

## Set up an “innovation and venture” platform

Under the guidance of the national strategy of innovation-driven development and “innovation and venture”, the Company has established an “innovation and venture” system that focuses on its main business, is based on its innovative capability platform, centres on cooperation and mutual benefits, and is interconnected both internally and externally. It includes three core platforms:

- Internal innovation incubation platform: the Company launched a “WO Maker Plan”, and set up special zones to support the ventures of employees relying on the open resources of the incubation platform. There were a total of 416 employee-initiated project applications in the first batch, among which 35 projects successfully entered incubators.
- External capital investment platform: the Company carried out external cooperation through a “incubation services + investment platform” mode established by China Unicom Innovation & Venture Investment Co., Ltd. Investments in 11 projects have been completed and settled, among which two have been listed on NEEQ, six have completed a new round of financing with unrealised gains of 1.5-9 times, and two have reached exits with an average annualised return of 100%;
- Open platform for innovative ability: various innovative resources were pooled together by the platform, which was fully open to social entrepreneurs. It greatly lowered innovation costs and provided support to public innovation.

### “WO Maker” Plan of China Unicom



Full-time innovation during a six-month incubation period



Continue to be paid and retain position during the incubation period



RMB50,000-200,000 of support by the incubation fund



Open resources of China Unicom



Free to decide as to whether to stay or leave after the incubation period

**35** EMPLOYEE PROJECT APPLICATIONS HAVE ENTERED INCUBATORS



## PAVE WAY IN KEY BUSINESS AREAS

China Unicom persists in innovation-driven development, continues to make endeavours in innovative businesses such as Internet of Things, cloud computing and big data, and achieves cross-over integration with traditional industries. Targeting the eight key fields of medical care, education, manufacturing, agriculture, environmental protection, tourism, transportation and logistics and public administration, China Unicom provides a lot of specialised and centralised information communication services with focuses on ten hot applications such as public e-services, education informatisation, auto informatisation, wearable equipment and mobile media, etc., making positive contribution to the implementation of the national “Internet+” action plan.

### Expand new space of cloud computing/IDC

China Unicom continuously bolsters the resource investment and development in cloud computing, achieves improvement of cloud data/IDC resource ability and platform development, and enhances fundamental core abilities such as management, research & development, innovation and cooperation, etc. Business volume doubled.

- Improve resources ability: China Unicom implements a “M+1+N” resource deployment scheme in the nation (M means national level and international core nodes; 1 means one core node for each province; N means local edge nodes). It has deployed 35 public resource pools and 13 dedicated private cloud resource pools with 160,000 cores of computational power, 10 PB of storage, and 820G of network bandwidth.
- Perfect platform loading capacity: China Unicom has established a CDN network covering the entire country with provincial capital cities and key cities as edge nodes. The network covers overseas accelerated nodes through cooperative operation, with more than 40 nodes and more than 1Tbps of bandwidth reserve.
- Strengthen R&D ability: China Unicom has acquired 30 software copyrights, passed CMMI3 software certification, and obtained trusted cloud certification for two new products.
- Enrich product system: China Unicom has set up 5 product lines, i.e. IDC, cloud computing, CDN, big data and cloud safety. The Wo Cloud platform has been upgrade to version 4.0, covering 16 cloud computing products in four major categories, namely computing, storage, network and application. We also developed five key products including efficient block storage, cloud backup, full flash block storage, cloud cache and cloud database.

### Establish “China Unicom Wo Cloud + Cloud Ecology Alliance”

China Unicom initiated to establish the “China Unicom Wo Cloud + Cloud Ecology Alliance” which is participated in by over 30 industrial leaders such as global chip manufacturers, hardware manufacturers, database vendors, software application service providers and integration service providers. This industry alliance aims to gather the edges and resources of each part in the cloud computing industry chain, build a complete cloud computing industry ecosystem, and promote prosperous development of cloud computing ecosphere in China. Meanwhile, the Company has pushed forward the upgrade of standards, industrial applications and industrial services in cloud computing.



Inaugural Meeting of “China Unicom Wo Cloud + Cloud Ecology Alliance”

### Awards and certifications received by China Unicom Cloud Data Company

- Cloud China Award, Best Practices for Cloud Computing Award, Most Influential Cloud Industry Company Award, and Excellent Cloud Computing Product Application Award granted by MIIT;
- “Most Innovative Award” granted by China International Big Data and Cloud Computing Expo;
- Green Data Centre Award, Prominent Contribution of Data Centre Award, and 2016 Excellent Operator Data Centre Award granted by China Data Centre Alliance;
- ISO9001 certification, ISO27001 certification, trusted cloud (cloud desktop and block storage) certification.



Shao Medicine Health Cloud 2.0, to which China Unicom Wo Cloud platform provides technical support, was officially announced in the 3rd World Internet Conference in Wuzhen. The platform is the first mobile intelligent medical care cloud platform with graded treatment as the core and physical hospitals as the carrier in China. It has undergone comprehensive cloudification upgrade, and is capable of integrated operations in respect of citizen medical insurance and medicine logistics and distribution through a hybrid cloud mode.

China Unicom Beijing Branch established an “Innovation and Venture Cloud Service Platform”, addressing the government’s innovation and venture management departments as well as small and medium enterprises. The Company has established a nationwide innovation and venture service network through channels such as government’s innovation and venture management departments, industrial alliance, public venture spaces and incubators. It has achieved national innovation and venture service connection and implementation. In order to encourage innovation and venture, Beijing Branch of China Unicom allows quality venture enterprises to use its platform resources for free within a limited period. The platform now has gathered a number of innovation and venture enterprises such as SOHO China, Tsinghua SEM X-elerator, Zhongguancun Intelligent Hardware Dreamworks, which make joint effort to build up a healthy innovation and venture ecosphere.

### Expand new space of big data

In 2016, China Unicom engaged in the promotion of big data sharing and open capability cooperation, and continuously deepened industrial applications and perfected its service system.

- Perfect big data platform: China Unicom has built a big data platform with a hybrid architecture based on Hadoop, achieved scale application of open source technologies such as Hadoop, Spark, Storm and Redis in actual production and service, and integrated container technology to enable unified operation and services at resources, data and application levels.
- Strengthen data processing ability: China Unicom’s big data platform can collect five categories of data, including those on IT production system, business platform, communication network, external Internet and cooperation partners, covering 400 million customers, with a daily processing capacity of over 400 billion pieces of data, and high value resultant data sedimentation reached over 17PB. This platform supports multi-layer capacity output through a primary platform, internally covering refined management, marketing, customer relationship maintenance, customer service, network planning and network optimisation, and externally providing big data services for over 300 partners in over 10 industries.
- Enrich product system: China Unicom proprietary developed six major data products, including user labels, credit rating products, targeted marketing platform, WO index products, location-based services, and open capability platform.
- Improve operating system: China Unicom has established informatisation-oriented head office and provincial pre-sales teams, and a national sales system for corporate customers, and provides external big data cooperation service support to subsidiaries.

### Launch big data products

China Unicom has announced personalised big data solutions in various industries such as transportation, finance, automobile and Internet, and will focus on applications in three main industries, namely tourism, advertising and transportation as well as “small data” personal applications targeting the general public. We will continue to provide full-range solutions to industries and individuals ranging from data collection, data mining to business operation leveraging more diversified products, more open platforms and better operating system, so as to help enterprises and the entire society to add new value.



China Unicom and over ten partners in the video industry such as Baidu and Tencent jointly published the *China Internet Film and TV Big Data White Paper*. This is the first big data white paper in the industry. By integrating high quality data resources, comprehensively analysing and judging on the fluctuation trace of the Internet film and TV industry, and predicting the future development trend of the Internet film and TV industry in a scientific way, it provided references to regulating government departments, Internet video platforms, film and video industry practitioners and investors.

Smart Steps Digital Technology Co., Ltd. is a joint venture company established by China Unicom and Telefonica. The big data platform of Smart Steps links up with data cooperation channels of partners such as China Telecom, Baidu, Union Pay and GPS. It uses the world leading location big data product "Smart Steps" to develop an industrial product model of location data after dozens of upgrades and localisation. As a location big data product of China Unicom, Smart Steps has formed core abilities in location labelling, API interface, data set/reporting and urban perceptual system. It can comprehensively analyse time-space and preference characteristics such as urban residency, points of interest, routes of interest, and travel modes. Through anonymous, integrated and push data processing application methods, it can provide the highest level customer data security guarantee, and at the same time provide top-tier big data insights and relevant services for the government's public administration and social governance, and enterprises' commercial intelligence, transformation and upgrade.

Unicom System Integration Limited Corporation of the Heilongjiang Branch has developed a "targeted marketing platform", which can analyse user behaviour and characteristics so as to understand the user's behaviour and preferences, and through personalisation algorithm and based on the preferences and interests of users, recommend different commodities and products. In this way, targeted services to users are effectively achieved, and the results obtained from the analysis "understand users even better than themselves".

### Expand new space of Internet of Things

China Unicom takes Internet of things as a key area of development in its innovative strategy, and has made great efforts to develop the technology and applications of Internet of Things, so as to accelerate the establishment of an industrial system with international competitiveness, deepen the integrated development of Internet of Things and the economy and society, and provide support to the development of the country into a manufacturing and network superpower.

#### Develop the Internet of Things platform

China Unicom and Jasper, the global leader of Internet of Things platform, cooperated to build a world leading Internet of Things platform.

- We have built dedicated network elements and a dedicated platform for Internet of Things with nationwide M2M service support ability, and created a standardised, open and centralised Internet of Things operation and support system;
- We have adopted BIP over-the-air card activation technology in China. It can link a SIM card directly with worldwide operators, so as to truly enable "one-point access and global deployment";
- With real-time network accessibility, self-diagnostic services and automatic engine, the platform can provide outstanding visibility and controllability. By monitoring equipment behaviour, setting up rules and real-time operation, it can actively prevent problems, and improve stability and reduce costs at the same time.

#### Research and develop all-in-one service solutions

Through cooperating with all parties in M2M industry chain, China Unicom has developed all-in-one Internet of Things service solutions, covering chips, modules and applications. The Company has launched, in cooperation with other parties, a platform for remote contracting management, and focused on developing a Global SIM service model. In conjunction with international operators, we have provided global Internet of Things solutions for multi-national clients in automobile, transportation, consumer electronics and engineering equipment. Meanwhile, we shortlisted candidates through centralised Internet of Things communication module tests, and formed a list of partners to build up our ability in communication modules service. In 2016, China Unicom had a total of 43 million Internet of Things connections. China Unicom's Internet of Things M2M basic platform won the 2016 Internet of Things Solution Award by MIIT.

China Unicom Taizhou Branch has developed "Bianque First-aid System" on the Internet of Things platform. Users can measure blood pressure, conduct electrocardiogram, measure pulse and blood oxygen in the real time with the system, display the results on mobile phones and send them to the personal electronic health archive in the call centre through Internet of Things services, or to the mobile phones of family members and friends. Based on "Bianque First-aid System", the Chest Pain Centre of Jiangsu Taizhou People's Hospital has established a regional cooperative chest pain first-aid network with a number of basic hospitals. It has reformed the treatment workflow for critical illnesses relating to chest pain, and has significantly improved treatment efficiency and quality.

Aiming at solving parking lot shortage in downtown and busy areas, China Unicom Tianjin Branch has developed an "Intelligent Parking System". After the geomagnetic vehicle sensor has detected the vehicle information, the system will send the relevant information such as parking lot occupation, parking time and fee payment to the POS machine of the parking staff through the 4G network. People can perform "parking lot map inquiry, quick stored value top-up, overdue fee payment, parking inquiry and bill inquiry" through an APP. Currently, the system has covered over 20,000 parking lots in 500 car parks in Tianjin, which facilitates the achievement of "fair and transparent parking charges and avoid manual handling of money". The parking management company can also use this platform to strengthen its supervision on parking staff.



## Expand new space of industrial Internet

China Unicom focuses on eight key industries, and plans to set up 16 bases. Each base conducts R&D on application products aiming at a certain industry. As of 2016, China Unicom had built seven product operation bases and nine product incubation bases, and has completed R&D of 56 products. Such bases have promoted over 219 projects in total. The number of base partners reached over 101, and an industrial alliance focused on the products of such bases is gradually formed.



- China Unicom won “Outstanding Contribution Award of the 16th China Education Informatisation Innovation & Development Forum” granted by the Ministry of Education.
- The “Internet + Logistics Localisation Project in Jilin” of China Unicom won “Third Prize of Science and Technology Progress Award” granted by China Federation of Logistics & Purchasing.

### Internet + agriculture

Targeting problems such as low utilisation of agricultural machinery resources and difficult issuance and management of government subsidies, China Unicom has applied BeiDou Navigation Satellite System to Internet and agriculture and has developed the BeiDou Agricultural Machinery Informatisation Management Platform. Through this platform, the agricultural machinery terminal carries out positioning and data collection in respect of agricultural machinery and information is processed through the Internet of Things platform of China Unicom, so as to achieve refined management of positioning, dispatching and real-time measurement. It not only improves agricultural machinery operation efficiency greatly, but also helps the government more conveniently issue and manage subsidies.

### Internet + tourism

China Unicom has launched a tourism big data platform, which shows the relevant information of domestic scenic spots through “scenic spot dashboard”, “tourist source dashboard”, “scenic spot analysis” and “tourist analysis”, and serves scenic spot management and tourism marketing. The “Scenic spot dashboard” can show analytics such as scenic spots’ crowdedness and tourist flows, and mark the positions of scenic spots on a map. The “tourist source dashboard” can show tourist source information at national, provincial and scenic spot levels in real time. “Scenic spot analysis” can show information on food, hotel, transportation, sightseeing, shopping and entertainment in the region through analysis of popular keywords and tourists’ Internet behaviours. “Tourist analysis” provides analytics by tracking tourists’ travel routes, their APP usage and where they stay.

### Internet + medical care

China Unicom Smart Medical Care Cloud Platform adopts the mode of “Internet + hospital alliance + doctors” to disseminate medical resources, and provide higher quality, more convenient and safer medical care services to the public. The platform can provide medical assistance services for medical institutions, provide early warning services in respect of medical regulation and decision making for healthcare authorities, provide services to patients such as health consultation, making doctor appointments and report inquiry, and provide services to doctors such as two-way and transparent referral, mobile doctor consultation, medical coordination and information exchange among doctors. The medical cloud platform has also launched cloud image system, which may receive medical image reports such as ultrasonic and ECG examination reports, and allow real time inquiries. Through mobile terminals, doctors can conduct remote diagnosis based on such medical images.

### Internet + environmental protection

China Unicom and Institute of Atmospheric Physics, China Academy of Sciences has signed a strategic cooperation agreement, whereby the two parties established strategic partnership in air pollution forecast and early warning model, air pollution intensity monitoring, environmental protection big data and value-added services, and nuclear pollution forecast model, for the purpose to increase the informatisation level for air pollution management, and thus provide scientific technology and information services for environmental protection and treatment in China.

### Internet + education

In 2016, China Unicom made a great breakthrough in the education informatisation industry, and in total acquired 2.275 million mobile users, increasing by 120% year-on-year. 3iKids APP served 20,000 kindergartens. 3iKids WO card mobile users reached 888,000. Class-Access covered 301,000 classes, and mobile users of everyone-access cards reached 1.038 million. China Unicom is honoured by the Ministry of Education as the “only operator which systematically provided informatisation solutions in the main battlefield of education in China”.

China Unicom Guangdong Zhaoqing Branch has launched the “Interactive Smart Class”, an all-in-one solution which integrates cloud, pipelines and terminals, and centres on “education resources cloud platform + class-access/everyone-access application platform + intelligent terminals + wireless network”. Zhaoqing Branch provided 34 free “Smart Class” demos, high-quality and affordable wireless broadband service and smart learning terminals to secondary and primary schools and kindergartens of the city, and opened “China Unicom Tiny Class”, a learning management platform, to secondary school and primary school students for free. Meanwhile, China Unicom Zhaoqing Branch, in cooperation with Zhaoqing Education Bureau, made great efforts to integrate quality education resources on “China Education Cloud” and “Guangdong Education Cloud”, and developed local Internet courses and incorporated them into “China Unicom Tiny Class” learning management platform, so as to provide quality education resources for secondary school and primary school students and children.

### Internet + public administration

China Unicom, based on a series of new technology applications such as mobile Internet, cloud computing, big data and Internet of Things, has launched a series of new "Internet + public administration" industrial application products, covering smart fire control, food traceability, safety mobile phone, ocean access, Internet of videos and Lanxin. These public administration industrial applications will bring innovation to the government's service mode, improve scientific decision making ability and management capability of the government, and effectively improve the government's working efficiency and service ability.

China Unicom Jilin Branch has developed an online public administration and services platform for the provincial government of Jilin Province, which integrates features such as transparent public administration, convenient public services and open data, and coordinates the services at the provincial, municipal and county levels. Through the development of an "integrated network" for public administration and services, China Unicom Jilin Branch has helped push forward the centralisation of public administration data in the entire province, enabled "online acceptance", "one-stop handling" and "whole-process" efficiency supervision of provincial public administrative authorities and convenient public services, and promoted centralised authorities, on-line services, disclosure of public administration information and data resources sharing.

China Unicom Zhejiang Taizhou Branch has developed "ESHIAN" platform for the purpose to achieve Internet+ supervision for food. Market supervision officers can use a mobile client to take photos on site and upload them, and register basic food safety supervision information so that evidence relating to food safety supervision can be collected on site and inspection information can be reported immediately. Taizhou Branch has also developed an "ESHIAN" APP to enable maintenance of routine inspection records, convenient information reporting and accurate enforcements against breaches.

### Internet + transportation

Through its subsidiary Zhiwang Technology Co., Ltd., China Unicom provides differentiated products and comprehensive services for auto industry customers, mainly including information services, platform operation, call centres, online stores, content services and ICT. In the OEM market, the Company integrated auto manufacturers' original supply chains. In the aftermarket, the Company promoted a bundled service mode combining "platform + hardware + data + operating service". For new energy vehicles, the Company promoted comprehensive services combining "vehicle monitoring platform + data + storage + operating service" in leveraging the state's policy on mandatory monitoring of new energy vehicles. In the vertical industry market, the Company focused on the key fields such as bus rental, online taxi appointment and industry fleet management, and provided comprehensive solutions for vertical industries. In 2016, Zhiwang Technology Co., Ltd. cooperated with 38 international and domestic auto manufacturers.

- Zhiwang Technology Co., Ltd. of China Unicom won "Best China Telematics Enterprise of the Year" Award granted by the Society of Automotive Engineers and Telematics@China Organising Committee
- Zhiwang Technology Co., Ltd. of China Unicom won "Innovation Award of China Internet of Vehicles" granted by Internet of Vehicles Conference

China Unicom Xinjiang Branch has developed "safety management and control system for dangerous and heavy vehicles" targeting large vehicles such as construction vehicles, passenger vehicles, buses and trucks carrying dangerous goods. Relying on mobile communication technology, the system can identify driver's identity, accurately position driving routes, devise electronic fences and remotely control dangerous driving vehicles. In this way, it can strengthen the safety supervision on dangerous and heavy vehicles, and help to solve the problem of insufficient safety supervision personnel in regulatory authorities, the difficulty in vertical interaction of information on stability maintenance and horizontal expansion of stability control, so as to effectively prevent outbursts of terrorist attacks caused by vehicles. Currently, the system has been installed on 1,815 large vehicles, and the project has become a benchmark stability maintenance industry application in South Xinjiang.

### Internet + manufacture

Targeting manufacturing enterprises, China Unicom brings its network coverage advantages into full play, and provides safe and reliable communication modules and fast and stable networking ability to help enterprises carry out Internet-based online value added services such as early warning for malfunctions, remote maintenance, quality diagnosis and remote process optimisation, so as to increase product value.

### Help "Smart City" construction

In 2016, China Unicom launched a series of application solutions covering industry, agriculture, medical care, tourism, communication and services leveraging new technology applications such as mobile Internet, Internet of Things, big data and cloud computing, so as to provide powerful support to "Smart City" construction and the development of digital economy.

China Unicom Yinchuan Branch made great efforts to cater for government planning, helped "Smart Yinchuan" construction, built up the overall framework of "one cloud, one network and one map", and deployed 13 sub-modules in 10 systems covering smart public administration, smart community, smart transportation and smart environmental protection. It also completed the construction of over 4,000 nodes, such as security monitoring, smart transportation, electronic station boards, wireless WIFI, and RFID data collection. Yinchuan is the only smart city in China with top-level planning covering the whole city. Therefore, it has achieved city-level data sharing and generated real value from the data, benefiting municipal administration, citizens' daily life, industrial development, energy conservation and environmental protection, etc.



### Improve ICT ability

- **Integrated implementation ability:** relying on its communication network, China Unicom has set up a “grand integration” service system and developed an integrated implementation framework serving key national projects;
- **Application development ability:** China Unicom has set up an R&D system combining basic R&D in the head office and application R&D in various bases;
- **Service outsourcing ability:** China Unicom has optimised the development of its outsourcing support system, improved automated monitoring and onsite inspection capability, set up a unified operation and maintenance command system based on ITSM (IT service management), and explored how to establish a service outsourcing system which meets the requirements of IAAS (infrastructure as a service) and PAAS (platform as a service).

### Expand new space of international market

In order to strengthen coordination and planning of international business and more effectively expand overseas business, China Unicom established China Unicom Global Limited (hereinafter referred to as “Unicom Global”) in 2015. Unicom Global is responsible for the operation of all global businesses of China Unicom catering to all customer bases. Unicom Global is committed to being a leading service provider in information communication among global enterprises and in the Asia-Pacific region, so as to make contributions to the implementation of the national “Belt and Road Initiative” and “Internet +” action plan. Unicom Global has set up 29 sales offices around the world in line with its overall development concept of “focusing on key markets, based in Asia-Pacific and optimising its global network”. Its operator business is distributed all over the world while its corporate business mainly focuses on Asia Pacific, the Americas, Europe and Australia. Its mobile MVNO services have expanded into Europe and the Americas with Hong Kong as the headquarters.

### Improve overseas network ability

- International basic transmission bandwidth increased by 9.3T, and total bandwidth reached 19.7T.
- 16 POPs were added in the transmission network, and the global total number of POPs reached 44.
- For data networks, AS4837 reached 15 POPs, AS9929 reached 35 POPs and AS10099 reached 35 POPs.

### Innovate overseas product system

- Basic IDC products include resource-based services such as host service, Internet access service and IP address lease service. IDC value-added products include network security, data application and IT operation and maintenance services.
- Launched new cloud computing products, mainly including virtual private servers (VPS), CloudPRTG, cloud desktop and DDoS data cleaning.
- Launched comprehensive information solutions, covering informatisation infrastructure development, software/hardware application services, and one-stop maintenance outsourcing for enterprise informatisation software/hardware, etc. serving hundreds of overseas enterprise offices, including Union Pay International, ICBC International, China Merchants Bank and SPD Bank.

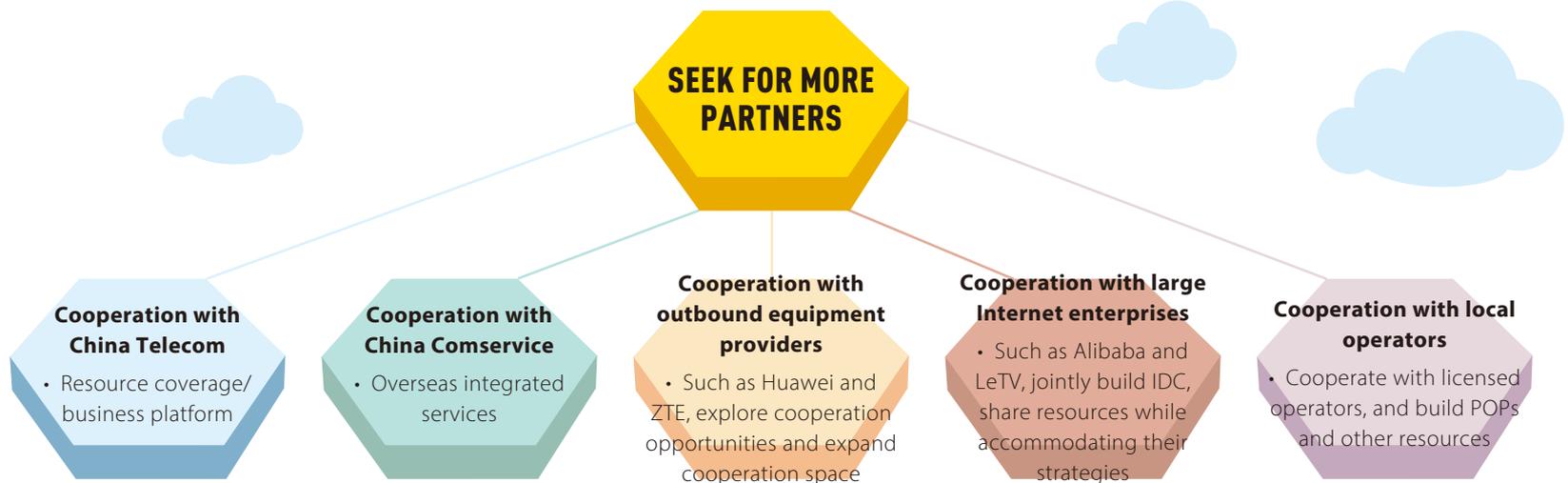
**Unicom Global released CUniq-branded overseas multiple-numbers-in-one-card MVNO service in London, UK. After subscribing to the service outside China and selecting telephone numbers of UK, Hong Kong and Mainland China, users can enjoy shared voice services in China, UK and Hong Kong, shared data in 45 countries and regions, 24-hour Chinese-English bilingual customer service and inquiry service via online shop CUG Store.**

Note: CUniq multiple-numbers-in-one-card service: CU refers to China Unicom, Uniq means unique (exclusive, quality and unique), i.e. one SIM card can carry three mobile numbers in UK, Hong Kong and Mainland China at the same time.

### Carry out global business cooperation

Unicom Global has actively cooperated with global operators, and enhanced its own resources and abilities through developing cooperation organisations and joining cooperation alliances.

- It has developed good relationship with over 400 operators worldwide, promoted cooperation with Telefonica in South America, improved Brazil-Cameroon submarine cable network, and pushed forward Hong Kong-America new submarine cable cooperation.
- It has cooperated with over 200 overseas operators or communication groups on voice and data international roaming. China Unicom’s outbound LTE roaming connects with 132 operators, and inbound roaming connects with 147 operators.
- It has, jointly with China Telecom, promoted a new overseas expansion mode of “sharing, competition and cooperation”, and has made progress in various aspects such as joint negotiation with foreign parties on international roaming IOT, reduction in international roaming costs, joint construction of overseas POPs, and joint investment in cross-border land cables and international submarine cables.
- It has established global cooperation organisations for ICT, cloud service, CDN and other businesses, to promote cross-industry resource integration, achieve industrial cooperation and win-win, and push forward overseas business through industrial cooperation.
- It has joined global alliances in the fields of M2M and mobile services, so as to rapidly acquire global resources and capabilities.



### Innovate international operation mechanism

The Company has made great efforts to push forward GAM mechanism, so as to transform from horizontal management to vertical management. As a result, GA customer satisfaction keeps improving, and the service is acknowledged and praised by customers including Telefonica, Vodafone, BT and AT&T.

Note: GA (Global Account) refers to a kind of large-scale customers with branches globally. GAM (Global Account Manager) is a customer sales service team particularly serving GA customers. GAM mechanism is an innovation in management model, which transforms the original horizontal management to vertical management. Through flattened, centralised and vertical and unified management by the head office, a global team is set up to take care of customer demands, projects and customer service management during the whole life cycle before, during and after sales, so as to improve operating efficiency.

### Serve the development of the "Belt and Road Initiative"

China Unicom has accelerated its improvement of global network deployment and product system, emphasised improvement in global service ability, and actively participated in the "Belt and Road Initiative" development.

- China Unicom has accelerated the network coverage in areas along the "Belt and Road", participated in constructing AAE-1 (Asia-Africa-Europe -1) submarine cable system and SMW-5 submarine cable system to form double-route and double-system capacity in Europe-Middle East-Africa-Asia Pacific area, and improved the resources deficiency in Europe, South Asia and West Africa by taking advantage of the network strength of Ngwe Saung of Burma, Hong Kong and Shanghai.
- China Unicom has actively promoted Central Asia cross-border land cable project construction, so as to improve the network coverage on the Economic Belt of the Silk Road.
- China Unicom has greatly expanded operator customer base, and provided better product offerings and channels in areas along the "Belt and Road". In 2016, China Unicom developed 22 new operator clients in ASEAN, India and Russia and other "Belt and Road Initiative" countries, and achieved full operator business coverage in ten ASEAN countries.

China Unicom (Hong Kong) Global Centre came into operation in 2016. It is the largest data centre that China telecommunication operators have planned and built overseas. Moreover, it connects to domestic and international backbone networks, and is an international independent data centre, a global cloud service centre in Asia-Pacific and a service base for international financial customers. It will become the important hub for connecting the "Belt and Road Initiative" information infrastructure.

China Unicom (Hong Kong) Global Centre is located in Tseung Kwan O Industrial Park, a high-end data base of Hong Kong, with a site area of about 14,900m<sup>2</sup> and a construction area of about 37,000m<sup>2</sup>. It has 4,000 cabinets, and adopts environment standards for international data centre construction and certification. Its service level reaches international Tier III standard.



China Unicom engaged in the construction of the international submarine cable in South Atlantic Ocean, and provided a landing station in Brazil. After the construction of the South Atlantic Ocean international submarine cable is completed, it will form China Unicom's global international communication network along with AAE-1 submarine cable, SME-5 submarine cable, New Central America and Asia-Pacific direct international cable, and provide infrastructure support to the implementation of China's "Belt and Road" strategy.