created an online entrance for the “Ancient China Hall” of the National Museum, where digital intelligent guides lead audiences through an immersive exhibition experience.



The digital intelligence figure “Ai Wenwen” brings the audience on a magical journey of “stepping into a painting in the morning, dreaming back a thousand years in a day”.

Enhancing the integrated and open corporate image

- On 19 July 2024, “A Century of Legacy, Thirty Years of Innovation” China Unicom Partners Conference was successfully held. The conference, themed “Advancing Together for a New Intelligent Era”, proposed to focus on network innovation, technology innovation, and service innovation. It aims to further enhance cooperation efforts, expand cooperation areas, deepen cooperation levels, upgrade cooperation models, and improve cooperation standards, thereby uniting efforts from all sectors to jointly draw a new chapter of Chinese-style modernization.

- The China Unicom Partners Conference was attended by more than 38,000 participants, with over 100 partners signing agreements.

- China Unicom has established a unified Unicom Partner Portal as an important bridge between Unicom and its partners, externally providing an efficient, convenient and secure online centralized cooperation service platform to provide partners with a clear and convenient channel for cooperation, and internally realizing the sharing of business opportunities through the system’s interoperability of information, sharing of resources and business synergies.



China Unicom Partners Conference

Integration and Openness

<h3>Privilege Cooperation</h3> <p>Relying on the network resources and user base of Unicom, we join hands with partners to provide comprehensive and diversified privilege services</p> <p>View details</p>	<h3>Smart Home</h3> <p>“Network + Terminal + Application + Service” intelligent solution, empowering ecosystem partners to create a smart future together!</p> <p>View details</p>	<h3>Digital Village</h3> <p>Develop an ecological, shared, and open ‘Unicom Digital Village’ solution to support rural revitalization</p> <p>View details</p>	<h3>Payment Finance</h3> <p>Integrate innovative “communication + payment finance” business model, with a user base in the hundreds of millions and transaction scale in the hundreds of billions</p> <p>View details</p>	<h3>Terminal Ecology</h3> <p>Establish the China Unicom Ubiquitous Intelligent Connectivity Industry Cooperation Alliance, create a co-creation and sharing ecosystem, and promote win-win cooperation in the industry chain</p> <p>View details</p>	<h3>Unicom Cloud</h3> <p>Provide integrated computing power operation services to customers, creating the “First Computing Power Engine” for the digital economy</p> <p>View details</p>	<h3>Unicom Digital Technology</h3> <p>As the driving engine for the high-quality development of China Unicom’s Computing and Digital Smart Applications business, it is committed to becoming a “trusted digital transformation expert”</p> <p>View details</p>
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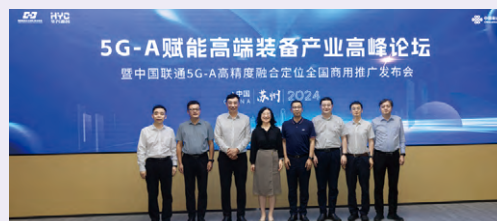
Unicom Partners Portal

Comprehensive deepening of technological cooperation

China Unicom focuses on areas such as computing power AI Network, big data, and artificial intelligence, engaging in strategic cooperation with national laboratories and universities, establishing dedicated R&D funds, jointly building diverse innovation platforms, conducting collaborative technological research, cultivating scientific and technological talents, promoting deep integration of government, industry, academia, research, and application, and building national strategic scientific and technological strength.

- The Company jointly established an innovation centre/joint laboratory with Beijing University of Posts and Telecommunications, Purple Mountain Laboratories, and Zhejiang University.
- The Company jointly established the Enterprise Innovation Development Joint Fund with the National Natural Science Foundation (first batch of central enterprises in 2024).
- The Company led the establishment of the Ministry of Culture and Tourism's Tourist Behaviour Monitoring and Decision Service Technology Innovation Centre.
- The Company participated in the construction of provincial-level laboratories in Shandong, Henan, Zhejiang, and other provinces.

In May 2024, China Information Technology Designing & Consulting Institute, Zhiwang Research Institute, Suzhou Unicom, and Purple Mountain Laboratory collaborated to carry out the commercial deployment of a sub-metre level 5G positioning system at the Suzhou HYC Technology Factory (Phase II). On 22 June, the 5G-A High-Precision Integrated Positioning National Commercial Promotion Conference was held, where representatives from dozens of leading enterprises in the high-end equipment industry visited the workshop to observe the system operation demonstration.



China Unicom, in cooperation with Purple Mountain Laboratory, completed the nationwide commercial launch of the 5G-A high-precision positioning system.

On 11 June 2024, China Unicom signed a strategic cooperation agreement with Zhejiang University and unveiled the "Zhejiang University-China Unicom Qizhen Computing Power Centre", "China Unicom University Intelligent Computing Centre Demonstration Base", and "Zhejiang University-China Unicom Digital Security Joint Laboratory". The two parties will focus on new infrastructure construction, high-level technological innovation cooperation platforms, collaboration in computing power, 5G empowerment across various industries, digital education application development, and talent cultivation cooperation, to deepen multi-level and comprehensive industry-academia collaboration.



China Unicom signed a strategic cooperation agreement with Zhejiang University

Broadly expanding industrial cooperation

China Unicom focuses on strategic emerging industries and future industries, deepening cooperation in the industrial chain, supply chain, and value chain to achieve complementary resource advantages, better serve customers, and expand the market.

Building an ecological alliance

- The Company continuously strengthened the ecosystem carrier of the 5G Application Innovation Alliance, aggregating over 4,000 partners and gathering high-quality ecological resources from upstream and downstream of the industry chain, including chips, modules, platforms, network equipment, and solutions, to incubate over 1,000 innovative products in 5G terminals, networks, and application security.
- The Company engaged in open privilege ecosystem cooperation to build a comprehensive privilege ecosystem covering areas such as video, entertainment, living, education, medical care, and travel, allowing a wide range of subscribers to easily enjoy high-quality privileges and connect to a better life together. Currently, China Unicom has partnered with over 150 leading privilege partners to jointly serve hundreds of millions of privileges subscribers.

Deepening joint chain action

- China Unicom actively fulfils its responsibility as the leader of the modern industrial chain for network security, adhering to an industry demand-oriented approach, strengthening industry collaboration, establishing a coordination mechanism, and building a collaborative platform. The Company took deepening cooperation as the entry point, actively promoting precise alignment among all parties in the industry chain, coordinating efforts, and initially forming a new paradigm of industry chain development driven by central enterprises and integrating the development of large, medium, and small enterprises.
- The Company deepened the "Security Hub" Chain Bridge Co-Creation Action Plan, opening up seven major security areas to a wide range of partners: network security, terminal security, data security, security services, cloud security, emerging field security, and IoT security. The Company attracted high-quality security enterprises in the industry chain to jointly create over 140 security products, empowering thousands of industries and serving over 15,000 customers, covering 31 provinces and more than 270 cities. The scale of partner revenue exceeded RMB390 million.

On 19 July 2024, at the China Unicom Partner Conference Network Security Modern Industry Chain Co-Chain Action and Industry Development Summit Forum, China Unicom in collaboration with Huawei released the “Trusted Network Practise White Paper”, launched the “China Network Security Industry Innovation Development Alliance”, and announced the “Security Industry Chain Joint Overseas Plan” along with a series of co-creation achievements in the modern network security industry chain.



China Unicom convened the Network Security Modern Industry Chain Co-Chain Action Plan and Strategic Emerging Industry Co-creation Kick-off Conference

Promoting sustainable development of the supply chain

Enhancing supply chain management standards

- The Company strengthened the construction of the group and provincial-level centralised procurement operation system, regulated supplier management according to the 'China Unicom Supply Chain Management Measures', and built a fair, sound, and transparent cooperative environment.
- The Company implemented positive and negative behaviour list management to promote the joint fulfilment of social responsibilities by upstream and downstream supply chain partners. The Company continuously optimised the management mechanism of the supplier blacklist, releasing the fourth batch of 24 blacklisted suppliers, including 17 on the banned list and 7 on the restricted list.
- In the benchmarking assessment of procurement and supply chain by the SASAC of the State Council, China Unicom was rated as an A-grade enterprise, ranking 5th.

Shandong Unicom has developed a modern supply chain characterised by lean, collaborative, intelligent, and green practises, achieving significant results in systematic management of tender procurement, comprehensive integration of structured bidding processes, and the establishment of a contract performance guarantee system. In the 2024 “Jingcai Cup” National Finals for Typical Cases in Information and Communication Procurement, it achieved excellent results, winning 1 first prize, 1 second prize, and 1 third prize, as well as the Outstanding Contribution Award.

Building a green supply chain

- The Company optimised supplier selection criteria by incorporating ESG elements related to environmental and energy emissions such as ISO 14001 and ISO 50001. We included evaluation criteria for energy saving, consumption reduction, low carbon, and environmental protection in the tender documents. We enhanced the requirements for using green materials and green manufacturing processes to guide suppliers in increasing their efforts in green product R&D.
- The Company promoted the use of green packaging by suppliers, ensuring that the products provided meet the requirements for green packaging. We do not use toxic or hazardous substances as packaging materials, and we utilise recyclable, degradable, or harmless packaging materials and avoid excessive packaging. We minimise the consumption of packaging materials as much as possible while meeting the needs.
- The Company emphasised environmental protection, energy conservation, and low carbon in the procurement process, while the centralised procurement ratio reached 99.7%.

Ensuring the security and stability of the supply chain

- The Company established a cross-departmental supply risk assessment and assurance team to continuously monitor and focus on the domestic and international supply chain security situation, regularly organise supply chain security analysis, comprehensive inspections, and early warnings, and formulate effective response measures.
- The Company established a robust risk response mechanism, strengthened independence and controllability, and reduced bottleneck risks. We enhanced on-site inspections to eliminate potential risks of supply shortages, dynamically matched supply and demand to reduce upstream and downstream production and sales mismatch risks, and established emergency plans to effectively handle potential risks.
- The Company optimised supply chain structure, diversifying supply assurance and increasing the application of self-developed achievements to achieve diversification of technology sources. We established forward booking procurement to achieve diversification of supply resources, reasonably selecting factory distribution to achieve diversification of supply origins. We linked upstream material prices to achieve sustainability of supply capability. 38,000 new suppliers were added in the year.
- The Company innovatively adopted a smart supply chain platform, established a comprehensive analysis model, and effectively diagnosed risks such as supplier shutdowns and reduced production capacity through internal data like contract orders, delivery confirmations, supplier evaluations, online consultations, and publicly available government information.
- The Company strengthened supplier verification, conducted information verification for 526 times throughout the year, and rejected suppliers 32,274 times due to non-compliance or failure to meet bidding requirements.
- The Company established a special reserve mechanism for critical materials, built a dedicated system to manage reserve materials, and implemented the “special zone, special warehouse, special management” approach for reserve materials as a contingency plan to ensure supply chain security in necessary situations.

Region	Nationwide	East China	North China	Central China	South China	Southwest	Northwest	Northeast
Number of suppliers (thousand)	127	41	21	19	15	11	9	11

Equal treatment for small and medium enterprises

- The Company published the “Guiding Opinions on the Qualification Conditions and Evaluation Criteria Setting for China Unicom Tender Projects” to ensure equal participation opportunities for small and medium-sized enterprises, creating an open, fair, and transparent tendering environment.
- The Company made timely payment to small and medium enterprises and issued the “Notice on Implementing the Strict Regulation of Central Enterprises’ Payment to Small and Medium Enterprises”, requiring all levels of units to pay great attention to the issue of arrears and strictly comply with the “Six Prohibitions” requirements of the SASAC of the State Council. The Company organised a comprehensive nationwide survey and review of outstanding payables, forming a closed-loop dynamic update mechanism and regularly conducting data verification and cross-checking to ensure the authenticity and accuracy of ledger data. As at the end of 2024, the balance of accounts payable (including bills payable) accounted for less than 30% of total assets, with no overdue payments to small and medium enterprises.

Accelerating the development of industry-finance cooperation

China Unicom strengthened the integration of the “innovation chain, industrial chain, capital chain, and talent chain” by actively supporting industrial development through methods such as guiding investment, cornerstone investment, leading and following investment, relay investment, and joint ventures and mergers.

- Expanding the integration of production and investment. China Unicom focuses on its core responsibilities and main business, continuously increasing its equity investment deployment in strategic emerging industries, future industries, and the construction of chain leaders and chain masters. It emphasises efforts in areas such as computing power AI Network, data technology, and model technology integration and innovation. The Company effectively utilises long-term capital, patient capital, and strategic capital to promote production through investment and achieve synergy between production and investment, actively transforming into a technology service enterprise.
- Strengthening research and investment collaboration. The Company fully leveraged the critical role of equity investment in supporting technological innovation, anchored the deep integration of the innovation chain, industrial chain, capital chain, and talent chain, focused on the monetisation pattern of technological innovation and the growth cycle of enterprises, established a research-investment collaboration mechanism, built a research-investment collaboration platform, and explored the path of deep integration between technological innovation and industrial innovation.
- Revitalizing the Industry Fund. The Company upgraded China Unicom’s RMB10 billion-level 5G industry parent fund to a strategic emerging industry parent fund, establishing a sub-fund cluster with a total scale of no less than RMB30 billion to discover high-quality forward-looking technology targets and drive the development of the main business. The Company prepared to establish the China Unicom Network Security Industry Fund with a fund scale of RMB1 billion to support the construction of the chain leader and the creation of a network security industry ecosystem.

Continuously enhancing people’s well-being

Actively engaging in public welfare undertakings

China Unicom focuses on people’s livelihood concerns, engages in public welfare and charity undertakings, and makes active contributions to meeting the people’s needs for a better life.

- The Company vigorously promoted the volunteer service spirit of dedication, friendship, mutual assistance, and progress, and encouraged and guided employees to actively participate in volunteer services.
- For regions affected by typhoons, floods, earthquakes and other natural disasters, the Company provided mobile phone, broadband, and fixed-line subscribers service without suspension. The 10010 hotline activated emergency support, established an emergency activation green channel, and continuously provided communication services.
- In collaboration with the China Youth Development Foundation, the “China Unicom Points for Education Programme” has been ongoing for six years, with a total donation of RMB9.095 million, supporting 8,562 impoverished rural students and establishing 19 libraries.
- The Company sent 49.55 billion public welfare and emergency messages, supporting policy promotion, anti-fraud and fraud prevention, emergency warnings, ecological protection, educational promotion, disease control reminders, and other livelihood guarantees.

External donations in 2024

RMB **2.031** million

Donation Project	Donation amount (RMB thousand)
Aid to border areas (aid to Tibet and Xinjiang)	53
Other donations (culture and sports, education, medical and health care, charity, environmental protection, etc.)	1,978
Total	2,031

Unicom Finance Company organised the “Hope for Blue Skies, Love in Transmission” cerebral palsy children care volunteer service activity. Volunteers visited the “Huiling Service Centre for Children with Intellectual Disabilities”, accompanying the children in playing games, assembling puzzles, drawing, and singing, bringing laughter and warmth with enthusiasm.



Unicom Finance Company cares for individuals with cerebral palsy, spreading love and warmth

Volunteer organisation reached

678 units

Registered volunteers

103,778 people

In the face of Typhoon “Yagi” (super typhoon level), the 10010 service hotline set up special major support service desks, providing services such as exemption from reminders and disconnections, emergency phone activation, and launched a family search hotline to help customers confirm the safety of their relatives during the typhoon.



10010 hotline initiated emergency support, providing uninterrupted communication services

Relying on the China Unicom Online Company’s capability in points-based public welfare operations, and in collaboration with provincial branches across the country, a series of charitable actions such as “Points for Education Dream Fulfilment Action”, “WO’s Reading Together”, “Dining with Good Deeds”, and “Points for Disability Assistance” were carried out. In 2024, the Company jointly launched the “University Dream Fulfilment Action” with the China Youth Development Foundation to help young people develop healthily and grow into talents.



“WO’s Reading Together” Hope Project Library



Charity Section of the Points Mall in China Unicom APP

China Unicom vigorously promotes the spirit of “serving the public and contributing to society”, with Wu Jianbin from Fujian Xiamen Unicom, Wang Peishan from Longkou Branch of Shandong Yantai Unicom, Yan Shuai from Shandong Unicom and 4 others acting bravely and being respectively referred to by netizens as “Lifting Brother”, “Most Beautiful Falling Melon Brother”, and “Firefighting Guardian”. They received honorary titles such as “Good Employee of China Unicom” and “Model of Bravery in Siming District”.



Fujian Xiamen Unicom’s Wu Jianbin Rescued Child hanging from Window



Wang Peishan of Yantai Unicom in Shandong urgently “smashed a melon” to save a person



4 employees of Shandong Unicom encountered a dangerous situation and instantly became “firefighting guardians”

Anhui Hefei Unicom carried out companionship assistance for the elderly, in collaboration with professional medical institutions to conduct on-site free medical consultations and celebrate “Our Festival” together. Over two years, we have conducted more than 100 activities such as smart elderly assistance, caring visits, happiness classes, and holiday companionship, serving nearly 100,000 people and accumulating nearly 1,000 hours of service.



Anhui Hefei Unicom and medical institutions jointly organised on-site free medical consultations and medical science popularisation activities

Conducting actions to support the elderly and assist the disabled

China Unicom has always regarded assisting the disabled and elderly as its responsibility, providing priority services to the elderly and disabled, continuously developing information accessibility technology products for the disabled, reducing the usage threshold of smart products, and offering smarter and more convenient services to special groups.

Embarking on a care mode

China Unicom, with the “Care Mode”, assists the elderly and visually impaired groups in bridging the digital divide. The China Unicom APP and China Unicom 10010 online service centre have launched the “Care Mode”, while the China Unicom Smart Home APP has introduced the “Care Version”, featuring enlarged text, enlarged icons, a simplified interface, and easy operation, along with voice broadcasting, making it more suitable for the usage habits of special groups.

- China Unicom APP provides a “Care Mode”. In 2024, optimisation and upgrades were carried out for voice broadcasting, secondary pages, and the homepage, with an average daily service of 70,000 people, helping elderly subscribers and visually impaired groups further lower the operational threshold and enjoy the convenient services brought by digital life.

- China Unicom Smart Home APP provides a “Care Version”, specifically designed for family care, integrating core functions such as device binding, smart fixed-line, health record management, and virtual experience, offering online consultation services for the elderly, providing a more comfortable and convenient smart living experience for the elderly groups.



China Unicom Smart Home APP launches ‘Care Version’

Building heart-warming products

China Unicom focused on enhancing the high-level supply of products for the elderly and disabled, increasing the reduction of communication fees for special groups, continuously optimising the functions of the Hearing King Card, and improving call response speed, voice recognition speed, and accuracy to provide a smoother and more efficient communication experience for the hearing impaired.

- The Company launched exclusive concessionary packages such as the Filial Piety Card, Silver Age Card, and Evergreen Card for communities and rural elderly left behind, disabled persons, and other groups, providing care in telecommunications and life services for special groups.

- The Hearing King Card is the industry’s first barrier-free communication product for the hearing impaired, jointly launched by the China Deaf Association, China Unicom, Tencent Charity, and Tencent Cloud AI. In 2024, it enhanced the response speed for answering/receiving to 8 seconds, with a rate increase of up to 50%, significantly improving the speed and accuracy of voice recognition on the mobile app by developing an in-house ASR voice recognition library for mobile devices.

Reduction in telecommunication
fees exceeds

RMB **610** million

No. of disabled and elderly
subscribers benefited

5 million

Provide barrier-free communication
services for the hearing impaired

707,000 people

In July 2024, technicians received feedback from users of the Hearing Assistant about hang-up problems, quickly investigated and processed them, accurately analysed and traced the root causes, and resolved them promptly. Mr. Ding, the user, expressed high praise for the Hearing Assistant technical team through a letter of appreciation and a pennant.



The Hearing Assistant technical team received a banner as a gift.

Providing priority services

In 2024, all self-owned business outlets of China Unicom implemented priority services for the elderly and disabled groups. The Company provided caring seats in the business outlets equipped with guiding signs. In more than 5,300 standard and flagship outlets, the Company has set up green channels to provide a more convenient service experience for disadvantaged groups. For all 42,000 sales personnel, 24 sales skill training drills were conducted to comprehensively enhance the service level and service awareness of the sales staff, providing more considerate and professional face-to-face services to various groups in need of care.



Providing a more convenient in-store processing experience



Enhancing service awareness, prioritising age-friendly services

Tianjin Unicom optimises offline facilities and services for the elderly and disabled. Throughout the city, 174 self-operated business outlets have completed elderly-friendly renovations, as well as the establishment of caring stations and smart elderly service experience centres. Various elderly assistance service activities such as “Public Welfare Lecture Halls” and Silver Age entertainment activities were organised, providing a more convenient and comfortable service environment for the elderly.



Tianjin Unicom Elderly Assistance Volunteer Service Team Provides In-Home Services for the Elderly

Serving Community Digital Life

Upgrading the entire family's intelligent services

To enable residents to experience a more intelligent lifestyle, China Unicom's broadband service has been continuously upgraded comprehensively in terms of service teams, service capabilities, and service scope, with the smart home engineer team providing comprehensive smart services for families.

- The Smart Home engineers possess professional network design, installation, and maintenance capabilities, and can provide on-site whole-house network optimisation and upgrade customised services for subscribers.
- The Company implemented the four broadband service commitments of “compensation for slow service, full-house testing, overnight repair, and carry-on service”, providing community residents with “same-day installation and same-day repair” and “night repair within two hours” premium Smart Home customised services. 12 million households are already using China Unicom’s full-house optical broadband service.
- Upholding the original intention of serving the people, the Company conducted free on-site broadband network inspection services for 11.33 million times.
- From 2024, the real-time satisfaction evaluation for broadband services has been implemented, with a positive rating reaching 99.7%.

Tuotuo River, the source of the Yangtze River, the lofty mountains and vast glaciers, constructed the local unique and fragile plateau ecology. Qinghai Unicom’s Geermu Smart Home Engineer Si Qiu overcame the challenges of extreme environments, constructing gigabit fibre optic networks with dedication and commitment, and actively engaged in environmental protection, becoming a guardian of the information ‘Heavenly Road’ and the magnificent mountains and rivers.



Smart Family engineers support hometown construction

Illuminating smart community living

Smart communities are becoming the bridge connecting technology and life. China Unicom utilises emerging technologies such as 5G, AI, and the Internet of Things to create five major innovative scenarios in community governance, community security, smart property management, digital life, and smart business districts, along with N innovative applications, constructing new units of future cities with new living experiences, new service models, new governance models, and new industrial methods.

- The Smart Community Platform has covered 6,861 streets and 17,598 community committees, providing services such as incident reporting, cultural and entertainment activities, online voting, and surveys to 9.548 million residents for over 40,000 times, effectively enhancing the level of grassroots community governance.
- The Company provides smart access control functions such as facial recognition and WeChat door opening, as well as intelligent AI monitoring functions like high-altitude object throwing surveillance and flame recognition monitoring, to achieve comprehensive intelligent supervision of people, objects, and events in the community, enhancing residents’ sense of security.
- The Company provides convenient and efficient home-based elderly care services and one-click call, elderly care bracelet terminals for community elderly subscribers, enhancing the quality and level of community elderly care services.

Caring for the well-being of the employees

China Unicom deeply implements talent-oriented corporate development, adheres to the strategic position of talent-led development, regards employees as the driving force for the Company’s growth, respects the legitimate rights and interests of each employee, listens to the opinions and suggestions of every employee, focuses on the career development of each employee, creates a good workplace environment, and achieves an efficient and fulfilling professional life.

Safeguarding the basic rights of employees

China Unicom implements legal and regulatory requirements, creates an equal employment environment, improves the compensation and benefits system, safeguards employees’ social welfare, and enhances the Company’s talent attraction and social influence.

Adhering to fair employment

The Company strictly implements the “Labour Law of the People’s Republic of China” and the “Labour Contract Law of the People’s Republic of China” and other laws and regulations, comprehensively strengthens labour employment management, standardises various forms of employment, and always adheres to the principles of equality, voluntariness, and mutual agreement, ensuring 100% signing of labour contracts with employees. In the process of terminating labour contracts, the Company strictly implements relevant national policy requirements to protect their basic rights.

Adhering to the principles of fairness, openness, and impartiality, the recruitment process is strictly regulated to ensure fair employment of candidates. It is strictly prohibited to publish employment information containing discriminatory clauses against national regulations concerning ethnicity, gender, household registration, age, etc. It is also strictly prohibited to release false and fraudulent illegal employment information. Efforts are made to create a fair employment environment. During the reporting period, there were no incidents of child labour, forced labour, or employee abuse. We have zero tolerance policy forced labor and child labor. If such cases are discovered and confirmed after an investigation, we will pursue appropriate actions, including but not limited to initiating disciplinary actions, commencing legal proceedings and/or reporting to the appropriate governmental/regulatory authorities.

Improving compensation management

The Company continuously improved the management mechanism of compensation and benefits to encourage talent growth and innovative development.

- The Company improved the total wage resource allocation mechanism, closely linking the growth of total wages with the Company's operating performance.
- The Company deepened the reform of internal compensation distribution, optimised internal distribution relations, improved the protection mechanism for various groups, implemented a policy to raise the base salary for lower-level employees, covering 160,000 personnel.
- The Company flexibly implemented medium- to long-term incentives, completed the unlocking of one unlocking period of the second phase of restricted shares, achieving the sharing of interests and risks between employees and the Company.
- The Company strictly implemented the regulations related to employees' working hours and rest and leave, ensuring the legitimate rights of employees to take leave.

Strengthening grassroots democratic management

China Unicom continues to enhance the construction of the tripartite democratic corporate management system comprising the "General Meeting of Staff Representatives", "Open Corporate Affairs", and "Employees' Advice and Suggestions", promoting consultation and cooperation between the enterprise and employees, co-building mechanisms, guiding both the enterprise and employees to establish a sense of shared interests, and fostering a positive environment where the enterprise cares for employees and employees contribute to the enterprise.

Promoting participation in management

The Company organised and convened the 15th meeting of the second session of the employee representative assembly of the Group Company, exercising employees' rights to deliberate and propose, approve, elect, and conduct democratic evaluation and supervision in accordance with laws and regulations. The Company conducted the selection of outstanding employee representative proposals for the year 2024 and facilitated "face-to-face" experience exchange activities for handling employee representative proposals. The Company guided each unit to convene more than 610 staff congresses at various levels, scrutinized more than 1,600 items and collected more than 5,400 proposals, thus the foundation of democratic management of the enterprise has become more solid.

The Company deepened the construction of the corporate affairs open democratic system, guided the extension of corporate affairs openness to grassroots responsibility units, and conducted in-depth "Everyone Has a Clear Account in Mind" themed class meetings. Throughout the year, over 450 corporate affairs open release meetings were held at all levels, with over 1,700 public items. More than 40,000 thematic class meetings on clear accounts were held by grassroots responsibility units to ensure the coverage and effectiveness of disclosure.

Smooth communication channels for demands

Members of management teams at all levels and key responsible persons in relevant professional departments regularly listen to employee opinions, utilising various channels such as "General Manager Online" to widely gather employee suggestions and advice, focus on employees' mental dynamics, and address employees' urgent and difficult issues from the source, thereby assisting in building harmonious labour relations.



The 15th meeting of the second session of employee representative assembly at China Unicom



Shandong Unicom has equipped the grassroots grids across the province with a standardised "Enterprise Affairs Bulletin Board".



The provinces launched the "General Manager Online" special event, establishing a closer and more efficient communication bridge between enterprises and employees.

Conducted more than

480 sessions of
General Manager Online activities
throughout the year

Number of participants exceeded

230,000
person-times

On-site collection and compilation of
issues exceeded

10,000 cases

On-site problem resolution
rate reached over

95%

Mediating labour disputes

The Company strengthened the construction of grassroots labour dispute mediation organisations, establishing mediation bodies covering municipal branches. Employees can submit mediation applications to the local labour dispute mediation committee, which mediates conflicts between the parties involved in labour disputes according to relevant regulations. Upon reaching a mediation agreement, the trade union guides and urges the parties to actively, promptly, and fully fulfil the mediation agreement.

A total of

68 labour disputes were mediated
through the Mediation Organization for
Labour Disputes and handled with the direct
participation of the Group's trade unions

Creating an excellent talent team

China Unicom continues to cultivate fertile ground for talent, consolidate the foundation for talent, and nurture a deep affection for talent. It continuously improves the construction and capacity development of its talent team, creating a community of shared interests and values between the Company and its talent, fostering a core force that supports the Company's sustainable and healthy development.

Planning Talent Development

The Company formed a "1+3" system framework led by the "China Unicom Talent Strengthening Enterprise Implementation Opinions", and coordinated the development of three teams: management talents, professional technical talents, and skilled talents. The Company continuously strengthened key developments in position management, performance management, and promotion management, implementing various incentive measures through systematic systems.

- The Company issued the "Position Management Measures (Trial) of China Unicom" to achieve job matching for all employees.
- The Company issued the "Guiding Opinions on the Implementation of the Unified System for Employee Performance Management of China Unicom", achieving performance appraisal coverage for all employees and providing a basis for implementing various positive and negative incentives.
- The Company issued the "Guiding Opinions on the Implementation of China Unicom's Employee Promotion and Incentive System", achieving dual-channel promotion for all employees.

Strengthening talent recruitment

The Company implemented the national policy on employment stabilisation and comprehensively upgraded the talent recruitment policy system.

- The Company optimised the mechanism for introducing and cultivating young talents, targeted strategic emerging industries and future industries, deeply explored high-quality employment positions, and attracted more outstanding young talents to join.
- The Company actively built a school-enterprise cooperation ecosystem, deepened the "National Recruitment Action", implemented the "Sailing Plan" of the Communist Youth League Central Committee, clearly listed 28 group-level cooperative colleges, and organised the selection of 519 high-potential "new seedlings" for long-term continuous cultivation.
- The Company optimised the flexible talent introduction mechanism and introduced 27 people.

A total of over

6,000 graduates were
recruited throughout the year

Among which, the proportion of
graduates from prestigious institutions
was

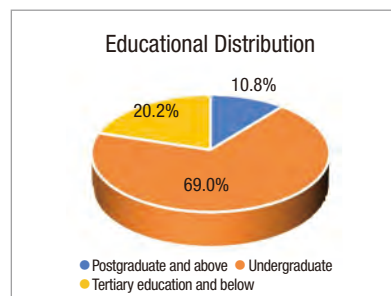
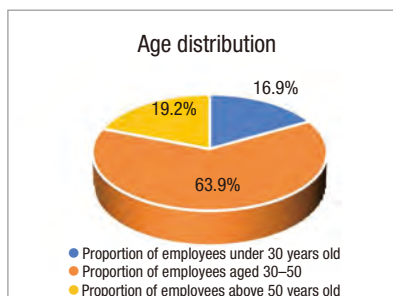
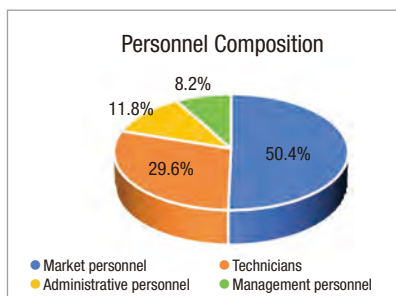
38.1%

Proportion of science and
engineering graduates was

77.1%

Proportion of master's and
doctoral degrees in science
and engineering was

38.1%



Total number of employees	Number of Mainland China employees	Number of Hong Kong, Macau, and Taiwan employees	Number of overseas employees	Proportion of ethnic minority employees (%)
240,617	239,307	862	448	7.16

Note: 9,277 temporary staff were hired from the market in mainland China.

Strengthening capability training

Focusing on the Company's main responsibilities and core businesses, a key training plan was formulated with the principle of full coverage for critical groups, constructing a tiered and categorised training system to deliver precise training for specific groups such as management personnel, outstanding cadres, and high-level talents.

Ongoing capability and quality training for management personnel.

- The Company organised 178 sessions of research classes for central state-owned enterprise cadres, with a total of 19,521 participants.
- The Company organised centralized rotational training for China Unicom management personnel, with a total of 4,999 participants from all units of the Group.
- The Company selected 22 company management cadres and outstanding management talents to participate in the high-level ideological education training class.

Regularly conducting education on ideals and beliefs for outstanding young cadres.

- The Company organised 4 cadre talent development programmes, including spring and autumn training classes for young and middle-aged cadres and demonstration classes for outstanding management talents, with 174 participants.

Targeting high-level talents, implement joint training programmes between universities and enterprises for master's and doctoral engineering students.

- The Company jointly completed the recruitment of full-time engineering master's and doctoral students for 2025 with 8 universities, currently jointly cultivating 180 engineering master's and doctoral students.
- The Company received 18 students to carry out enterprise practise.

Implementing independent capacity development for professional technical talents.

- The Company organised over 300 independent training projects for key capabilities and issued 12 capability certification schemes.
- The Company organised and completed a total of 16 batches of professional competence certification exams for government-enterprise and digitalisation, with approximately 150,000 participants passing.

Implementing job position training certification for front-line employees.

- The Company conducted a total of over 65,000 training sessions for more than 2.4 million front-line employees in sales, call centres, and installation and maintenance.

	2023	2024
Number of senior management personnel receiving training (person-times)	8,537	8,062
Number of middle management personnel receiving training (person-times)	328,463	301,520
Number of ordinary employees receiving training (10 thousand person-times)	469.3	436.1
Proportion of male employees participating in training (%)	98.5%	100%
Proportion of female employees participating in training (%)	98.5%	100%
Average training time of senior management (hours per person)	240	209
Average training time of middle management (hours per person)	171	152
Average training time for ordinary employees (hours per person)	112	106
Average training time of male employees (hours per person)	115	110
Average training time of female employees (hours per person)	115	105
Proportion of senior management attending training (%)	100%	100%
Proportion of middle management personnel attending training (%)	100%	100%
Proportion of ordinary employees attending training (%)	98.35%	100%

Holding skill competitions

The Company fully leveraged the function of the employee skill competition platform, replaced training with competition, empowered through competition, and continuously developed various professional talents that meet the needs of the Company's transformation and development by building a multi-level, multi-professional, and high-coverage group-level employee labour and skill competition system. The Company united and mobilised all employees to enhance skills and make contributions in the Company's high-quality development.



China Unicom Government-Enterprise Innovation Business Skills Competition



China Unicom Network and Information Security Skills Competition



2024 China Unicom International Business Sailing Cup Skills Competition

Organised

47 group-level labour and skill competitions

Participating employees reached

1.1 million person-times

Participated in

23 competitions organised by higher-level units and the industry

Selected

325 group-level technical Experts



China Unicom Third Financial Skills Competition

Providing heart-warming services for employees

China Unicom cares about the physical and mental health of its employees, with a focus on caring for female employees and special groups, enriching the cultural life of employees during their leisure time, and creating a loving and warm corporate family.

Focusing on physical and mental well-being

The Company adheres to the five-character strategy of “prevention, treatment, management, education, and construction”, ensuring vertical and horizontal integration and comprehensive measures to safeguard employees’ physical health and life safety, effectively protecting employees’ health rights, and actively promoting the construction of a healthy enterprise.

- The Company promoted the construction of health cabins to provide employees with free health checks and consultations, and invited specialist doctors to offer diagnosis and consultation services for common and frequently occurring diseases among employees.
- The Company promoted the installation of AED defibrillators throughout the Company to provide multiple protections for employees’ life and health. A total of 219 AED defibrillators were installed throughout the year, providing multiple safeguards for employees’ health and safety.
- The Company carried out critical illness insurance and mutual aid protection work for employees, supervised the lawful implementation of working hours, employee rest and leave, and recuperation systems, to promote the physical and mental health of employees.

The Company continuously cares for employees’ mental health by establishing a psychological consultation platform and a psychological crisis intervention hotline, conducting mental health seminars, and training mental health specialists to meet employees’ mental health needs.

- The Company promoted the construction of mental health cabins, with a total of 180 “psychological stations” established nationwide, conducting a variety of activities such as team counselling, group salons, psychological consultations, and stress-relief massages.

- The Company continuously enhanced the professional level and service capability of the EAP specialist team, training over 600 EAP specialists, selecting 31 psychological lecturers, and conducting 298 lecture tours.

The Group’s labour union held the fifth “Mental Health Month” event to help employees relieve psychological stress. The participation volume in the event reached over 1.21 million people, with 85,000 people participating in knowledge competition, 52,000 participating in mental health assessments, and over 10,000 attending mental health lectures.



The fifth “Mental Health Month” event was conducted through online platforms and offline activities

To further improve the employee mental health service system, China Unicom organised the 2024 EAP (Employee Assistance Programme) Specialist Training Course to enhance the professional level of EAP specialists, enabling each specialist to master programme design, crisis management, conflict resolution, communication, and team-building skills effectively. This initiative effectively promotes EAP work to penetrate the front lines and grassroots levels, enhancing the sense of happiness and belonging among employees.



EAP Specialist Training Course

Building humanistic care

China Unicom provides personalised care services for employees, strives to create a balanced and happy working environment, and enhances employees' sense of happiness.

Carrying out assistance and care

The Company promoted targeted assistance, in accordance with the requirements of "covering the bottom line, weaving a dense network, and building a mechanism", to create a "three-in-one" medical system of critical illness insurance, mutual aid fund, and supplementary medical care, comprehensively ensuring the stability of the lives of employees in need.

- The Company vigorously promoted the compensation work for critical illness insurance for employees in financial difficulty due to illness. In 2024, the entire group has cumulatively lifted over 400 people out of poverty and difficulty.
- The Company promoted employee medical mutual assistance, established a mutual aid fund system, and in 2024, the Company provided aid to more than 1,700 people, with a total disbursement of over RMB16 million.

Assistance fund for employees in difficulty amounted to

RMB **123** million

Caring for employees' children

The Company continuously improved the employee care service system, established and implemented work brands such as employee children custody and Golden Autumn Education Assistance, provided volunteer registration services for employees' children, distributed care packages and money to employees with children taking exams, and organised seminars and other activities. In 2024, a total of over 9,000 employees' children were provided custody service, and guidance for college entrance exam volunteer registration was provided to 6,386 employees' children.

Provided support for more than

4,600
employees' children throughout the year

More than

RMB **3.7** million
has been invested

Improving the working environment

The Company fulfilled the responsibility and commitment of central state-owned enterprises, promoting the continuous extension of 'service reach'.

- The Company used the "Five Small" construction as a starting point, building and creating a warm "staff home", with special funds of RMB22 million allocated for the construction of 630 grassroots projects across 23 provincial branches.
- The Company steadily advanced the "Trade Union Service Station Double 15 Project", promoting the construction of over 2,700 trade union stations, with a cumulative service to more than 1.35 million outdoor workers.
- The Company explored new models of cross-industry union organisation cooperation and co-building in collaboration with SF Express Union, so that over 150,000 employees could enjoy discounted courier services.

Heilongjiang Unicom's "Five Small Construction" received the honorary title of "National Health Enterprise Construction Featured Case". Heilongjiang Unicom will advance the "Five Small Construction" work as the focus of healthy enterprise construction. We have thoughtfully formulated two "Three-Year Plans", taking into account the older age profile of employees across the province, emphasising the theme of "health", and vigorously advancing the "Five Small Construction" project.



Heilongjiang Unicom "Five Small Construction" Project Site

Protecting women's groups

The Company provided health care and psychological counselling services for female employees to protect their rights, fostering a work environment that respects and cares for female employees.

- The Company implemented the “Special Provisions on Labour Protection for Female Employees”, ensured the protection of female employees during the “five periods”, safeguarded their rights to rest and leave, and conducted psychological counselling for female employees.
- The Company conducted screenings for “two cancers” and health examinations for female employees, and promoted the construction of 404 breastfeeding rooms for female employees.
- The Company carried out “March 8 Festival” celebration and condolence activities, selected and commended 100 group-level “Heroines’ Civilised Positions” and 100 “Heroines’ Meritorious Models”, created the “Blossoming at the Right Time” brand, promoted the spirit of heroines, and showcased the elegance of heroines.

Enriching cultural and sports activities

The Company organised online and offline cultural and sports activities to enhance the physical fitness and cultural literacy of employees, enriched their leisure cultural life, and improved their well-being and literacy.



Shanghai Unicom Staff Sports Games



Sichuan Unicom Staff Sports Games



China Unicom Hunan balloon volleyball competition



Anhui Unicom Fun Sports Games