INNOVATIVE CONVERGENCE
to Establish Edge

MANAGEMENT'S DISCUSSION AND ANALYSIS

Business Review

The following table sets out the key operating data for 2017, 2018 and 2019:

	Unit	2017	2018	2019	2019 change over 2018
Mobile subscribers	Million	249.96	303.00	335.57	10.7%
Mobile voice usage	Million minutes	769,152	827,724	820,346	-0.9%
Handset data traffic	kTB	3,597	14,073	24,370	73.2%
Wireline broadband subscribers	Million	133.53	145.79	153.13	5.0%
e-Surfing HD subscribers	Million	85.76	105.35	112.62	6.9%
IoT connected devices	Million	44.30	106.93	157.41	47.2%
BestPay average monthly active users	Million	33.00	43.41	56.31	29.7%
Access lines in service	Million	121.80	116.48	110.85	-4.8%
Wireline local voice usage	Million pulses	75,144	60,213	55,870	-7.2%

Mobile World Congress 2019

Key Operating Performance in 2019

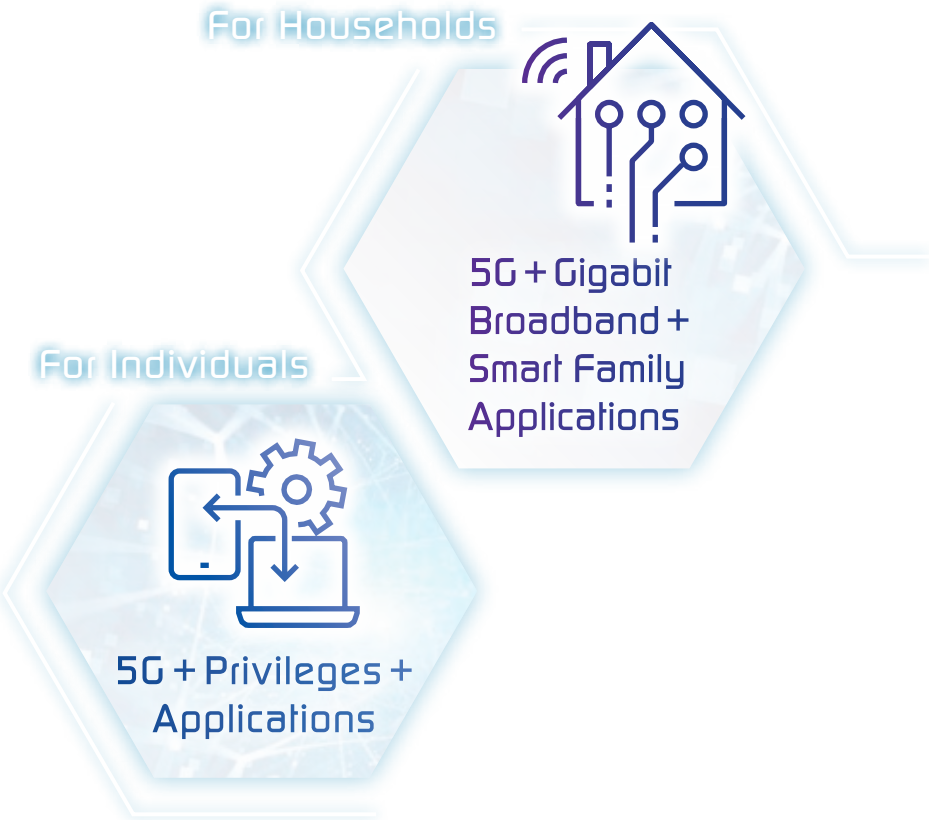
In 2019, adhering to customer-centric principles, the Company further expedited scale development, pushed forward value operation, deepened reform and innovation, and improved service quality, which led to new achievements in the Company's high-quality development. The Company's operating revenues reached RMB375.7 billion, of which service revenues increased by 2.0% year on year to RMB357.6 billion. Revenues from emerging businesses increased 8.6% year on year to RMB197.7 billion, which drove service revenue growth up by 4.5 percentage points.

1. Advancing scale development of the mobile business to the next level, building new edge on 5G-driven personal informatisation services

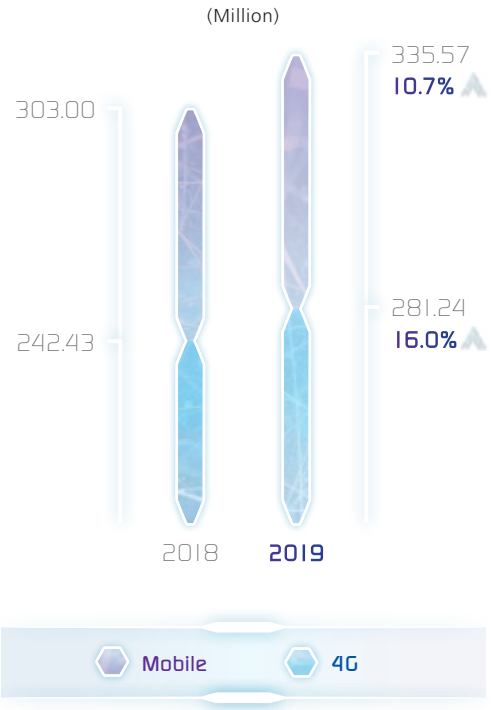
The Company insisted on valuable scale development, firmly implemented a proactive market strategy, focused on customers' perceptions and demands, further strengthened data operation as well as business convergence, and continued to streamline, optimise and upgrade its service package offerings, which together elevated both of the Company's customer and corporate values. The Company strengthened terminal-driven strategy and terminal operations by stepping up effort in developing Orange Instalment Payment Service to better fulfill customers' demands for terminals. The Company also strengthened marketing and sales organisation in key markets and further expanded, with differentiation and innovation, into enterprise and rural markets. In 2019, the Company's mobile subscribers net addition was nearly 32.57 million, achieving a 53.2% share of total subscriber net addition in the industry, maintaining a leading position in the industry. The Company's total number of mobile subscribers was approximately 336 million, leaping to the second place in the industry in the country, while mobile service revenues increased 4.7% year-on-year.

Mobile Subscriber Net Addition

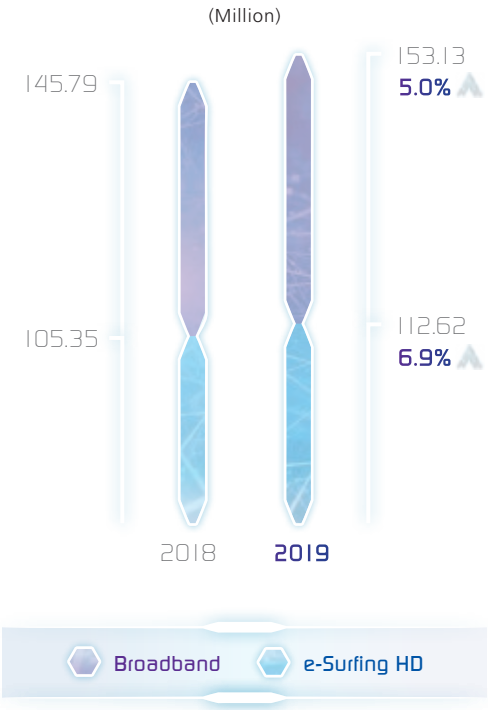
The Company seized new opportunities arising from 5G commercialisation by creating a new development model of "5G + Privileges + Applications" to forge new edges in the area of individual informatisation services. It launched a member privilege system for 5G subscribers, strengthened operation of its membership system, and worked with leading partners to continue to develop ecosystem privileges. Leveraging the strengths of cloud-network integration, the Company introduced HD contents and launched a number of featured applications such as Cloud VR/AR, Cloud Gaming, and Cloud Computer. These prompted across-the-board enhancement of user experience of 5G individual informatisation services. As of the end of February 2020, the number of the Company's 5G package subscribers had reached 10.73 million, creating new momentum to enhance the value of the mobile business.



Mobile Subscribers

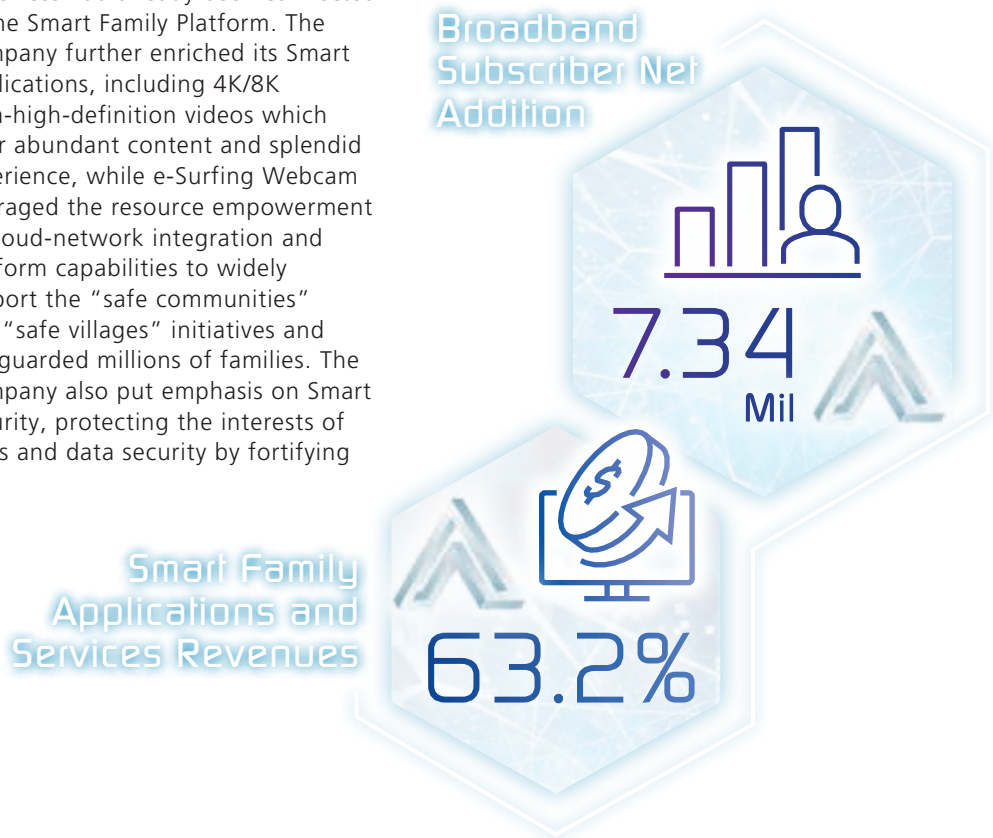


Wireline Broadband Subscribers



2. Building Smart Family system on all fronts, with household informatisation applications beginning to take shape

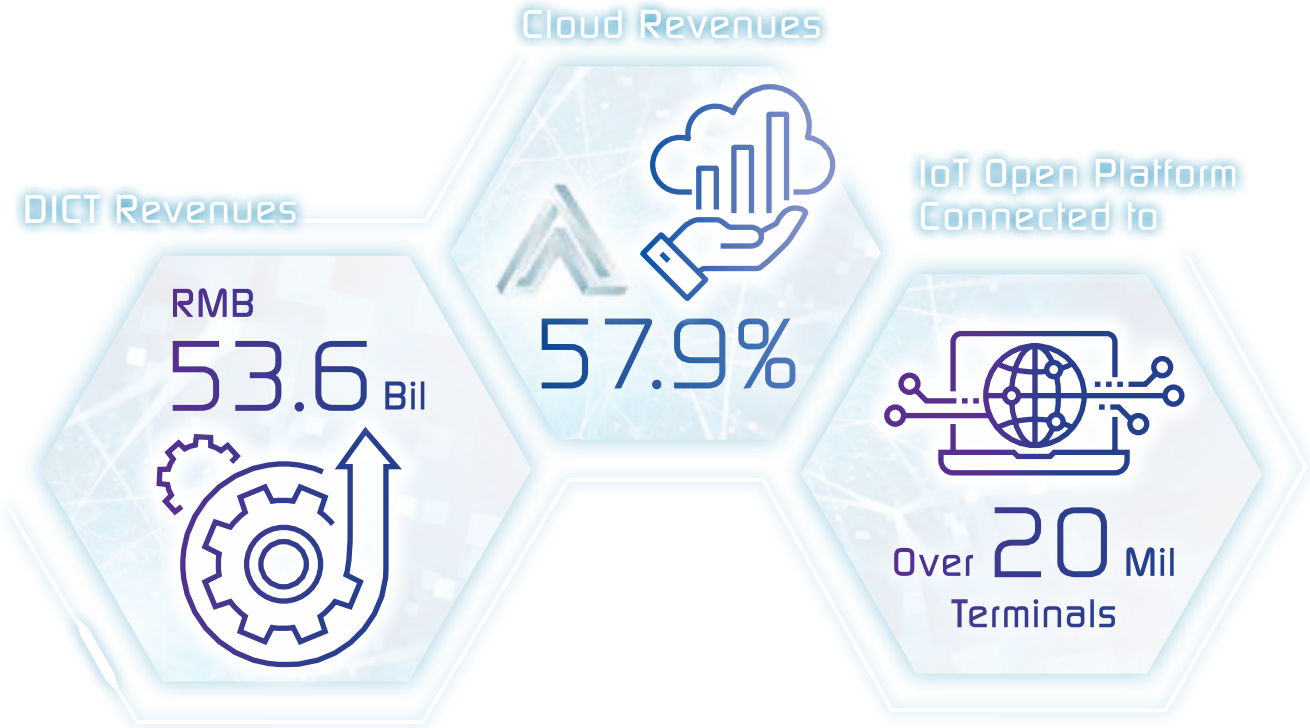
The Company proactively planned the development of household informatisation, while developing a comprehensive five-in-one Smart Family product and service portfolio that encompasses Smart Broadband, Smart Family Platform, Smart Applications, Smart Security and Smart Services. It launched Smart Broadband service and forged an end-to-end service system for "5G + Gigabit Broadband + Smart Family Applications". It set up the Smart Family Platform, strengthened the operational management of ubiquitous smart terminals, and enabled API exposure to empower the industry ecosystem. Over 120 million of devices had already been connected to the Smart Family Platform. The Company further enriched its Smart Applications, including 4K/8K ultra-high-definition videos which offer abundant content and splendid experience, while e-Surfing Webcam leveraged the resource empowerment of cloud-network integration and platform capabilities to widely support the "safe communities" and "safe villages" initiatives and safeguarded millions of families. The Company also put emphasis on Smart Security, protecting the interests of users and data security by fortifying terminals, access, applications, cloud storage and other aspects. The Company upgraded Smart Services by continuously enhancing the expertise of its Smart Family Engineer teams, in order to meet the needs for the smart detection of Wi-Fi signals in different environments and the design of customised home networking solutions. The number of Whole-home Wi-Fi users reached 17.91 million. In 2019, the Company's wireline broadband subscriber net addition reached 7.34 million, bringing the total number of broadband subscribers to 153 million. The subscribers of e-Surfing HD (IPTV) reached 113 million, while revenues of Smart Family applications and services[1] increased by 63.2% year-on-year, delivering an increasing value contribution.



[1] *Revenues of Smart Family applications and services include revenues from Whole-home Wi-Fi, Family Cloud and other businesses.*

3. Innovative development in government and enterprise informatisation, alongside continuous reinforcement of leading edge in services

The Company hastened government and enterprise business reform, innovated and optimised organisations and mechanisms, and continued to enhance professional capabilities. It also focused on key areas to develop use cases, as well as gathered industries' forces to forge the "5G + Cloud + DICT" ecosystem. As a result, key related businesses maintained rapid growth. The Company formed innovation centres for digital government, smart cities and industrial Internet sectors. It strengthened capabilities in terms of platform and business integration in cloud, IoT, etc., which prompted continuous enhancement of professional capabilities. The Company also developed more than 100 use cases for media live broadcast, industrial Internet, video surveillance, smart healthcare and other key areas. The Company further founded the 5G Industry Innovation Alliance, the 5G United Innovation Centres and 5G open labs, with an aim to actively nurture industry ecosystem. The Company's e-Surfing Cloud gained a market share ranking no. 7 in the global public cloud IaaS market and no. 1 among global telecom operators[2], while its brand influence also continued to expand with its IDC business earning a no. 1 overall ranking in the country[3].



[2] *Source: IDC*
[3] *Source: China Internet Weekly*

The Company's IoT open platform are connected to over 20 million terminals and supported mainstream IoT access protocols, enabling the rapid launch of partners' application products. In 2019, revenues from the Company's DICT business reached RMB53.6 billion, of which revenues from cloud business was RMB7.1 billion, representing an increase of 57.9% year-on-year. The number of IoT connected devices reached 157 million, with revenues increasing by 21.7% year-on-year.

Management conducted on-site research of
5G commercial launch in Chaoyang district outlet of Beijing

4. Continuous improvement of operations and management, maintaining industry-leading customer satisfaction

The Company utilised data to enhance the efficiency of its operations and management, continued to optimise its intellectual corporate core, strengthened data consolidation to empower frontline customer touchpoints by precision products strategies matching, and fully launched the BSS3.0 system, resulting in significant increase in the efficiency of product operation. By optimising the layout of its sales channels, applying chain-store approach in the operations of its core outlets, and exploring scene marketing for 5G + Smart Family services, the professional competence and efficiency of the Company's sales channel operation steadily increased. The Company formed a customer-centric product system, continued to optimise product management, development and operation based on customers' needs. It also propelled the construction of customer-oriented service system by continuously increasing the efficiency of AI-powered smart services and optimising star-grade services, thereby realising more prominent value of the services. In 2019, the Company continued to lead the industry in overall customer satisfaction and in customer satisfaction for mobile Internet access service[4].

[4] *Source: The Ministry of Industry and Information Technology of the PRC*

5. Strengthening network edge with cloud-network integration accelerated

The Company constantly promoted high-quality network construction and pushed forward network intelligentisation with reference to CTNet 2025 as the blueprint. Capitalising on extensive resources and co-building and co-sharing development philosophy, the Company spurred rapid scale deployment of 5G network beginning with precision coverage in regions with high data traffic volume and high value. The Company built 40 thousand 5G base stations and co-shared over 20 thousand 5G base stations of China Unicom, yielding over 60 thousand base stations in use. Guided by user experience and perception, the Company utilised Big Data to support the in-depth coverage and dynamic capacity expansion of its 4G network at key locations, powerfully supporting the growth of 4G subscribers and data traffic volume, as well as the full commercialisation of VoLTE service. Adhering to market demands, the Company expanded its fibre network coverage on a need basis and improved the efficiency of resources utilisation, while catering to the needs of high-speed users by 10G PON network upgrade in developed urban areas. Persisting with the goal to build a high-quality smart ubiquitous network, the Company stepped up technological R&D and innovation, accelerated cloud-network integration, and committed itself to building a next-generation, fully cloud-based and full-fibre intelligent network that is simple, agile, efficiently-centralised, open and secure.

Management attended Artificial Intelligence Development Whitepaper Release Event

Outlook for 2020

In 2020, the outbreak of the novel coronavirus (COVID-19) epidemic caused impact to the Company's business development and network construction. Since the outbreak, the Company has actively carried out epidemic control and telecommunication assurance in an effort to tackle the impact. Meanwhile, the Company supported the rapid deployment of informatisation systems in frontline hospitals through its healthcare cloud services which provided computing and storage capabilities with security defenses. It also satisfied the demands for informatisation applications for various use cases such as SME Cloud, e-Surfing Cloud Conferencing, Education Cloud, Cloud Classroom, among others.

Looking forward to the new year, the Company will continue to deepen corporate reform, broaden its collaboration with external parties, enhance service quality, expand subscriber scale and promote high-quality development, as it marches firmly towards a leading integrated intelligent information services operator.

The Company will continue to focus on customers' demands to strengthen its information services. Upholding scale development and value operation, it will focus on individual, household, government and enterprise and overseas customers in key areas to enhance capabilities of professionalisation of marketing management, digitalisation of marketing services, ecologicalisation of marketing collaboration as well as refinement of marketing organisation, with an aim to boost competitiveness in various business aspects. The Company will continue to strengthen China Telecom's "Trustworthy" brand image and provide customers with satisfying integrated intelligent information services.

The Company will continue to foster cloud-network integration to solidify the foundation for development. It will build a smart ubiquitous network that is simple, agile, efficiently-centralised, open and secure. It will also establish a digitalised platform for cloud-network integration to serve as the foundation for DICT solutions based on cloud-network unification; it will build unified cloud-network infrastructure and promote 5G network construction. It will also establish unified cloud-network operating system to meet the demands of customers looking for "extensive product offerings, timely delivery, leading quality, security and reliability" of cloud-network services. The Company will also create unified cloud-network products and applications that enable the evolution from "cloud-network connectivity" to "cloud-driven network configuration adjustment" and "network convergence into cloud", and to launch more cloud application models for different customers.

The Company will safeguard network and information security and provide reliable services. The Company will continue to promote the establishment of network and information security system and capabilities, and strengthen the protection of critical information infrastructure. The Company will expand its network and information security product and service portfolio, and capitalise on enterprise resources to provide reliable security services for various customers. The Company will also gather forces to establish network security ecosystems in fields such as 5G security, cloud security, data security, IoT and security consultancy, among others.

The Company will step up operational management to improve corporate efficiency. The Company will enhance capabilities of corporate core to efficiently support intelligent operation. It will invigorate its channels and touchpoints and build, centering around customers, the integrated sales channel 2.0 that is professional, digitalised, open and innovative. The Company will also further optimise its supervision system, transform and upgrade its procurement processes, improve its audit management system and bolster its risk management work.

The Company will deepen reform and innovation, and expand ecological cooperation. The Company will intensify effort to deepen corporate reforms and improve system and mechanism innovation while fully motivating subsidiaries and employees at all levels in terms of proactiveness, initiative-taking and creativity. The Company will further engage in ecological cooperation and focus on five key areas, namely IoT, e-Surfing Cloud, smart living, vertical industrial applications and 5G, to build a "4+2+1" foundation for API exposure constituting of communications, cloud, IoT, data, channels, services, and API enablement platform.

Realising dreams with hard work and striving for future success, China Telecom will proactively pursue its new development ideals, leverage on its reliable, intelligent and secure integrated cloud-network resources to continue to bring its comprehensive edge of cloud-network integration into full play, and to push forward with innovative development of 5G. With better networks, better services, and newer user experiences, the Company is poised to bring greater satisfaction and felicity to its customers, and join hands to enter the golden smart age of the "Internet of Everything" together.