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# A Beautiful Life Created Together

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## Building Quality Networks and Sharing Digital Benefits

### Strengthening Foundation for Connectivity

Aligning its efforts with the development requirements of the new era, China Mobile further implements the “Big Connectivity” strategy and commits itself to building quality networks and bridging the digital divide. In doing so, we strive to meet the public’s ever-growing demand for digital consumption and lay the “connectivity” foundation for economic and social transformation and development.

As of the end of 2018

Mobile Customers  
**925** Million

Wireline Broadband Customers  
**157** Million

IoT Smart Connections  
**551** Million

### Narrowing Digital Divide

We try constantly to extend broadband coverage in remote villages and islands to further narrow the digital divide. By the end of 2018, through the Telecommunication Universal Service Project, we had cumulatively delivered broadband services to 38,352 administrative villages and our wireline broadband services covered 417,000 administrative villages.

#### Fujian: Tackling Challenges in Building Island Broadband

Fujian Province is surrounded by mountains on three sides and by the sea on one side. This caused difficulties in broadband construction in remote areas, in particular on coastal islands, such as significant signal loss and proneness to interference. China Mobile introduced a domestic cross-sea communications expert team and state-of-the-art big-broadband telecommunications equipments and formed 20 technical teams. They worked around the clock conducting investigations and developing construction plans and effectively overcame the obstacles of building cross-sea networks. On May 12, 2018, the Company took the initiative to launch 100Mbps fiber-optic broadband on 23 coastal islands, not only providing the citizens on islands with access to high-speed broadband services but also greatly enhancing the development of local tourism and fishery sectors.

## Jiangsu: Collaboration in Developing Offshore Base Stations

Nantong city of the Jiangsu Province has a coastline of 206 kilometers. To effectively resolving the issue of delivering offshore mobile signal coverage to meet the communication needs of maritime workers such as fishermen, harbor workers and wind turbine operators, China Mobile collaborated with coastal wind power companies in building high-power base stations utilizing offshore boosting stations and offshore wind turbines. At present, the Company has started four offshore base stations on Nantong and Yancheng waters in Jiangsu, providing seamless mobile network coverage within 70 kilometers of the coastline in the respective areas.

## Broadening International Connections

China Mobile continues to grow its capacity for international connections through strategic measures such as optimizing roaming services, developing overseas service channels and strengthening mutually beneficial cooperation with its global telecommunications counterparts. As at the end of 2018, China Mobile continued to lead the world with its 4G international roaming services extending to 181 countries/regions around the globe, achieving a 61.2% year-on-year growth in its international data roaming users.

To persist in complying with the principle of achieving shared growth through discussions and collaboration, China Mobile continued to optimize the multi-dimensional high-speed information channels encompassing Information Highway (transmission resources), the Information Station (POPs), and the Information Island (data centers) to expand its capabilities for overseas communications infrastructure construction and deployment. In 2018, we achieved positive development in serving the needs of Chinese enterprises for “going out” and the needs of transnational companies for pursuing information-based development through the provision of reliable dedicated cross-border communications connections, international data center services, and holistic ICT solutions.



## Speed Upgrade and Tariff Reduction

China Mobile earnestly implements network speed upgrades and tariff reductions, laying the requisite foundation for a thriving digital economy. Our speed upgrade and tariff reduction measures cumulatively benefited 4.7 billion person-times as at the end of 2018.

At present, high-speed Internet experience has become the new norm of the day, where people have ubiquitous access to HD movies, intriguing videos and live broadcasts, can enjoy installation-free online gaming experience with no lag, and can instantly transmit huge files. The list goes on. While continuing to improve our 4G network speed, we placed a dedicated focus on comprehensive speed upgrades for our home broadband services in 2018 to fully accommodate people's demand for high-speed Internet.

- Average 4G network downloading rate on urban roads reached 42.6Mbps
- Achieved comprehensive home broadband speed upgrades, with the broadband connection speed of the whole network exceeding 100Mbps; rolled out 1000Mbps demonstration communities in every city across the country, taking a lead in the provision of 1000Mb networks



In an effort to ensure both quality and affordability, we made our services more accessible to consumers in 2018 through a range of measures to reduce tariffs for our voice, data and other services. By doing so, we managed to stimulate customers' consumption demands and nurture their habits of digital living, while fueling the digital transformation of SMEs.

- Completely eliminated charges for long-distance calls, roaming calls, and data roaming
- Introduced measures such as big-volume data plan, sponsored data tariff, and data assurance services
- Lowered charges for home broadband, business broadband, and dedicated Internet access

## Improving Network Quality

In light of the growth of the scale of connections, the complexity and difficulty in maintaining the networks has continued to grow. It thus becomes the Company's top priority to maintain robust network quality and user experience. In 2018, China Mobile continued to improve its network quality management system, robustly upgrade network maintenance and emergency communication support, so as to ensure a smooth and premium network experience in all kinds of scenarios.

### Reinforcing Network Quality Management

In 2018, we created the innovative Network Experience Index (NEI) to further refine our network quality evaluation management. Based on accurate user experience analysis and timely response, we strive to overcome the difficulties in network maintenance to provide better connections. In the meantime, big-volume data services have created new requirements and challenges for developing the necessary network capabilities. We proactively adapted ourselves by introducing new technologies and building new platforms dedicated to addressing issues such as high-load communities and network interferences, thus improving our network operations capabilities.

#### Network Experience Index

In 2018, China Mobile launched the Network Experience Index (NEI) in collaboration with our partners. For the first time, the index theory and genetic engineering models were introduced into the mobile communication network, which, together with four innovation technologies including artificial intelligence algorithm and big data, served as the pillars of the experience-based digital evaluation system of the telecommunications industry. The system enables digital representation of network experience, quantitative correlation of customer perception, and rapid quality benchmarking against international operators, thereby more accurately pinpointing key contributing factors to network capabilities and providing direction for network quality improvement.

#### New Capacity Smart Operations System

Major scenic spots across the country witness a sharp rise in the number of tourists during public holidays. People use their mobile phones to search for food to enjoy and beautiful places to visit, upload photos and videos, interact real-time with their friends and relatives, etc. Such exploding demands for mobile data often lead to short-term, regional ultra-high network load, which significantly undermines network quality or even leads to network jams. To satisfy the high network traffic demand in these situations, China Mobile Zhejiang Company established the new Capacity Smart Operations System in 2018, with "resources operations", "capability operations" and "efficiency operations" as its guarantee guidelines. With intelligent analysis and judgment, automatic evaluation, and automatic execution enabled by its network maintenance support platform, the system provides solid support for meeting customers' data demands in a timely and effective manner.

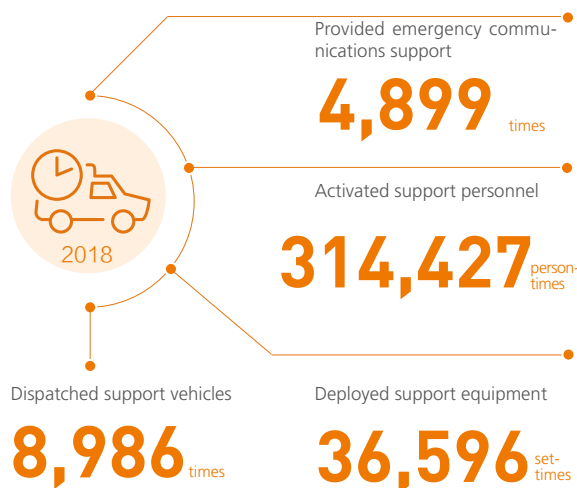
#### "Four-aspect & Ten-dimension" Quality Evaluation System

With the "Four-aspect & Ten-dimension" quality evaluation system, China Mobile defines perception indicators across 10 vertically refined dimensions under the four aspects of macroscopic scale, microscopic scale, network foundation, and major events and measures the daily network experience of its individual, household, government and enterprise customers, and new business users in a comprehensive and multi-dimensional manner.

### Improving Emergency Response Capability

We continued to improve our critical event network supporting system characterized by 4 "Rs", namely "clear Responsibility, readily available Resources, manageable Risk, and timely Response". Meanwhile, we further strengthened our long-standing critical event supporting mechanism, which involved unified efforts between the Group and provincial subsidiaries as well as cross-departmental and interdisciplinary collaboration, to improve our overall capability in providing emergency support.

In 2018, we successfully provided communications and network security support for major events including Boao Forum for Asia, Shanghai Cooperation Organization (SCO) Qingdao Summit, Forum on China-Africa Cooperation (FOCAC) and China International Import Expo (CIIE) as well as providing communications quality and network security support for natural disaster relief, and achieved our service goals of "zero major network failures, zero major network security incidents, and zero complaints from key customers".



### Combating Typhoon "Wambia"

From the afternoon of August 18th to the early morning of August 20th, the No.18 Typhoon "Wambia" brought widespread torrential rain to Shandong Province, leaving Weifang severely ravaged by the biggest flood in decades. On the eve of the disaster, China Mobile launched the emergency communications response plan and prepared support resources in advance. In the aftermath of the disaster, we rapidly deployed and set up the centralized command and control center for flood control and disaster relief. Using the "Zhiduoxing" command and control system and a range of new emergency response devices such as drones, satellite communications vehicles, satellite phones, and Gigabit microwave, we effectively addressed issues of dangerous scenarios and serious network damages and rapidly restored Internet access in disaster-stricken areas. Moreover, we sent out 900,000 charitable text messages in support of disaster relief and provided affected people with free access to phones, as well as phone charging, consultation, and other services.



▲ Post-disaster communication equipment repair

### Communications Support for SCO Qingdao Summit

From June 9th to 10th, 2018, the 18th Meeting of the Council of Heads of Member States of The Shanghai Cooperation Organization was held in Qingdao, Shandong Province. Bringing together its group of experts, China Mobile undertook comprehensive safety tests and loophole rectification for 687 systems/mobile apps and developed the innovative "Haina" multilayer network emergency communications vehicles. Together with the newly developed one-button disaster recovery system that realized safety protection at important sites at the press of one button, all these efforts helped ensure secure and smooth Internet access during the summit.



▲ Service team at the SCO Qingdao Summit

### Communications Support for CIIE

From November 5th to 10th, 2018, the first China International Import Expo (CIIE) was held in Shanghai. To ensure a sound communication service experience for guests from all over the world, China Mobile had initiated a "carpet-style international business test" for global network operators in advance. The Company actively engaged over 300 operators from 165 countries in tests on the interconnectivity between international roaming cards and international Internet. During the Expo, the "breathing network" was adopted for the first time to ensure on-site communication, whereby intelligent adjustments were made consistent with the real-time people flow and network use inside the exhibition hall to cater to the communication needs when there was heavy passenger flow. Meanwhile, we managed to solve the problem of communication interference caused by densely located base stations using innovative technologies, increasing the wireless communication capability inside the hall by around 6.5 times to accommodate the communication needs of up to 500,000 people simultaneously.



▲ Emergency communication drill at the CIIE

### Communications Support for Boao Forum for Asia

On April 8th, 2018, the 17th Boao Forum for Asia Annual Conference was held in Hainan Province. Using its independently developed technological applications such as the "And Cloud Speed" device and "AR Network Map" mobile app, China Mobile conducted Internet speed test at important sites and surrounding roads as well as base station monitoring, providing successful communications support for the Forum.





## China Mobile and SDGs

### Our Sustainable Development Rationale

Like roads, water supply, power supply, and other types of infrastructure, information and communication networks and services have become an integral part of economic development and our social and personal lives. The size and quality of information infrastructure will impact our quality of life and social productivity in profound ways. As a provider of connection services, China Mobile recognizes providing extensive, quality, and reliable connections as its top priority for contributing to the SDGs. To this end, we commit ourselves to expanding 4G and broadband network coverage, accelerating the development of IoT, offering premium networks, and delivering continuous improvements in our universal services and emergency communications support capabilities. Through the provision of quality information and communication services, China Mobile is on track to contribute to an inclusive digital economy and information society that is to the benefit of everyone.

### Key Performance Indicators

Indicators	2016	2017	2018
<b>Connection scale</b>			
Number of mobile customers (million)	849	887	925
Number of 4G customers (million)	535	650	713
Number of wireline broadband customers (million)	78	113	157
Number of IoT smart connections (million)	103	229	551
<b>Roaming services</b>			
Number of countries and regions with 4G international roaming service	143	172	181
Number of countries and regions covered by our data roaming services	218	229	239
<b>Network capability</b>			
Number of 4G base stations (10,000)	151	187	241
Average 4G network downloading rate on urban roads (Mbps)	40	42	42.6
International transmission bandwidth (G)	12,942	23,750	39,000
<b>Network quality guarantee</b>			
Number of emergency communication support tasks	4,128	4,476	4,899
Significant political/economic event support	3,748	4,253	4,597
Significant natural disaster support	347	190	266
Significant accident or catastrophic event support	25	23	16
Public health incident support	2	0	1
Social safety incident support	6	10	19
Number of emergency support vehicles deployed	15,425	7,362	8,986
Number of emergency support equipment deployed (set-times)	56,625	30,642	36,596
Number of emergency communication support personnel activated (person-times)	386,214	201,250	314,427

### Our Achievements in 2018

- Cumulatively set up 2.41 million 4G base stations, and served 925 million mobile customers and 157 million wireline broadband customers
- Improved broadband network coverage in remote rural areas and island regions, and cumulatively delivered broadband services to 38,352 administrative villages through the Telecommunications Universal Service Project
- Comprehensively improved emergency response capabilities, performing 4,899 emergency support tasks and realized the service goals of "zero major network failures, zero major network security incidents, and zero complaints from key customers"

### Our Goals for 2019

- Achieve a net increase of 45 million 4G customers, 25 million household broadband customers, and 300 million IoT smart connections.
- Build a network quality assessment system that covers all networks, systems, platforms, and applications, and extend the scope of assessment from 31 provincial subsidiaries to also include all specialized organizations



## 02 Providing Satisfactory Services and Seeking Trusted Communication

### Optimizing Customer Experience

As our business evolves along with the technological advancements, the scope and boundary of telecommunications services have been significantly expanded. The increasingly complex service portfolio presents an ever-greater challenge for ensuring premium customer experience. China Mobile firmly adopts the Customer-centric and Service-oriented approach and strives for an all-round service management system that leads to services satisfactory to customers, whose personalized service demands are responded to and met in a timely and effective fashion.

#### Improving Service Management System

We set up the Customer Service Department in 2018 to further reinforce the management responsibilities and implemented a series of measures to improve our service management system and customer service work mechanism.



##### Enhancing management responsibilities

- ▶ Set up the Customer Service Department to assume overall customer satisfaction management responsibilities, strengthened service quality regulation, and accelerated implementation of the customer service responsibility system.
- ▶ Strengthened cross-departmental collaboration and established the cross-departmental joint work mechanism to enable timely communication and handling of customer service issues.
- ▶ Improved the customer service personnel arrangement and service quality supervision, and strengthened customer service responsibility and service awareness to improve capability to provide professional services on all fronts.



##### Optimizing complaint management measures

- ▶ Revised the China Mobile Management Measures on Customer Complaints to raise time-limit standards for tiered and classified complaint handling and clarify requirements for each stage of the complaint handling process.
- ▶ Set up the National Upgraded Complaint Center to handle all sorts of upgraded complaints in an omnichannel, all-round manner, thus enabling more efficient complaint handling.
- ▶ Set up the Voice of Customers platform, and established company-wide mechanisms to collect customers' true thoughts.
- ▶ Intensified communication with governmental departments and organizations like the Consumers' Association, paid close attention to customer demands, and actively resolved service-related disputes.



##### Improving customer satisfaction surveys

- ▶ Conducted customer satisfaction and Net Promoter Score (NPS) surveys targeting key business areas including 4G, household broadband, and international roaming services to deliver 360-degree monitoring of the key elements of customer perception.
- ▶ Planned to construct a centralized overall customer satisfaction evaluation system to further improve the efficiency and accuracy of the surveys and inform improvements in customer service capabilities.
- ▶ Our 4G customer satisfaction rate reached 78.5% in 2018, maintaining a leading position.

### Improving Customer Complaint Handling Procedures

#### Risk identification

Determine key risk control points at each stage of customer service from the three dimensions of monitoring, intervention and remediation before, during and after an event respectively; create a closed-loop complaint handling mechanism that involves unified efforts between the headquarters and provincial subsidiaries.

#### Timely response

Establish a dedicated reminder line to set up a green channel between the communication and resolution of complaints; create a proactive care mechanism dedicated to frequent complainants, set up an alert platform, and respond to customer demands in a timely manner through the provision of proactive services.

#### Problem analysis and resolution

Conduct in-depth analysis regarding issues that lead to customer complaints, and urge concerned departments to resolve such issues through effective measures.

#### Service supervision and follow-up

Ensure that upgraded customer complaints are properly received, resolved and followed up by setting up the service supervision hotline 4001110086.

## Responding to and Resolving Key Issues

In 2018, we conducted joint analysis among the various departments, implemented powerful measures, and ensured timely response and resolution to issues about which our customers have complained intensively according to their feedback, thereby trying our best to improve customer experience.

### Top customer concerns & China Mobile solutions

#### Unauthorized service orders and data tariffs

Regulatory guarantee: We formulated a number of policies including the China Mobile Management Measures on Unauthorized Service Orders (Trial), Notice on Further Regulating "Unlimited Data" Plan Offering, and Notice on Further Standardizing Customer Agreement Orders to further regulate our related management practices.

##### Specific measures

- Making our service tariffs public at all contact points such as China Mobile sales channels, website and mobile apps, and moving the tariff section on the Company website to the featured section on the front page to give users easier access.
- Regulating outbound marketing and improving transparent consumption practices such as "0000 unified inquiry and unsubscription", "double check", and "payment notifications" to ensure correct billing.
- Improving the "daily report, weekly analysis, monthly review" customer complaint collection and reporting mechanism and incorporating unauthorized service order complaints into the KPI appraisal of relevant subsidiaries to strengthen management accountability.
- Improving data reminder service to help avoid high data costs and recommending targeted data plans based on user behavior to protect customer interests.

#### Customers' rights of choice

Regulatory guarantee: We published the Notice on Further Guaranteeing Customers' Right of Choice to fully guarantee customers' proper rights when choosing services to subscribe or accept.

##### Specific measures:

- Explicitly forbidding such non-conforming behaviors as limiting customers' rights to subscribe to or change services and forcing bundle sales; adjusting unreasonable restrictions on subscription conditions; removing unreasonable requirements regarding scope of services for subscription; resolving the issue of differential treatment for old and new customers.
- Introducing the DIY plan priced between RMB8 and RMB38, which allows customers to freely pick and combine data and voice services as they need, satisfying customers' demands for lower range offers.



## Creating New Service Platforms

We fully embrace the transformation towards providing “integrated services, Internet-based services, big data-driven services, and intelligent services” to deliver a brand-new customer experience that is efficient, convenient, intelligent and interactive.

In 2018, we continued to improve our 10086 Internet service system to establish a full-service, all-contact-point service platform. Meanwhile, 24/7 access to 10086 hotline was guaranteed to improve the efficiency and quality of our online services. We delivered continuous innovations in our service contents and improvements in our service offerings and functions based on the new mobile Internet platform. Using more everyday language, we strengthened interactions with our customers and created communication channels that were more flexible, direct, and effective. At the Chinese Enterprises New Media Annual Meeting 2018, China Mobile 10086 Weibo account and China Mobile 10086 WeChat account were awarded the “Most Impactful Central Enterprise New Media Second-tier Account of 2018”.

Moreover, we improved our intelligent customer service system by introducing new technologies such as AI and big data, and strove to build our integrated online-to-offline intelligent customer service capabilities by introducing fully self-service machines.

### Intelligent All-In-Ones

In 2018, China Mobile launched unguarded self-service intelligent AIOs to facilitate the construction of intelligent sales channels. At present, we had deployed over 70,000 intelligent AIOs in 30 provinces, offering our users convenient access to real-name authentication, account opening, card reissue, broadband, business inquiry and processing, and a range of other services.

## Ensuring Worry-free Consumption

A prosperous digital economy is dependent on a secure and reliable information consumption environment. China Mobile embraces customer-centricity and makes an all-out effort to reinforce the protection of customer privacy and information security and prevent customer rights violations resulting from telecommunications frauds and harmful information, thereby ensuring worry-free consumption by customers.

## Intensifying Customer Privacy Protection

In 2018, we continued to intensify customer information security protection, with zero major customer information leakage event recorded during the year.

### Regulation formulation

We formulated 14 regulations including the China Mobile Regulations on Customer Information Protection according to numerous relevant laws and regulations including the Cybersecurity Law, the Law on the Protection of Consumer Rights and Interests, and the Provisions on Protecting the Personal Information of Telecommunications and Internet Users, establishing a long-standing customer information protection system and incorporating customer information protection in employees' performance appraisal.

### Implementation Methods

We implemented the customer information protection Vault Mode, where all high-risk operations involving sensitive customer information on key system platforms were placed under vault management, and sensitive customer information was obscured to prevent leakage.

### Monitoring and inspection

We intensified customer information security checks and actively undertook third-party monitoring to reinforce supervision both during and after the occurrence of customer information security incidents.

### Privacy Protection Solutions: And Multiple Numbers and Intermediate Numbers

While making people's lives a lot more convenient, the popularity of the Internet and smartphones has also increased the risk of personal information leakage. In response, China Mobile launched the And Multiple Numbers and Intermediate Numbers, with a view to providing privacy protection for individual and corporate numbers. The And Multiple Numbers are for individual use and enable the addition of 1-3 secondary numbers without having to insert another SIM card. Those secondary numbers can be used for registration or contact purposes. Corporate users are provided with “Intermediate Numbers”, which are ad hoc virtual numbers assigned to transacting parties, thereby “double-encrypting” the numbers of both the vendor and the customer. The total number of our Intermediate Number services exceeded 1.1 billion in 2018, providing over 2.2 billion person-times with temporary transaction communication safety guarantee services.

## Preventing Telecommunication Frauds

With a close eye on the new forms of telecommunication frauds, China Mobile continues to improve its overall capabilities in telecommunication fraud prevention and crackdown to provide maximum protection of customer interests.

### Improving management system

We set up Network Safety Leading Groups at both the Group and provincial subsidiaries; we formulated the China Mobile Implementation Plan for Deepening ICT Fraud Prevention and Crackdown Measures and China Mobile Accountability Management Measures for ICT Fraud Prevention and Crackdown, further improving the evaluation and accountability system.

### Innovating regulation measures

We have realized systematic identification, monitoring and quick handling of roaming numbers from places where frauds frequently originated from as well as numbers indicated in fraud messages, through the use of innovative, integrated data analysis-based measures; we provided users with fraud number alert service free of charge via our And Color Printing service.

### Strengthening source control and treatment

We fully implemented real-name phone number registration and intensified rectification and regulation over key businesses; we took measures to shut down pseudo base stations and deal with mobile malware, "Call you to death" numbers, "Ring once" numbers, and phishing sites; we provided a variety of reporting channels and established a normalized verification mechanism.

### Big Data-Based Telecommunication Fraud Prevention and Crackdown Technology

The "Big Data-based, Scenario-oriented Communications Information Fraud Prevention and Crackdown Technology" of China Mobile is based on its massive user database. The Company has set up high-risk number identification models and fraud incident analysis models based on the various fraud scenarios and established a telecommunications fraud prevention platform that enables accurate and effective discovery and timely interference and prevention. In 2018, the Company identified 11.896 million fraud incidents, sent out alerts against 435,000 high-risk fraud numbers, and dissuaded 1.23 million person-times of potential deceived users. The technology was presented with the Black Technology Award and New Technology Award by China International Big Data Industry Expo.

## Intensifying Harmful Information Management

We make a continuous effort to intensify harmful information management with the aim of creating a secure and clear consumption environment and cyberspace for our users. In 2018, we formulated the China Mobile Work Plan for "Campaign on Comprehensive Regulation of telephone harassment" to enforce targeted management measures against telephone harassment for commercial marketing, malicious and criminal purposes. We provided our customers with a range of relevant services including emergency protection against "SMS bombs", high-frequency harassment phone numbers interception, and mobile phone safety protection. We strictly followed regulatory requirements to adopt a "zero tolerance" attitude towards information with pornographic content, implementing "network-wide one-click blocking" of noncompliant websites.



### Building Sunshine Internet Screen to Safeguard Healthy Childhoods

As more and more parents equip their children with a smartphone, issues such as malicious online information and phone addiction have seriously affected the physical and mental health of minors, giving rise to an urgent need for parents to effectively manage and properly supervise their children's use of smartphones. The Sunshine Protection platform is an integrated solution developed by China Mobile Beijing Company to ensure the healthy use of Internet by minors. The platform allows parents to activate safety protection features to block pornographic, violent and virus-infected websites, thereby creating a green and safe online environment for their children. Functions like screen time limit can be set up to encourage children to develop good habits for using the Internet.

## China Mobile and SDGs



### Our Sustainable Development Rationale

As information consumption finds its way into every corner of our social and personal lives, people are exposed to an increasing number of negative events such as telecommunications frauds and information leakages, which has become a major risk to be guarded against for building a digital society. It is China Mobile's top priority to deliver quality products and reliable services and ensure solid protection on top of greater convenience for information consumption. We actively practice sustainable operations and responsible production strategies by improving our customer service management system, optimizing customer experience and intensifying crackdown measures on illegal actions such as telecommunications frauds, continuously championing and contributing to a sustainable information consumption environment.

### Our Achievements in 2018

- Set up the Department of Customer Services, further improved customer service management procedures, responded to and addressed key issues, and drove improvements in customer service quality
- Enhanced capacity for customer information security protection on all fronts by means of institutional improvements, technologies, supervision and control, and identified 11.896 million fraud incidents and dissuaded 1.23 million person-times of potential deceived users through the telecommunications fraud prevention platform based on big data

### Our Goals for 2019

- Fully strive for high-quality development, construct a customer-oriented service management system, and improve closed-loop service management which covers the whole process of formulation and implementation of service standards, service quality assessment and customer complaint management to improve customer satisfaction
- Focus on where we fall short in customer perception and improve the quality of our networks, products, business, support, and service on all fronts by intelligent means
- Fully utilize new technologies such as big data and artificial intelligence to further strengthen the protection of customers' privacy and enhance network safety standards

### Key Performance Indicators

Indicators	2016	2017	2018
<b>Customer rights protection</b>			
Number of complaints per million customers (person-times)	46.2	35.4	32.1
Number of reported spam messages handled (10,000)	149	128	133
Number of fraud numbers dealt with	136,000	50,700	19,600



## Enabling a Digital Society and Unlocking Innovative Possibilities

### Building Industry Ecosystem

In the era of intelligent connectivity, cross-industrial collaboration and win-win development have become the inevitable choice for realizing integrated industrial innovation. China Mobile strives to make good use of its connectivity expertise and role as an industry leader to actively contribute to building a new digital service ecosystem. The Company makes a concerted effort with its partners to deliver innovations in frontier fields such as 5G, AI, and IoT, providing new possibilities to satisfy people's growing need for a better life.

### Embracing Openness and Cooperation

Consistent with the "Value co-creation, mutual benefit, and win-win" cooperation philosophy, in 2018, China Mobile entered into strategic cooperation agreement with 15 partners including large Internet companies, leaders of vertical industries, and important organizations to explore cooperation in new infrastructure areas such as cloud computing, big data, AI, IoT, and key vertical industries.

In terms of international communication and cooperation, in 2018, we took an active part in major events hosted by industrial organizations such as the GTI (Global TD-LTE Initiative) and ITU (International Telecommunication Union), and continued to scale up our Hand-in-Hand Program. We actively boosted business cooperation in voice and data services as well as the "going out" of self-owned brands, technologies and services to enhance the platform's capabilities in providing services worldwide.

As a Gold Member of OPENSTACK and Priemer Member of the CEPH open source community, we are actively involved in directing the development of international cloud computing and cloud storage technologies. We seek to engage in deeper communication and cooperation with industry leaders via the open source community to foster the healthy development of the industry ecosystem.

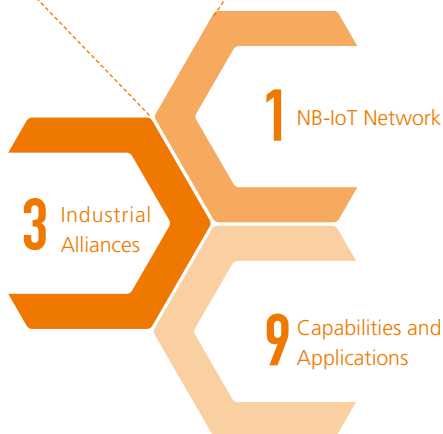


## Upgrading “139” Cooperation Plan

With capability openness and win-win development at its core, we upgraded our “139” Cooperation Plan on all fronts in 2018 so as to seize the broad range of opportunities associated with 5G development. By doing so, we further improved the capability sharing system of China Mobile and enabled closer connections, interactions and cooperation among enterprises in the upper and lower end of the industry chain to jointly create a bright digital future.

### The Achievements of “139” Cooperation Plan in 2018

- The China Mobile Digital Home Alliance has 165 official members encompassing a wide range of industry sectors including chips, modules, and smart hardware, etc..
- The China Mobile IoT Alliance has 675 official members and it gives them a variety of rights including standard setting and mobile empowerment; the OneNET platform brings together nearly 100,000 developers.
- The China Mobile 5G Innovation Center initiated five major industry alliances in multimedia, autopilot, smart cities, Internet of Flying Things and Internet of Energy, with 260 co-operation partners.



- We have completed NB-IoT network deployment in 346 cities across the country and built the world's largest NB-IoT network.
- We offer nine key capabilities applications, of which the Mobile Authentication Platform processes an average of 670 million accreditations per day.
- We published the White Paper on China Mobile Capability Openness 3.0, which lists our core capabilities and solutions.

### Launching the Upgraded Version of “139” Cooperation Plan



**Expanding  
boundaries  
of cooperation**

**Connections ▶ Connections + Applications**  
Expanding industrial digitalization cooperation

Initiating the formation of the Industry Digitalization Alliance, offering partners products like dedicated Internet access, cloud, IDC, and IoT at preferential rates and integrating ICT capabilities into their products and solutions to help realize upgrading; developing open platform structures while advocating “full integration” of customers, products and channels, helping companies use cloud services; providing companies with strategic subsidies and 5G fund.



**Breakthrough  
in  
cooperation**

**Hardware ▶ Pan-intelligent terminal  
joint operation**  
Strengthening household digital cooperation

Creating intelligent hardware ecosystem, launching the Andlink Platform Plan that can be accessed by hardware partners for free, thus realizing lightweight development of applications.

Creating content and application ecosystem, and providing partners with over 200 million big- and small-screen resources to realize accurate recommendation with big data.



**Upgrading  
content of  
cooperation**

**Commodity trade ▶ Adding value to customers  
and partners**  
Deepening pan-intelligent terminal cooperation

Deepening terminal customization with an investment of RMB10 billion in subsidies.

Implementing the 5G Device Forerunner Initiative, providing test environment and technological support for chip and terminal partners.



## Supporting SME Development

Small- and medium-sized enterprises (SMEs) are important driving force behind China's economic and social development. Through its communications capability open platform, China Mobile enables the information-oriented transformation of SMEs and inspires innovation and entrepreneurship. We have established the "1 (business broadband) + 1 (converged business gateway) + N (value-added services)" service system to provide SMEs with customized broadband, standardized products and industry solutions that are stable and cost-effective. By including partners from a wide spectrum of backgrounds such as software, hardware and services, in jointly building the service alliance, we provide a full-service platform dedicated to SMEs where all their needs for information-based services can be satisfied.

## Building Entrepreneurship and Innovation Demonstration Base

We have continuously fostered the organizational, all-member, and open innovations. Leveraging our capacity openness platform online and the series activities offline, we built a cross-industrial and multi-dimensional capability sharing system to promote the aggregation, openness, and sharing of premium resources along the industry chain. We thus sought to enhance the dynamics of internal and external entrepreneurship and innovation and actively explore the mass entrepreneurship and innovation model where large enterprises can engage SMEs in integrated development.

In 2018, we actively explored the innovative path of "unified production and research" and fostered the construction of the Entrepreneurship and Innovation Demonstration Base. The Base has been listed by Ministry of Industry and Information Technology of China in the entrepreneurship and innovation platform pilot and demonstration projects for the manufacturing sector and by the National Development and Reform Commission of China in the sharing economy demonstration platforms and included in the China Sharing Economy Development Report.

- Established united laboratories with university demonstration bases including Tsinghua University and key enterprises along the industry chain to pursue collaborative breakthroughs in core areas such as Internet of Vehicles and Internet of Things
- Set up innovation incubation bases with local governments and universities in line with regional features to promote local economic transformation and development
- Founded the AND-HOME Innovation and Entrepreneurship Incubation Base with business partners focused on hi-tech areas such as smart hardware and artificial intelligence to jointly innovate and incubate relevant products and capabilities

We established three And-Creation Spaces in 2018, namely "intelligent hardware", "cloud computing and big data", and "artificial intelligence and smart cities", and signed And-Creation Spaces incubation agreements with ten external mass entrepreneurship and innovation teams. Meanwhile, we have expanded the scope of our Makers' Marathon series competitions to cover the six major areas of the Internet, 5G innovative applications, digital home, MIGU culture, Internet of Things and digital industry to further stimulate the creativity of the wider society.

### "Longyu": Making Phone Calls Possible for the Hearing Impaired

"Longyu", an intelligent device designed by Nuobaiai specifically to allow people with hearing impairment to make phone calls, won the first prize at the 2018 China Mobile Digital Home Makers' Marathon Contest.

"Longyu" features the Bluetooth peripheral box + app solution. When people with hearing impairment get phone calls, the voice messages are translated into texts and displayed on the app. They can reply the messages by typing texts, which are then processed by a speech synthesis system before being clearly played out as voice messages. The device thus enables hearing-impaired people to easily engage in barrier-free communication in situations where phone calls are required such as food delivery ordering, parcel collection, and job interview. During the contest, China Mobile provided the team with funding and an interview opportunity for being prioritized for entering China Mobile Digital Home product portfolio and securing marketing channel and strategic investment.

2018

Entrepreneurship and Innovation platform hosted users

156,000

The number of teams engaged in innovation and entrepreneurship projects

1,855

The number of projects created through Entrepreneurship and Innovation activities

2,918

The number of teams worked at the And-Creation Space

109

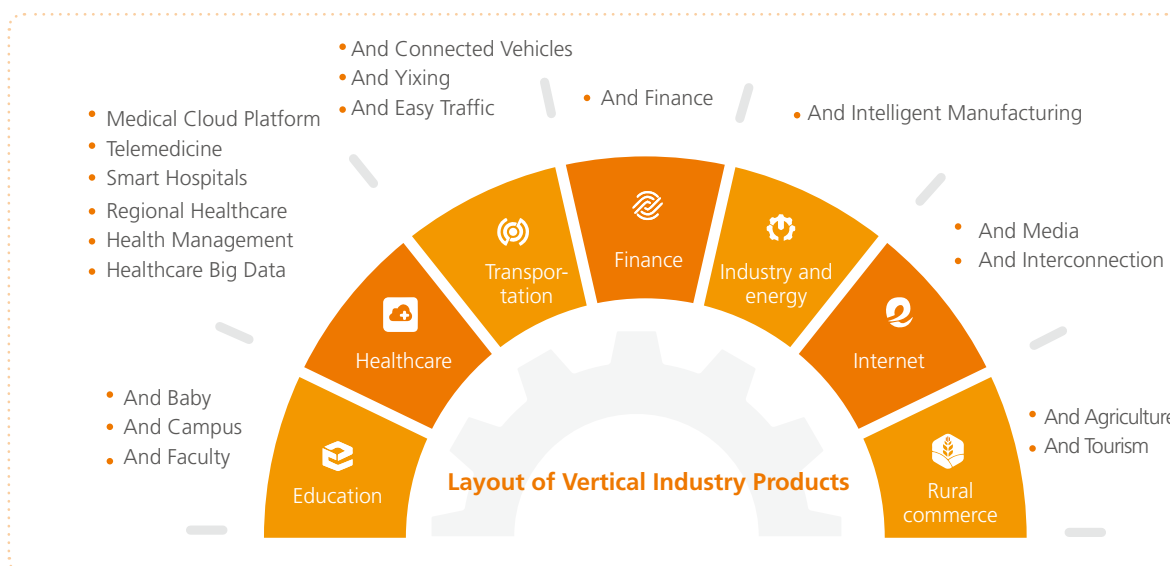
*"The contest provides a platform for us to showcase our company and our products. From the experience, I felt the enthusiasm of China Mobile and its dedication to helping special groups and engaging in social causes. This also allows the makers to quickly and freely fit in as part of the big family and has enormously benefited startups like us."*

—Du Bowei, Team Member

Nuobaiai (Hangzhou) Technology Co., Ltd.

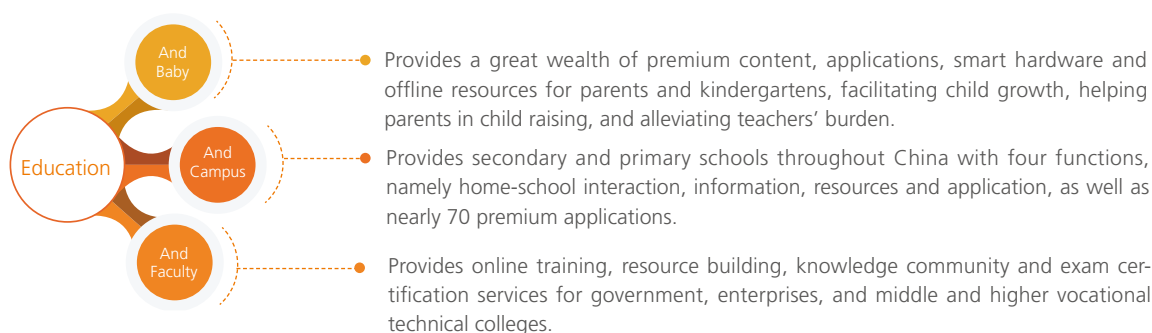
## Enjoying a Digital Life

Leveraging its strengths in business offerings, technologies, networks, and economies of scale, China Mobile constantly fosters the integration between technological applications and industry scenarios through the provision of customized solutions across various verticals of the economy, thereby accelerating the digital transformation and upgrading of industries and providing people with a rich spectrum of opportunities for enjoying a more intelligent digital life.



### And Education: Supporting Information-based Education

China Mobile developed the And Education cloud platform to provide an integrated solution combining “teaching, learning, and education” to drive the information-based development of pre-school education, K12 primary and secondary school education and vocational education.



### “Shared Parking Spaces” Solving Parking Problems in an Innovative Way

As the standard of living is getting higher, there is an increasing mismatch between the growing number of private vehicles and limited public parking spaces. Given that Lanzhou city featured a compatible mixture of commercial and residential areas, China Mobile developed China’s first private parking space sharing solution here based on the concept of sharing economy. The solution utilizes the intelligent linkage between the parking lot entry/exit management system and parking space locks and realizes time-based space rental using IoT technology.

Parking space owners can publish real-time space sharing information by themselves via the mobile App or WeChat official account. Car owners in need of a parking space can select and pay for an idle space online to make a reservation. The relevant parking lot entry/exit management system would automatically recognize those cars and let them through. Not only does the service bring profits to space owners but it has also put idle parking spaces to efficient use. As at the end of 2018, the number of monthly parking space sharing reached 586 and the parking spaces enjoyed an average daily use rate of 89% through sharing, effectively relieving people’s “anxiety” for parking.

## Mobile Community Healthcare Platform: Facilitating the Life of In-home Elderly

To solve the problems with health management at community hospitals in Beijing, China Mobile proactively seeks to build the Mobile Community Healthcare Platform, to help create a hierarchical diagnosis and treatment system that is institutionalized, personalized, and archived. Currently, the Mobile Community Healthcare Platform has signed on over 50,000 family doctors, benefiting more than 70,000 residents at the initial stage.

### Health Display Cloud Platform for Hospitals

The Hospital Information System (HIS) at hospitals is opened up based on mobile virtual private dialup network (VPDN) technology to enable the cloud platform to receive examination measurements and display health data.

### Multi-functional Portable Medical Box for Doctors

The variety of portable devices contained in the medical box comes with built-in wireless transmission modules so that after performing health checks with these devices, data will be automatically uploaded to the server to be synchronized with personal health records.

### Mobile App for Patients

The “Home Doctor Dongcheng” app allows patients to read and upload health data by themselves using the NFC function of their mobile phone; other features of the app include enquiring for information of doctors and receiving hospital notifications.

*“Aged people living in Dongcheng District are fortunate. Doctors can bring a Portable Medical Box to my home and my daughter can view the results on her phone. I can also get prescriptions from experts in 3A hospitals. I am feeling better now.”*

*—A senior patient in Dongcheng District, Beijing*

## “Internet of Teas” Making Teas Reliably Traceable

Due to the lack of effective tracing system and technologies, the West Lake Longjing Tea is plagued by a large volume of counterfeit products in the market. China Mobile worked with a number of partners and developed the first NB-IoT + Blockchain Tracing System in China. This system enables information collection and transmission in rural areas based on intelligent IoT sensors and networks and utilizes blockchain for data storage and management, producing traceable data that are safe from manual manipulation. The data is more accurate and credible thanks to real-time monitoring and direct uploading.

In 2018, China Mobile launched the platform with the Tianzhu Tea Garden in West Lake Longjing Tea Grade 1 Production Area of Zhejiang as the demonstration base, reducing the tracing time for tea's vital information from several days to merely 2.2 seconds and increasing the sales volume by 50%. Thanks to the promotion by

China (Shanghai) International Tea Expo, the Company has signed a letter of intent for cooperation with 52 companies across the country.

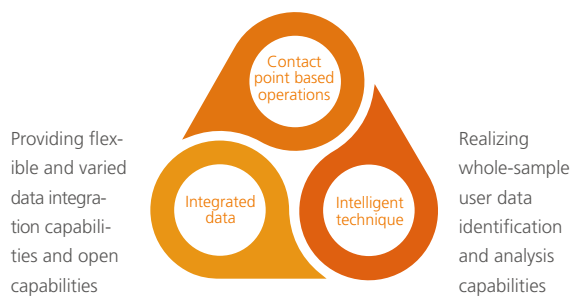


▲ Intelligent sensors at the tea garden conducting real-time monitoring of tea data

## Leisurely Tourism Big Data Platform Enabling Intelligent Tourism

We independently developed the Leisurely Tourism Big Data Platform for tourism management agencies, scenic spots, tourism companies and tourists. With customer privacy protection and data masking as prerequisites, the platform supports a range of functions including accurate and real-time monitoring of tourist flow, tourist attributes and transportation analysis, and travel itinerary analysis by various means such as cloud service, API, and WeChat Official Account. At present, the Platform has been put to commercial use at the tourism departments and scenic spots in Jiangsu, Henan, Yunnan, Shanxi and other provinces, effectively fostering the development of intelligent tourism. In 2018, the Leisurely Tourism Big Data Platform was elected as an outstanding case of big data product and solution by the Ministry of Industry and Information Technology of China.

Satisfying the various marketing needs of clients



## Serving for the Regional Development

Actively aligning with the guidance and opportunities of the national regional development strategies, China Mobile takes Xiong'an New Area, Guangdong-Hong Kong-Macau Greater Bay Area and the Hainan Pilot Free-trade Zone as the demonstration areas for pioneering digital innovations. China Mobile plans and builds the next generation of telecommunications infrastructure in accordance with the highest international standards. It also provides innovative digital solutions in association with the respective regional characteristics and development needs, establishing itself as a benchmark in supporting innovation-driven development while serving and implementing national strategies.

### Actively Participating in Developing Xiong'an New Area

In 2018, China Mobile entered into a strategic cooperation agreement with the government of Xiong'an New Area, established the "Xiong'an New Area Office" and implemented a series of measures to support the intelligent city development of the area.

#### Infrastructure construction

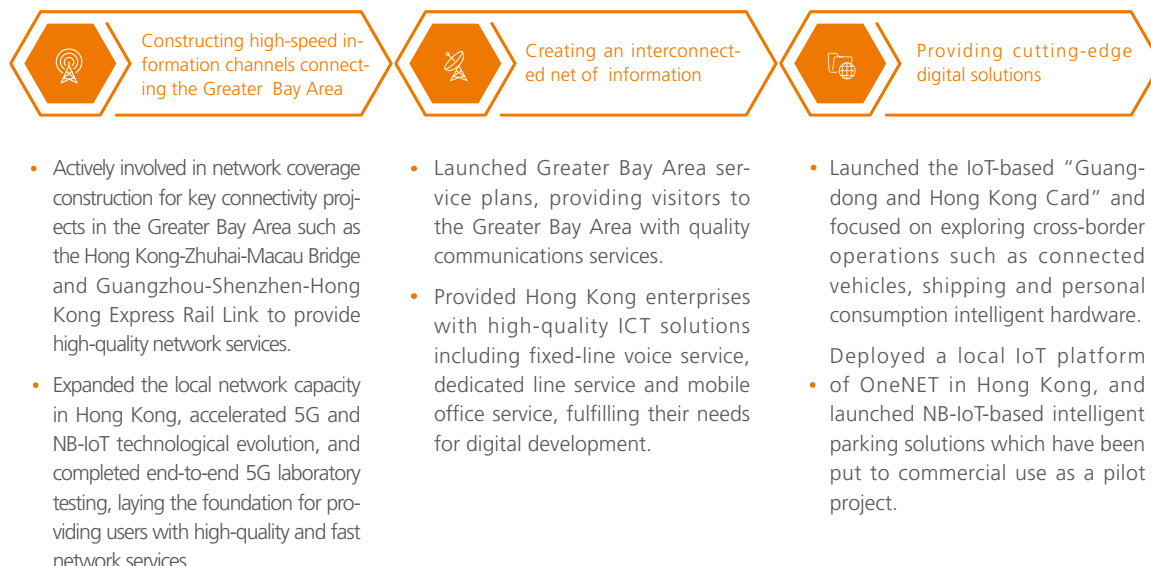
- Achieved full coverage of NB-IoT and regional coverage of 5G demonstration networks in key areas.
- Initially established access capability of "Gigabit in households and 10 Gigabit in businesses" for key areas.

#### Innovation capability development

- Established the China Mobile (Xiong'an) Industry Research Institute, and announced the Urban Superbrain Action Plan.
- Trial deployed and successfully demonstrated the super intelligent system providing feasible intelligent city solutions for Xiong'an in areas such as city governance and environment monitoring.
- Organized a series of 5G intelligent city forums, engaged in intelligent city general working group in standard setting, and participated in partnerships with industry peers on Xiong'an intelligent town planning.

## To Become the Best Digital Life Partner of Customers in Guangdong-Hong Kong-Macau Greater Bay Area

In 2018, with the vision of "becoming the best digital life partner of customers in Guangdong-Hong Kong-Macau Greater Bay Area", China Mobile worked to promote the construction and integrated development of the Area through the provision of improved telecommunications infrastructure and integrated digitalized solutions.



### Supporting Construction of Hainan Pilot Free-trade Zone

In 2018, China Mobile signed a strategic cooperation agreement with Hainan Province government to improve its information infrastructure and support the construction of the pilot free-trade zone and free-trade port with Chinese characteristics in the Hainan Special Economic Zone. With an aim of being first class of its kind in the world, we formulated the Hainan International Undersea Cable Hub Construction Framework and Planning to support the digital development in Hainan.



## China Mobile and SDGs

### Our Achievements in 2018

- Advanced the construction of Mass Entrepreneurship and Innovation Demonstration Base to further inspire innovative initiative and invested RMB83.59 million in support of mass entrepreneurship and innovation
- Our communications capability open platform served over 150,000 enterprises and our OneNET platform attracted 9,396 enterprises
- Actively delivered innovative applications based on our own platform strengths and industry scenarios to pioneer a richer selection of intelligent digital life applications
- Made forward-looking deployment in key development areas such as Xiong'an New Area, Guangdong-Hong Kong-Macau Greater Bay Area and the Hainan Pilot Free-trade Zone with high standards, building first-class information infrastructure and laying an important foundation for demonstration areas of the next generation digital services.

### Our Goals for 2019

- Further advance the "139 Cooperation Plan"; work with stakeholders to build a digitalized industry ecosystem that is more integrated and dynamic to capture the new opportunities associated with 5G
- Explore the various industry verticals in collaboration with partners to continuously innovate digital platforms and products and boost the digital transformation of industry verticals
- Accelerate new explorations into intelligent cities to provide relevant regions with all-round, high-quality platform and application services and foster the integration between information technology and city governance and industry development

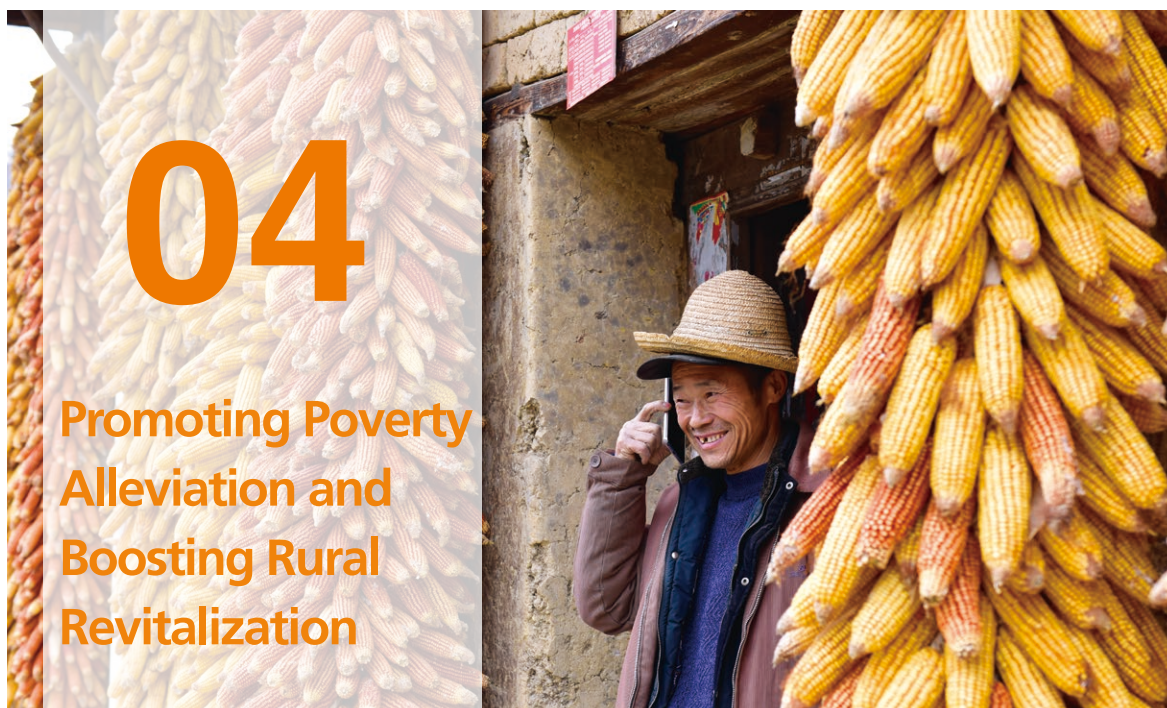
### Our Sustainable Development Rationale

The digital economy is becoming a new driver of economic growth in China and enables new possibilities for the sustainable development of cities and communities. The technological and application innovation in the digital area requires a concerted effort by multiple parties and the formation of a new industry ecosystem that features shared resources, complementary capabilities, co-created value, openness and inclusion. To this end, China Mobile leverages its strengths and its role as a platform and incubator of digital innovations and implemented the following measures: further cooperating with industry chain players by pushing forward the 139 Co-operation Plan and establishing a multi-dimensional online/offline capability sharing platform; providing all-round support for mass entrepreneurship and innovation to empower SMEs and individual entrepreneurs; developing and delivering innovative solutions tailored to the basic needs and key issues relating to the sustainable development of cities and communities to facilitate the realization of relevant SDGs.

### Key Performance Indicators

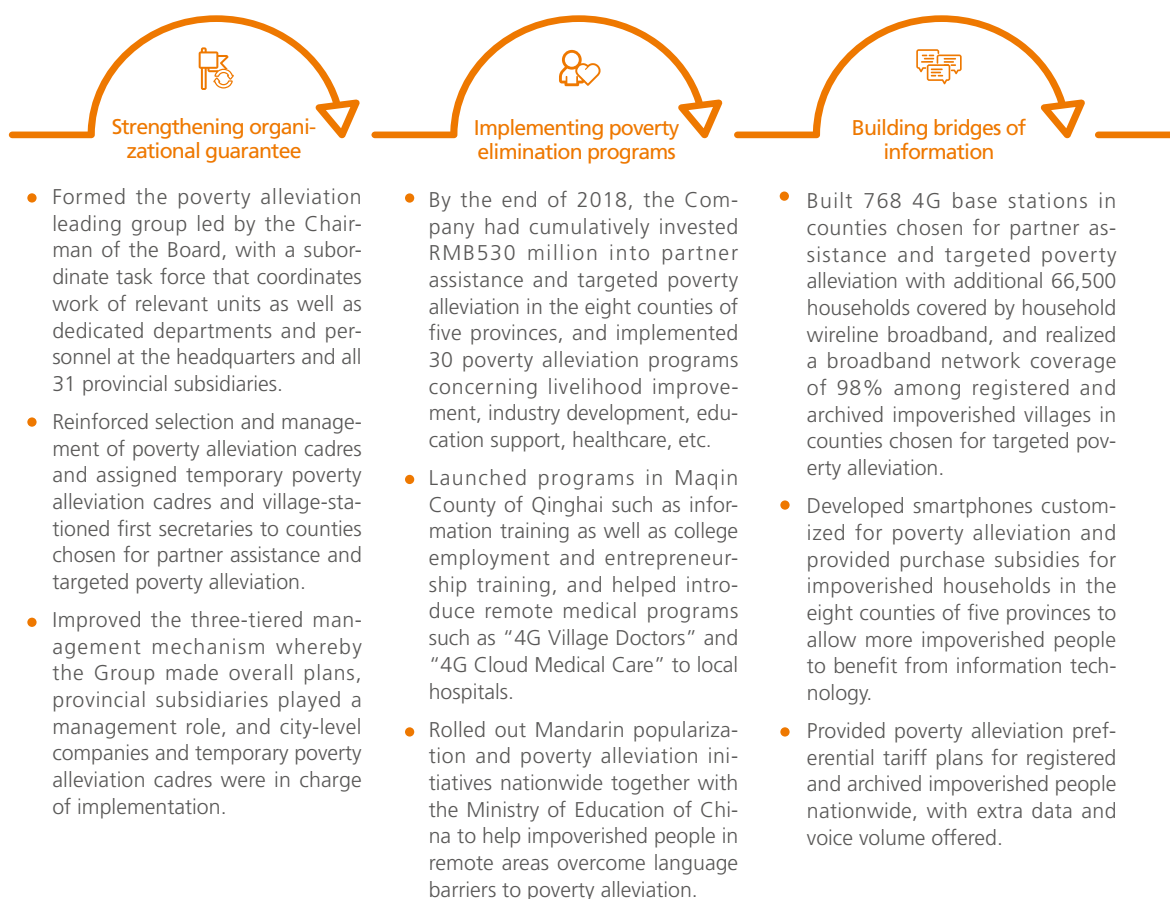
Indicators	2016	2017	2018
<b>R&amp;D and Innovation</b>			
Investment in entrepreneurship and innovation support (RMB10,000)	400	7,955	8,359
Number of developers on OneNET	over 30,000	56,728	99,963
Number of connected devices on OneNET (10,000)	over 700	3,154.31	7,987.85
Number of applications on OneNET	12,000	27,897	57,667





## Committed to Targeted Poverty Alleviation

To help realize the goal of eliminating poverty for rural residents living below the current poverty line in China by 2020, in 2018, China Mobile aligned efforts with the parent company and undertook partner assistance and targeted poverty alleviation in eight counties of five provinces, namely Xizang, Qinghai, Heilongjiang, Xinjiang and Hainan. The Company endeavored to help realize empowerment-based poverty alleviation and steady poverty eradication through measures such as optimizing the poverty alleviation management mechanism, prioritizing key projects, conducting education and training as well as providing information networks, platforms and technologies.



## Promoting Targeted Poverty Alleviation System

As at the end of 2018, the Targeted Poverty Alleviation System independently developed by China Mobile had been implemented in 71 cities/counties of 14 provinces across the country, covering 8.11 million impoverished people and 740,000 frontline poverty alleviation cadres.

Qian Yajun is the First Secretary stationed in the Yanglou Village, Fan County, Henan Province. Before the application of our Targeted Poverty Alleviation System, work on dozens of indicators related with targeted poverty alleviation of all the impoverished households in the village, including field investigation, record keeping and written summaries, had to be done manually by Qian Yajun. It was cumbersome, prone to inaccuracies and quite inefficient. Now, with the help of the Targeted Poverty Alleviation System, all Qian Yajun has to do is input the latest figures and poverty alleviation process records into the mobile app wherever he goes, and a work report is smartly and conveniently generated for him.

The Targeted Poverty Alleviation System has even greater significance for Li Daokai, an impoverished farmer from the Li-baiqiu Village, Puyang County, Henan Province. In April 2017, Li Daokai had a sudden heart attack that had to be treated as soon as possible, but the high surgery fee was unaffordable for his family. After learning about his situation, the staff from the Targeted Poverty Alleviation System managed to raise over RMB90,000 in donations on the platform in just a week, enough for him to receive the treatment. After the surgery, Li Daokai's family started to engage in rex rabbit ranching under the online guidance of experts on the platform, thus alleviating his plight of poverty.

In addition, China Mobile live-streaming team visited the lotus root farming and production base in Yanglou Village and utilized the e-commerce platform on the system to live-broadcast the sales of lotus root and Fan County rice, helping the villagers to make an income of more than RMB1,500 that day while making Fan County organic food known to more consumers.



▲ Rallying donations of study supplies through the Targeted Poverty Alleviation System

*"All our poverty alleviation work used to be done manually. Now with the help of the China Mobile Targeted Poverty Alleviation System, a mobile phone is all we need to conduct surveys and investigations at impoverished households."*

*—Qian Yajun, First Secretary of Yanglou Village, Fan County, Puyang City, Henan Province*

## Five-legged Pig Ranching Helping Lingwei Out of Poverty

The five-legged pig was originated in Wuzhishan, Hainan Province. It wanders in the wild, using its nose to dig for food in the ground. It walks with its mouth on the ground, which looks like a fifth foot from behind. That is how it gets the nickname of "five-legged pig". Today the pig has been given a new nickname by villagers in Baisha Li Autonomous County, Hainan – the "poverty alleviation pig".

China Mobile launched the "cooperative societies – impoverished people – poverty alleviation industry program" model in the local region, uniting with local government and impoverished households in developing the five-legged pig ranching industry. We have also made project-specific poverty alleviation investments in building pig ranching infrastructure in strict compliance with relevant standards, including sow pens, nursery pens, pork pig pens, and porkers' pens to fodder fermentation rooms, sick pig isolation rooms, national-standard biogas digesters and offices.

Every day at noon, the Athletes' March begins to play at the Baisha Heyou Planting and Raising Specialized Cooperative Society that has been jointly funded by China Mobile and the Rongbang Township Government of Baisha County. For the five-legged pigs in the Cooperative Society, the song is the call for lunch, at the sound of which they all rush out of the yard to the pen to enjoy the meal. The villagers have been

gradually lifted out of poverty since they began to work at the pig farm.

So far, an agriculture-based circular income growth model has been established in the five-legged pig ranching demonstration base in Lingwei Village, where government and companies work together to provide funding and self-regulation and operations are implemented by the villagers. The base has pulled in over RMB170,000 of income since its pig ranching industry developed in 2017, with a total of RMB94,900 dividend distributed in November 2017, February 2018 and January 2019 to 33 impoverished households, on average RMB2,876 to each household. Thanks to the base, a total of 154 people from 38 households have been steadily lifted out of poverty. Those five-legged pigs are really "poverty alleviation pigs" to the villagers.



▲ Villagers receiving dividends for five-legged pig ranching



## *Enrooted in Xizang to Help Pastoral Regions Out of Poverty*

Located in the northwestern region of Xizang, Gaize County is one of the largest purely animal husbandry-based counties in Ali. Duan Yuping, a Xizang-aiding cadre of China Mobile, came here in 2016 and has committed himself to boosting local livelihoods and economic development by introducing an array of resources.

### *Growing Leafy Vegetables on the Snowy Plateau*

With an average altitude of over 4,700 meters, Gaize County experiences eight-month long winter every year. The harsh natural environment makes it almost a luxury to get leafy vegetables in winter. Seizing the opportunity, China Mobile invested RMB13.85 million of Xizang-aiding fund in building eight vegetable greenhouses. Thanks to the active efforts led by Duan Yuping, a variety of greenhouse-grown vegetables, such as pakchoi, coriander, spinach and garland chrysanthemum gradually appeared on the dinner tables of villagers in Gaize County in the winter of 2018, addressing their difficulty in getting vegetables in winter.

### *Supporting Tourism in Line with Local Conditions*

As Temporary Deputy Head of Gaize County, Duan Yuping proposed the idea of boosting local economic development through tourism based on an in-depth research and investigation. With support from local government, Duan Yuping helped to set up the Gaize County Tourism Company. The Company undertook market-oriented development of local tourism resources, launching scenic spots and cultural tourism routes such as the Xianqian County Tourism Base and country tours in Dongcuo County and Quedeng County. Featured prod-

ucts stores have also been set up to showcase and sell featured local products such as locally-manufactured woolen sweaters, scarves and Xizang incense, yielding a monthly turnover up to over RMB300,000. The tourism industry in Gaize County has been on fast track since then.

### *Actively supporting Poverty Alleviation through Education*

It is important to help people increase ability and confidence in their own ability to help themselves out of poverty. Poverty has been a cause of school dropouts in Gaize County. To address the issue, Duan Yuping mobilized people around him to engage in paired assistance for students from impoverished families in Gaize County. A dozen units including China Mobile Jiangsu Company rallied behind efforts to call on more people to donate goods and materials for the students including clothes, dictionaries, sports equipment, stationery, and more. Donations from companies were used to set up scholarships in local secondary schools, alleviating the difficulty in getting education and the shortage of education resources.

For the archived poor in Gaize County, we provide them with skills training in catering, loader and excavator operations, etc.. The trainings are systematically designed according to relevant national occupational standards and training syllabus and combine teaching with practice. Apprentices who pass the exams are presented with a certification of compliance or profession qualification certificate. So far, 30 apprentices have received the profession qualification certificates, with 20 of them already earning a steady income. Some apprentices started their own businesses after graduation and now make an income of up to RMB10,000 a month.



▲ Xizang farmer working in a vegetable greenhouse

## Constructing Digital Countryside

China Mobile accelerates the comprehensive and thorough integration of modern information technologies such as IoT, big data and cloud computing with rural production and life. The Company contributes to the development of modern agriculture and diversified industries to transform villages with more robust agriculture, a more beautiful countryside, and better-off farmers by providing digitalized products and innovative solutions and advancing the application of information technology in rural areas.

### *Smartphones Becoming Farmers' "New Farm Tools"*

The Saihu Farm in Ruichang, Jiangxi Province is a state-level modern agricultural park featuring comprehensive agricultural development, with 98% of its farmers owning a mobile phone. Closely in line with the requirement of delivering "intelligent agricultural production, e-commerce-based agricultural operations, efficient agricultural management, and convenient agricultural services" at Saihu Farm, China Mobile developed the smartphone-oriented "four farm tools on smartphones" based on agricultural IoT technologies to provide all-round services for agricultural development. By providing backbone farmers and technical personnel at the Farm with training on IT applications, the farmers become good at utilizing the smartphone. Since the inception of the project, grain yields have increased by 1.05 million kg and the farmers have made a total net income of RMB5 million, while the fine breed coverage rate has reached 98% and the rate of soil test and fertilizer recommendation reached 100%.

#### Pest Prevention and Control

Set up the Intelligent Pest Risk Monitoring Station that allows farmers to keep an eye on insect pest on their phones in real time and eliminate it using drones or other tools enabled by cloud computing analysis and remote control technologies.

#### Soil Testing and Fertilizer Recommendation

Set up the Intelligent Soil Testing and Fertilizer Recommendation System to intelligently collect soil data; based on shared locations, a Soil Testing and Fertilizer Recommendation card is generated, which truly delivers "approaches tailored to specific pieces of land".

#### The four farm tools on smartphones

#### Agricultural Material Quality Tracing

Set up the Agricultural Material Quality Tracing Platform which allows farmers to look up the quality of production materials on their phones, thus enabling "safety alerts, traceable sources and trackable information".

#### E-commerce Platform

Worked with the biggest agricultural product e-commerce platform "Jiangxi Selected (Gan Po Youpin)" in Jiangxi province to explore the new "cooperative societies + farmers + industries + e-commerce + training" integrated model of agricultural e-commerce.

In 2018, China Mobile actively helped the farmers adopt new sales channels based on featured e-commerce services such as Caiyun Youpin and Sales Manager so as to help enhance their sales and popularity. In Yunnan, the number of sales of Suijiang Banbianhong plums exceeded 1,000 cases in just 5 days; in Anhui, the timely release of the picking and sales information of Dangshan nectarines brought hope and happiness to the local farmers.



▲ Anhui Company employees teaching farmers how to publish information for picking and sales

### *"Internet+" Program Launched in Maqin County, Qinghai*

The Maqin County of Golog Zang Autonomous Prefecture is located in southeastern Qinghai Province with harsh natural conditions and a relatively underdeveloped economy. In 2018, China Mobile Qinghai Company initiated a pilot "Internet+" program in Maqin County. The program provides information-based system upgrades for Maqin County Hospital and deploys systems such as 4G Cloud Medical Care and Cloud Doctors' Alliance and relevant equipments, realizing intra- and inter-hospital information exchange and driving improvement in local medical conditions.

To facilitate environmental protection and sustainable local economic development, China Mobile helped Maqin County Government develop the Maqin County Tourist Attraction Signs Information System with a series of core functions such as Travel Guide, electronic maps and accommodation and transportation guidance, giving a significant boost to local traditional cultural heritage preservation, county-wide tourism economy development, and delivery of self-reliant, sustainable economic development.

# China Mobile and SDGs



## Our Sustainable Development Rationale

Against the backdrop of global attention to poverty eradication and efforts to help everyone secure equal opportunities for development, China Mobile actively plays to its business strengths to contribute to the realization of China's 2020 poverty alleviation goal. Overcoming numerous challenges along the way, we have built 4G networks in remote, impoverished areas comparable to those in developed regions and made an all-out effort to implement the Telecommunication Universal Service Project, thereby providing broadband access to impoverished families and serving as the lifeline for local economic development and community growth. On this basis, we invested funds and manpower and conducted programs in livelihood improvement, industry development, education support, healthcare, etc. in partner assistance and targeted poverty alleviation areas to realize empowerment-based poverty alleviation, thereby helping impoverished people increase production and income and lead a better life. We also integrated new technologies and applications such as 4G, IoT and cloud computing closely with the practical needs of rural development, harnessed local characteristics to help realize new types of rural economy such as intelligent agriculture, intelligent animal husbandry and intelligent tourism, and built modernized "new villages".

## Our Achievements in 2018

- Cumulatively launched the self-developed Targeted Poverty Alleviation System in 71 cities/counties in 14 provinces across the country, covering 8.11 million impoverished people and 740,000 frontline poverty alleviation cadres
- Undertook partner assistance and targeted poverty alleviation in eight counties of five provinces together with the parent company, investing over RMB100 million in assist fund, implemented 30 focused poverty alleviation projects, and improved infrastructure conditions and economic development levels in impoverished areas
- Further enhanced information technology application in rural areas and formed a number of unique rural information-based application demonstration projects, thereby providing new ideas and new means for rural development

## Our Goals for 2019

- Strengthen the organization of and resource assurance for poverty alleviation, enhance the effectiveness of poverty alleviation projects, and help impoverished regions establish normalized mechanism for poverty eradication and help impoverished people develop capacity for sustainable development
- Continue to amplify efforts in network-based poverty alleviation and serve as a more effective platform to drive effective integration between social forces for poverty alleviation and the needs of impoverished regions, and provide technological and platform support for realizing poverty alleviation targets
- Further combine the resource endowments and development needs of villages in different regions, provide tailor-made village information applications, promote demonstration programs, and help villages enjoy information benefits and realize leapfrog development

## Key Performance Indicators

Indicators	2016	2017	2018
<b>Narrowing digital divide</b>			
Number of sales channels in township-level areas <sup>1</sup> (10,000)	55.0	46.2	41.0
Number of Rural Information Service users (10,000)	6,487	7,480	8,924

Note:

1. With the development of the Internet, the number of customers, volume of business and market share have all increased rapidly in our online store, mobile store and other electronic channels. This has been accompanied by a corresponding decline in the scale of offline channels including village channels. In the future, we will further enhance the business capacity of our electronic channels to provide rural customers with convenient services that can be enjoyed at home.





## Promoting Social Welfare

China Mobile fulfills its part as a corporate citizen by being actively involved in supporting social welfare. Since founding the China Mobile Charity Foundation in 2009, we have constantly improved the construction and management of our public welfare platforms. We have continually launched a range of brand programs such as the Blue Dream program and the Heart Caring program, utilizing information technology to improve children's education and medical aid conditions in remote rural areas, resolving the "last kilometer" problem of public welfare.



- In the national social organization assessment led by China Ministry of Civil Affairs in 2018, China Mobile Charity Foundation was promoted to Level 4A.
- The Blue Dream program won the third CSR China Education Award Special Award for Targeted Poverty Alleviation in 2018.
- The Heart Caring program won the Charitable Program Award at the 10th China Charity Award.

In 2018, we thoroughly implemented the MIGU Running initiative. We continued to optimize the user experience of our online platform and expand the scope of our offline activities. Combining the Blue Dream and Heart Caring programs, we matched user running mileages with company donations to further increase social participation and gather the power of public welfare. At present, 4.5 million people have cumulatively participated in our MIGU Running public welfare activities.

### Heart Caring Program Passing on Love

In November, 2018, the program was brought to the She County of Hebei Province. A 12-year-old boy named Zhao Zhiwei was the oldest of all the children screened for the disease and also had the latest diagnosis, rendering the disease life-threatening. When learning that Zhiwei was qualified for assistance from the Heart Caring program, his grandma cried with joy. Our staff learned that Zhiwei's grandma had adopted him in 2008 and since been raising him with her every effort. Through the kind gesture of adoption, she had saved Zhiwei's life years ago, and now China Mobile is passing on that love with its Heart Caring program.

China Mobile started the Heart Caring program in 2011 to provide free screening and treatment for children diagnosed with congenital heart disease. By the end of 2018, the program had covered nine provinces including Neimenggu, Liaoning, Henan, Shanxi, Qinghai, Guangxi, Ningxia, Hebei and Guizhou, cumulatively donating RMB160.8 million and providing free screening for 45,648 impoverished children, with 5,358 diagnosed children receiving free surgery.

## “Blue Dream” Education Aid Plan

Since 2006, the China Mobile Blue Dream Education Aid Plan has been dedicated to improving the balanced development of school education and teaching facilities in central and western China for 13 years. In 2018, based on the continual and integrated adoption of shadow training and long-distance training, the China Mobile Principal Training program newly launched the Diagnostic training model, where programs such as principal visits to the Mobile Information-based Exhibition Hall are included in the training to expand the training model and content, improving the effectiveness of training. In the meantime, we visited Sichuan, the Three Regions Three Cities at the Shanxi Provinces as well as areas of extreme poverty where we donated 272 multimedia classrooms equipped with multimedia long-distance teaching facilities and our And Education products to the local secondary and primary schools. By the end of 2018, the Company has invested over RMB156.8 million in the Blue Dream program, training 115,782 rural school principals and donating 2,310 China Mobile libraries and 2,302 China Mobile multimedia classrooms.

## Music Classrooms Filled with Love

“These kids deserve better music education,” said volunteer teacher Sha Nanjie. As a Yi ethnic singer from Daliang Mountains, Sha Nanjie still clearly recalls the first time he visited the school in impoverished areas of his hometown, when he was truly amazed by the children’s passion for music there. “Every classroom was packed with 50-60 children. The music lessons were part-time covered by other subject teachers. Due to the lack of hardware facilities, music classes were taught by the following to sing with the teachers repeatedly. However, I was surprised to find that the children could choreograph by themselves and would give performances in class now and then, clearly very eager for opportunities to perform.”

In June 2018, Sha Nanjie arrived at Sanchahe Township Primary School and Jiefang Township Primary School in Zhaojue County with our MIGU Music Classroom program. Drawing on his own specialties, he gave a singing and vocal class to the children. Through easily understandable beats combined with improvisational composition rooted in everyday life, he brought a brand new music experience to the children and inspired their imagination about musical forms.

Since its launch in November 2017, the MIGU Music Classroom program has joined forces with music experts, professional singers, employee volunteers, and other parties to bring music lessons to six schools in Zhaojue County of Liangshan Yi Autonomous Prefecture and Kaili County of Qiongdongnan Miao and Dong Autonomous Prefecture. Over 3,000 children have been benefited from our music lessons on basic musical knowledge, musical instruments and singing, as well as mate-

*“The training allowed me to learn firsthand better ways of school management. When I return to school, I will engage teachers from different schools in Simao District in sharing and research sessions to deliver higher-quality and more specialized school education.”*

—Xiao Weishu, Principal of Simao No.7 Primary School, Pu'er City



▲ Children having class in the China Mobile multimedia room



▲ Yi ethnic singer Sha Nanjie and primary school students from Daliang Mountains

rials including stationery, musical instruments and books, etc., which have satisfied the student’s needs for learning music and improved local learning conditions.

Asemalimu, a 14-year-old girl of the Yi ethnicity from Bi’er County Central Primary School, Zhaojue County, Liangshan Prefecture, contributed a pristinely-rendered song to the public welfare album Ceiba (“Mumian”) under the professional guidance of MIGU volunteer music teachers. The album has been released on MIGU Music and is intended to use music to bring more people’s attention to remote and mountainous areas and ethnic minorities, delivering positive message through music.



用音乐传递爱  
**木棉**  
吉克隽逸 × 阿色马里市  
咪咕音乐首张公益专辑已上线



Scan the QR code to listen to Ceiba, the public welfare album

## Sunshine Children Safety Monitoring Poverty Alleviation Program

Bijie City is a remotely located city in Guizhou Province, and nearly 180,000 residents work outside the city as migrant workers, leading to a huge number of left-behind children. The life and education of those children have become an issue of wide public concern.

Child safety accidents frequently occur in Bijie City. In response, China Mobile launched the Sunshine Children Safety Monitoring Program in cooperation with local government and social security departments, sending out 65,088 safety intelligent phone watches to left-behind children in 7 counties/districts of Bijie. Equipped with features such as family calls, emergency calls, location tracking, trail playback, etc., those watches build a bridge of safety between those children and their guardians.

All the left-behind children wearing the intelligent watches are included in the And Campus platform, where, utilizing the “Internet + Education” approach, targeted quality educational resources designed by renowned schools/teachers are provided based on the students’ records of academic scores and evaluations to help improve their academic performance.

Making  
education  
more reassuring

Making children  
no longer lonely

Making  
supervision more  
convenient

The watch enables the left-behind children to talk with their parents, thus ensuring better care and guardianship, helping them to develop more intimate communications and relationship with their parents, getting rid of the “shadow” of loneliness.

We developed the left-behind children safety supervision platform, which has been incorporated into the public security system to show the children’s real-time location and historical movement and send timely notifications when they are near dangerous spots; in case of emergency, nearby equipment can be maneuvered for quick response to reduce the time for resolutions.

## **Championing Volunteer Services**

We encourage employee volunteerism and continue to improve the volunteer service implementation and guarantee mechanisms to make our volunteer work more effectively delivered and richer in content. We are concerned about the needs of under-privileged groups and actively implement a rich variety of employee volunteer service programs for impoverished households, left-behind children, outdoor workers, the elderly, the disabled, and other groups, providing them with comfort and assistance.

In 2018, we formulated the Guideline on Further Promoting China Mobile Volunteer Work to make our employee volunteer management more standardized, program-oriented, systemized and normalized, thereby improving the management effectiveness and impact of voluntary management programs. 135,900 employees had registered as volunteers, collectively contributing 567,600 hours of volunteer work.

## With You – With Seedlings Campaign

With You is a China Mobile volunteer brand dedicated to implementing “one-on-one” donation and assistance initiatives aimed at poverty alleviation and education improvement in the Company’s targeted poverty alleviation regions. With Seedlings is a With You sub-brand designed to provide volunteer teaching in impoverished areas to drive education-based poverty alleviation and broaden students’ horizons and knowledge base. We also recruited the children of our employees to be “little volunteers”. They have participated in gatherings with donations (like stationery) for left-behind children, passing on the kindness of heart.

In 2018, our With You volunteer activities inspired active employee participation and donations. Through 6,301 activities, we raised a total of RMB9.1816 million in donations. Meanwhile, our With Seedlings platform sent 10 volunteer teachers to Ningxia Province and donated 105 sets of new desks and chairs and RMB25,000 worth of books to Xingjing County

Hui People No.1 Elementary School in Yinchuan City to provide better learning conditions for the children.



▲ Shaanxi Company employees celebrating birthday for left-behind children

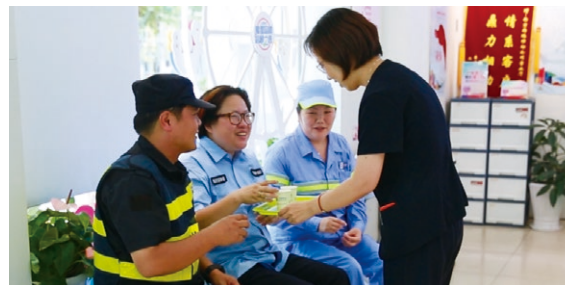


## Having You Under Our Roof – The Outdoor Workers' Care Station

Outdoor workers are “guardians of the city”. Regardless of the weather conditions, they always spare no efforts in contributing to the betterment of the city and the citizens' lives. However, they are always in lack of a roof to protect them from the rainstorms and harsh weather conditions. In 2018, China Mobile Shanghai Company set aside a special section and established the Outdoor Workers' Care Stations in the numerous China Mobile stores throughout the city. Over time, a service model that incorporates “space, sign, personnel, services, facilities and guarantee” has been established, with a focus on addressing the workers' practical needs for drinking water, shade from the sun and shelter from the cold, food warming, phone charging, bathroom breaks, etc. Drawing on our own business features, we also provide them with free 300Mb or 500Mb domestic data and free tryout of our mobile information services.

At present, the Company solidifies construction of the care stations by setting up a dedicated workgroup tasked with formu-

lating Outdoor Workers' Care Station operations and management regulations and conducting regular on-site inspections on the supplies and service quality. By the end of 2018, the Outdoor Workers' Care Station had been set up in 119 China Mobile outlets throughout Shanghai, collectively serving over 3,500 outdoor workers in all kinds of professions such as sanitation workers, assistant traffic police, messengers and deliverymen.



▲ Staff from our business store in Shanghai offering hot water to outdoor workers

*“I am so happy about these Care Stations. In the past, when I needed to use the bathroom, I would feel too awkward to ask the shoppers in case it would cause them any inconvenience. There was no proper place for lunch or taking a rest, so I would just sit under the shade of a tree. Now these Care Stations have made my job much more enjoyable. It is a wonderful service, and we all love it.”*

— Aunt Zhang, Cleaner

## Philanthropy Stars of the Year

### Zeng Huiling: Participator in charitable causes and spreader of love



Zeng Huiling is an account manager at the Tengzhou Branch of China Mobile Shandong Company. While taking good care of her own child, she has also long been dedicating her time and energy to caring for elderly empty nesters, left-behind children and special children in the community as a volunteer. To spend time with deaf-mute children, she has even mastered the sign language. For over ten years, she has influenced people around her with concrete actions and inspired more people to participate in social welfare through her unwavering commitment to charitable work.

### Zheng Yaru: Rose-giving hand has a lingering fragrance



Zheng Yaru is an employee of the Zhongshan Branch of China Mobile Guangdong Company. Her responsibility is to oversee work implementation of the Company's chief youth volunteer squad. She believes that outstanding and refined charitable work lies in a continuous effort to innovate and give character to past experience. With a focus on caring for migrant workers and providing premium service, Zheng Yaru has actively explored the way and managed to deliver a perfect blend of commercial activities and social good as well as diversified forms of charitable events and services.

### Lin Wanlv: Applying knowledge to practice to innovate poverty alleviation



Lin Wanlv is the Chief Operator of the Network Management Center Monitoring Room of China Mobile Yunnan Company. Since May 2018, he has volunteered to participate in poverty alleviation in Huangping Village, Suijiang County, Zhaotong City. Drawing on his technological expertise to overcome numerous difficulties, Lin Wanlv set up an innovative impoverished household information display platform and FTP information storage platform. The platform helped the work team solve chronic problems such as difficulty in locating specific people, information asymmetry, and difficulty of finding required resources, enhancing the efficiency of poverty alleviation work.

# SUSTAINABLE DEVELOPMENT GOALS



## China Mobile and SDGs

### Our Sustainable Development Rationale

Information and communications technologies have unique advantages in helping to narrow down development divide, alleviate and eradicate poverty, balance educational and medical resources, unite forces for public welfare and other aspects. China Mobile leverages its business strengths and Internet thinking and strives to deliver “last kilometer” solutions for providing public welfare assistance. From Blue Dream and Heart Caring to the platform dedicated to caring for left-behind children, and from the music classroom to MIGU Running Initiative, the Company gives play to its public welfare resources and featured platforms to connect groups in need with public welfare endeavors, enhancing the effectiveness of public welfare assistance and building and sharing prosperous communities with relevant stakeholders.

### Our Achievements in 2018

- Improved the construction and regulatory management of our public welfare platforms and promoted China Mobile Charity Foundation as a Class 4A foundation
- 115,782 principals from rural primary and secondary schools in central and western China trained through our Blue Dream Educational Aid Plan and 5,358 impoverished children diagnosed with congenital heart disease treated through our Heart Caring Campaign
- Continued to improve our volunteer service management and guarantee mechanism to enhance the volunteer service abilities of our employees and extend the coverage of our volunteer services, providing 567,600 hours of voluntary service this year

### Our Goals for 2019

- Train 11,120 principals from rural primary and secondary schools in central and western China and build 538 multimedia classrooms through the Blue Dream plan
- Provide treatment for around 600 impoverished children diagnosed with congenital heart disease through the Heart Caring Campaign
- Fully implement and improve the effectiveness of poverty alleviation volunteer work

### Key Performance Indicators

Indicators	2016	2017	2018
<b>Public Welfare</b>			
Total number of registered employee volunteers (10,000 persons)	13.10	11.10	13.59
Total amount of employee volunteer service time (10,000 hours)	50.20	56.80	56.76
Cumulative number of impoverished children to receive free congenital heart disease screenings	33,417	39,488	45,648
Cumulative number of impoverished children diagnosed with congenital heart disease assisted and treated	3,633	4,498	5,358
Cumulative number of China Mobile Libraries built	2,310	2,310	2,310
Cumulative number of multimedia classrooms built	1,760	2,030	2,302
Cumulative number of rural primary and secondary school principals trained	92,532	103,828	115,782
Cumulative donation made by China Mobile Charity Foundation (RMB10,000)	23,395	27,225	31,055