



COOPERATIVE DEVELOPMENT TO ACHIEVE WIN-WIN

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COOPERATIVE DEVELOPMENT TO ACHIEVE WIN-WIN

Open cooperation is a driver to the development and growth of enterprises. China Unicom has always held an open mind and actively cooperated with partners to achieve mutual benefits and win-win. In 2016, China Unicom carried out in-depth cooperation and innovation with telecommunication operators, Internet enterprises and various parties in the industry chain, and achieved synergetic development, building a prosperous and co-existing industry ecosystem.

Measures adopted in 2016

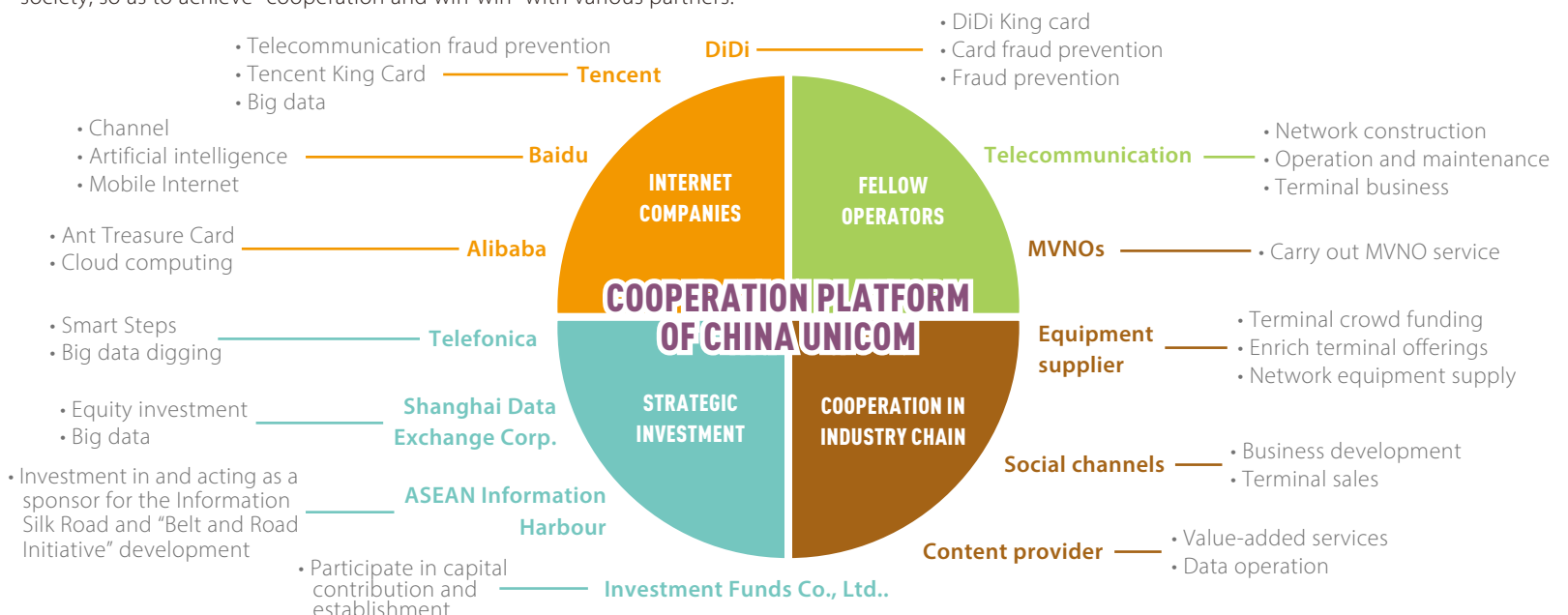
- Carried out in-depth cooperation with China Telecom in respect of resource sharing, mutual assistance during emergency, saving RMB3.3 billion in CAPEX and RMB350 million in OPEX; promoted “all network access” terminals as an industry standard;
- Carried out full cooperation with Internet enterprises such as DiDi, Baidu, Alibaba and Tencent in mobile Internet, artificial intelligence, big data and basic communication service, and launched products such as DiDi King Card, Tencent King Card and Ant Treasure Card;
- Promoted synergetic development of enterprises in the industry chain including equipment manufacturers, content providers, terminal suppliers, virtual operators and social channels; provided supporting services for industrial development; and procured enterprises in the industry chain to properly perform their social responsibilities;
- Explored capital cooperation in innovative businesses; invested in Shanghai Data Exchange Corp. and helped boost big data industry development in Shanghai; invested in and sponsored China-ASEAN Information Harbour Co., Ltd., and helped the development of the “Belt and Road Initiative”.

Actions in 2017

- Continue to drive the implementation of mobile Internet, transmission network, operation and maintenance cooperation with China Telecom, and improve the network abilities of both parties.
- Strengthen social cooperation, actively explore cooperative operation mode, expand network coverage and improve marketing ability;
- Strengthen cooperation in the industry chain, and conduct cooperation in aspects such as family terminals, STB, and Internet of Things terminals.
- Continue to actively explore business and capital cooperation in innovative businesses such as mobile Internet applications, mobile finance, big data, cloud computing, Internet of Things and Internet+.

ESTABLISH COOPERATIVE PLATFORM

In order to implement the development strategy of “focus, innovation and cooperation” and make new progress in “co-development, mutual benefits and win-win” under the background of “Internet+”, China Unicom cooperated with China Telecom, Internet companies, capital partners and enterprises in the industry chain to explore models of shared economy, cultivated industry ecosystems, and, through setting up information sharing platform, reduced communication costs, provided direct support to large-scale cooperation, promoted information exchange, resource sharing and healthy interaction, and shared with the entire society, so as to achieve “cooperation and win-win” with various partners.



In 2016, China Unicom for the first time integrated “Channel, Terminal and Application” meetings, and held a large scale conference of cooperation partners, which has greatly promoted comprehensive upgrade of 4G+ network and provided the industry with strong innovation impetus. Over 5000 persons from 1500 partner organisations attended the conference, and site visits reached 150,000 person-times, Internet broadcasts reached 100 million person-times. Altogether 51.63 million terminals were sold on site, with the amount of transaction reaching over RMB50 billion. The conference promulgated five programmes, including terminal star programme, user phone replacement programme, card slot operation programme, ten thousand chain stores programme and contents operation programme, as well as two white papers about video phone development and Internet film and TV, which received good responses and feedback from the industry chain. During the conference, China Unicom held high-level forums with Tencent, Baidu and Qualcomm, at which all parties had a discussion and preview of the comprehensive in-depth cooperation going forward. China Unicom will take this partner conference as an opportunity to gather industry strength, push forward technological innovation, build up a new cooperative and resources sharing landscape, and jointly promote the implementation of national information and communication strategies such as “network superpower” and the “Belt and Road Initiative”.



2016 China Unicom Partners Conference

PARTNER WITH FELLOW OPERATORS

In 2016, China Unicom continuously promoted the in-depth cooperation with China Telecom to comprehensively implement the “customer service quality upgrade plan”. In addition, the two companies built up a new industry development landscape by opening and sharing various resources including network, business and services, jointly propelled the structural reform on supply-side such as network and terminal, so as to reduce costs and increase efficiency, and improve operating efficiency of state-owned assets.



SAVED RMB
3.3 BILLION IN CAPEX

SAVED RMB
350 MILLION IN OPEX

| | |
|---|--|
| Unified standards | Jointly released <i>Broadband Service White Paper</i> and <i>4K Intelligent STB White Paper</i> |
| Network construction | Jointly built 4G wireless networks, sharing 39,000 outdoor base stations, and 34,000 indoor buildings; |
| | Jointly built 16,000km of optical cable for transmission networks, 19,000km of pole lines and 2,700km of pipelines; |
| | Saved RMB3.3 billion in CAPEX and RMB350 million in OPEX. |
| Operation and maintenance | Cooperated in aspects such as mutual assistance during emergency, basic resource sharing, optimised mobile cooperation, network operation linkage, maintenance system linkage, sharing of existing base stations, spare supplies and parts sharing and mutual maintenance cooperation; |
| | Revamped 99 emergency base station vehicles, carried out 37 joint drills, jointly provided emergency support for 41 times, and conducted 9 joint emergency operations; |
| | Exchanged network optimisation test data in 31 provinces, and shared 32,908 items of existing base stations and indoor distribution system resources; |
| | Concluded cooperative agreements on spare parts in 8 provinces, and carried out maintenance cooperation in 9 provinces; |
| IDC business | The two parties will establish interconnection channels for IDC in ten main interconnection nodes in China, and optimise cross-network visits of IDC users of either party. We have already completed the formulation of the detailed technical implementation plan, and have commenced early trial runs in Beijing; |
| International network and business | The two parties signed a joint negotiation agreement with Telus Canada on international roaming; |
| | China Unicom purchased 500G international network bandwidth from China Telecom; |
| | China Unicom entered into a memorandum of understanding on optical cable resource exchange for domestic section of China-Kyrgyzstan optical cable; |
| | China Telecom invited China Unicom to join in the construction of HKA submarine cable, with the confirmation of the intention to cooperate in Singapore POP. |
| Terminal cooperation | Conducted studies on how to facilitate the terminal industry chain to accelerate the release of L900 and L800 terminal products. |

China Unicom Jiangsu Branch and China Telecom Jiangsu Branch carried out in-depth cooperation in operation and maintenance.

- **Mutual assistance in emergency:** mutual cooperation and coordination for major disasters, emergencies and important events;
- **Basic resource sharing:** improvement in maintenance mechanism of shared resource to ensure proper maintenance of shared resources;
- **Optimised mobile cooperation:** push forward cooperation, exchange and sharing in maintenance and optimisation for jointly built LTE outdoor base stations and indoor coverage, and joint provision of satisfactory mobile network quality to users;
- **Network operation linkage:** work closely to implement connected operation of various specialised networks;
- **Operation and maintenance system linkage:** strengthen exchange and sharing of maintenance management experience and innovation, so as to jointly improve the overall maintenance level and customer service ability.

China Unicom Qinghai Branch signed strategic cooperation agreement with China Telecom Qinghai Branch to carry out in-depth cooperation in aspects such as mobile network construction and optimisation, maintenance service and pole line maintenance service. In 2016, in terms of 4G network construction, China Unicom Qinghai Branch shared the use of Qinghai Telecom’s 54 outdoor base stations and 16 indoor distribution buildings; and Qinghai Telecom shared the use of China Unicom Qinghai Branch’s 54 outdoor base stations and 32 indoor distribution buildings. As a result, China Unicom Qinghai Branch saved RMB70.48 million in network construction and maintenance in the year.

China Unicom Payment Co., Ltd. conducted in-depth cooperation with Bestpay Co. Ltd in aspects such as “opening up of resource capacity, joint construction and sharing of channels, and joint expansion of customer base”, so as to achieve the purpose of “maximum resource utilisation efficiency, rapid and healthy business development, and expanded user base”.

COOPERATE WITH INTERNET COMPANIES

China Unicom has actively explored cooperation with Internet companies, and has signed strategic cooperation agreements with Tencent, Baidu and Alibaba respectively. Each party can exploit its technology, resources and ecosystem advantages in the Internet industry, seize opportunities in the new round of technology revolution, and deepen cooperation to achieve win-win development on the basis of "mutual sharing of capacity, joint expansion and joint innovation". The parties also carry out in-depth cooperation in basic telecommunication service, mobile Internet and industrial Internet, so as to accelerate supply-side structural reform for mobile Internet.



China Unicom signed a strategic cooperation agreement with Baidu



China Unicom signed a strategic cooperation agreement with Alibaba



China Unicom signed a strategic cooperation agreement with Tencent

In 2016, China Unicom, in cooperation with other parties, launched DiDi King Card, Tencent King Card and Ant Treasure Card, which gained favourable social responses.



DiDi King Card: Tailor-made for DiDi drivers



Tencent King Card: with dedicated data



Ant Treasure Card: for Alipay users

DEVELOP INDUSTRY ECOSYSTEM

In the Internet era, communication and collaboration are essential for success. China Unicom has always held the belief of "cooperation, openness and win-win development", and has developed in a synergetic way with various parties in the industry, so as to provide proper support to the development of the industry and urge enterprises in the industry chain to properly perform their social responsibilities.

Promote industrial cooperation

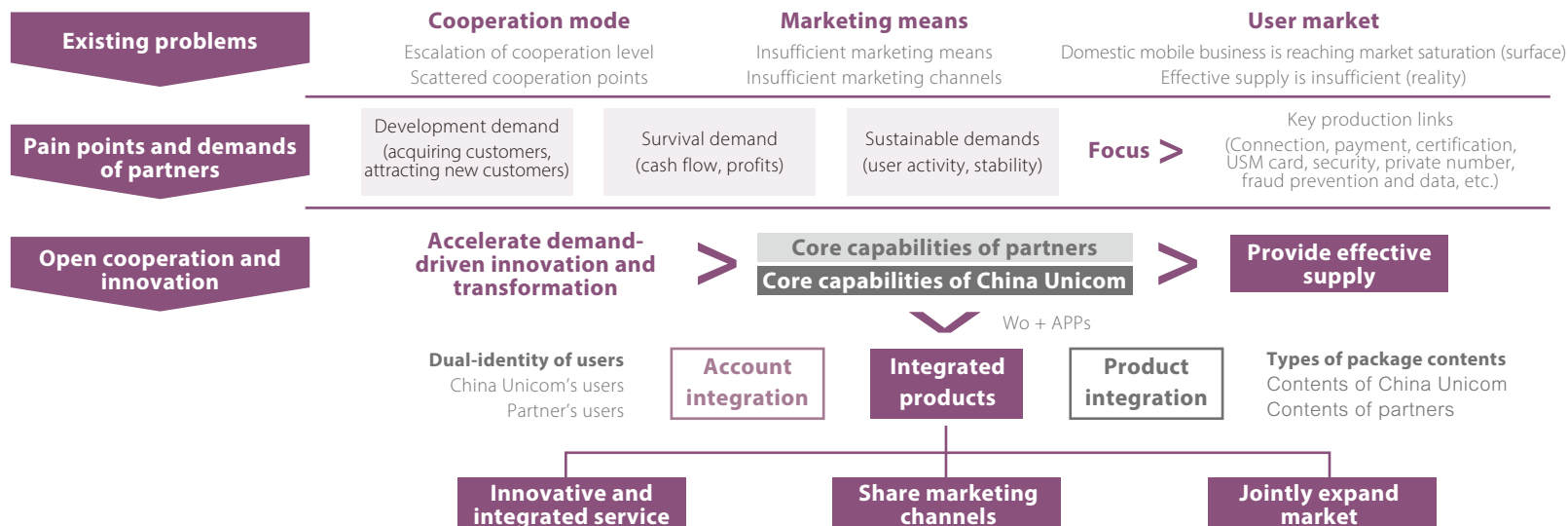
Cooperate with equipment suppliers

In 2016, China Unicom's self-service portal suppliers reached 960,000. In order to better cooperate with partners, China Unicom, holding the belief of "resource access through Internet" and "full collaboration in transactions", adopted various measures to promote cooperation progress.

- China Unicom has made great efforts to promote online procurement, and implemented open disclosure of procurement information, electronic tender and bid opening, and collaboration in electronic orders, so as to enable the procurement to be conducted in a more open and transparent way, and provide fair opportunities to suppliers. 100% of open tender information is available on "China Unicom Procurement and Tender Website" by category, and 70.4% of orders can be sent and received online. China Unicom head office and 28 provincial branches can conduct online tendering and bidding through electronic CA certification.
- The websites of China Procurement and Tender Website, MIIT's information platform for the management of telecommunication construction project tendering and bidding, and China Unicom Procurement and Tender Website has enabled open disclosure of procurement information, electronic exchange of procurement documents, coordination between e-orders and e-packing lists.
- China Unicom openly discloses procurement data to ensure transparent procurements. Through e-orders and e-packing lists, the Company has enhanced information communication and reduced trading costs. The one-point settlement mode of the Group enables integrated business management and highly efficient settlement.

Cooperate with content providers

SOLVE PAIN POINTS OF PARTNERS, AND ACTIVELY EXPLORE NEW MODES OF CROSS-SECTOR COOPERATION



Cooperate with MVNOs

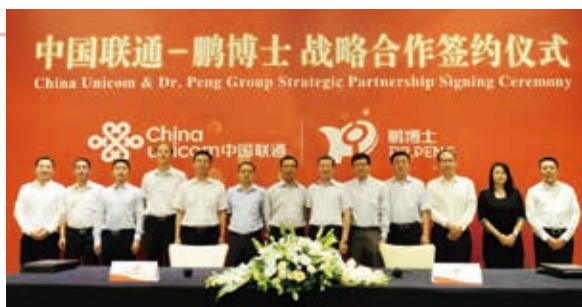
China Unicom attaches importance to the MVNO pilot programme, and provides full network access service with a single connection to actively support the development of MVNO enterprises. For the MVNO business, aiming to boost operating capability, improve perception of MVNO enterprises and users, and prevent operating risks of MVNO business, the Company gave full play to the advantages of centralised operation integrating management, services and production, signed MVNO cooperation agreements with 29 enterprises, and carried out MVNO business in 188 prefectural-level cities of 29 provinces. In 2016, China Unicom's MVNO revenue reached RMB1.56 billion, and the number of MVNO users reached 31.69 million. The market share of China Unicom in MVNO market in China reached 73%, showing a favourable image of social responsibility and external open cooperation under the background of the national policy to open up China telecommunication industry to private capital.

Cooperate with social channels

China Unicom currently has 360,000 physical social channel partners. In order to promote cooperation, the Company continuously optimised its centralised channel management system to enable rapid and transparent payments of social channel commissions. It strengthened small and medium social channel terminal services, iteratively upgraded the Woego platform, reduced social channel financing costs, and launched on a trial basis security-free "WO Finance" Internet finance services for social channels.

Social cooperation for broadband

Expand external cooperation, push forward resource sharing with enterprises within or beyond the industry and jointly promote the development of the broadband market. In 2016, the Company actively cooperated with strong private broadband companies or "capable individuals" and signed strategic cooperation agreement with Dr. Peng Group to share each other's edges by penetrating into each other's product and channel resources.



China Unicom signed strategic cooperation agreement with Dr. Peng Group

China Unicom Guangxi Branch actively carried out social cooperation for development of its broadband business, and cooperated with small and medium enterprises and individual contractors to build broadband network. In 2016, Guangxi Branch signed contracts for more than 1,000 broadband projects by way of social cooperation, up by 2.7 times on a year-on-year basis; and jointly built 95,000 ports, up by 2.6 times on a year-on-year basis. China Unicom Jiangxi Jiujiang Branch added 16,542 broadband ports through social cooperation, and the network coverage in towns and rural areas doubled on a year-on-year basis.

Push forward industry responsibility fulfilment

China Unicom is committed to fulfilling social responsibilities together with partners of the industry chain. On top of enhancing its own responsibility performance capability, it urges partners to undertake social responsibilities by way of cooperation in industry chain and jointly creates a “responsible” industry landscape.

- The Company's self-service vendor portal for equipment procurement is connected with the website of China National Administration for Code Allocation to Organisations, and by verifying information through the interface, it is ensured that the registration information of the suppliers are authentic and accurate. The Company continues to promote green procurement system, and specifies the energy consumption standards and energy-saving requirements for equipment in the technical specifications for equipment procurement.
- Strengthen social responsibility guidance on content providers, and make sure that the value-added products provided to users are green, safe and healthy. The Company implements strict testing and examination process for product listings, carries out routine inspections, solves the problem immediately when it is detected, and traces responsibilities according to the contractual provisions. It has drawn up a negative list for business cooperation, regularly evaluates its partners, and screens out high-risk enterprises. The Company requires each provincial branch to strictly implement the *Measures for the Administration of Value-added Business*, and to provide responsible products.
- Consider after-sales service system and market performance when selecting terminal suppliers;
- Help MVNO enterprises implement real-name registration, strengthen online interception of junk SMSs, meet with non-compliant enterprises to discuss the rectification requirements, and offer different treatment with respect to development resources to enterprises failing to implement real-name registration.
- Regulate management of social channels strictly according to the Circular on *Preventing and Cracking down on Fraudulent Crimes Committed through Telecommunication Networks*. Coordinate to deploy real-name imaging equipment, terminate unqualified channels and those failing to strictly implement real-name registration verification. Enhance the black list management system of social channels and never allow channels on the black list to process network sign-ups and real-name registration procedures.

China Unicom Guangxi Branch conducted terminal evaluation by applying big data technology to guide the healthy development of the smart phone terminal industry. The terminal quality evaluation system is based on three dimensions, namely the network signal reception sensitivity, calling and data service performance of the terminals. Whole-network terminal quality indices are released every month. It carried out big data statistics for interaction data of popular Internet applications on smart terminal network, analysed matching capability of the terminal and Internet, and guided Internet companies to improve OTT product quality.



In order to further implement the requirements of the *Circular on Making Further Efforts to Prevent and Crack Down on Communication Information Fraud* released by MIIT, China Unicom Jiangxi Branch strengthened the management of agents for 400 business. It formulated 400 business management measures, strengthened monitoring of users' usage, perfected agents' deposit and penalty deduction mechanism, and implemented accountability and punishment system. It eliminated sublease and resale of 400 business in the entire province, strictly implemented account management and territorial management, and implemented “shutdown and suspension” (shut down non-real-name customers, zero-call customers, non-white-list customers developed by agents, and suspend new business development of all agents) of non-conforming 400 business numbers. A total number of 35,000 non-conforming 400 business numbers were deactivated, and 150 illegal fraudulent numbers for call forwarding were suspended.

EXPLORE CAPITAL COOPERATION

Guided by the Focus Strategy, the Company actively explored capital cooperation opportunities in innovative businesses, such as mobile Internet application, mobile finance, big data, cloud computing, Internet of Things and Internet+, etc. while taking into account market development and its business development needs.

- To accelerate development process of big data and promote development of “Internet+”, the Company participated in big data industrial development in Shanghai through equity investment to explore new business models for overall monetisation of big data.
- In order to create information platform serving ASEAN and provide advanced, high-speed and reliable communication information infrastructure and abundant Internet and industrial application for various enterprises stationed in the information harbour, the Company participated in founding China-ASEAN Information Harbour Co., Ltd. to promote the establishment of an even closer relationship between China and ASEAN countries.