



China Mobile aims for 1.75 billion connections by 2020



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In less than three years since the commercial launch of 4G, China Mobile was running 1.4 million base stations and serving over 500 million subscribers. With these totals forming a globally unmatched scale of operations, the telco has a lot to say about 4G and the future development of 5G.

By Li Yue, President & Chief Executive Officer, China Mobile

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Changes arising from 4G

4 G mobile broadband (MBB) technology is the true enabler of the mobile Internet era due to the unprecedented wireless broadband experience it offers. Another contributing factor has been smart terminals, with current models far outstripping PCs in processing power. And a third is cloud computing technology, which provides various big data capabilities through low-cost, high-capacity systems. The mobile Internet era is people-oriented and experience is king. And we can also see de-layered company organizations and flat service structures, features that would have been impossible in the past.

4G has transformed people's lives, providing the fuel for broadband connectivity, video services, and people-to-machine communication. Once 4G arrived, our mobiles became truly indispensable and many

Internet services went universal. We had e-commerce before 4G, but things like shopping and marketing weren't as convenient. Now, Internet service applications are much more compatible with the way we live life. When people say mobile has changed our lives, they really mean 4G. But, where do we go from here on out?

Big connectivity with 5G

5G won't just change your life, it will change society; it will allow vertical industries and information to deeply integrate; and it will create an Internet that encapsulates everything. Telcos will be the builders of this environment and the cross-industry cooperation it facilitates.

In this sense, what is China Mobile's future strategy? We call it Big Connectivity or China Mobile 2020, and it will support the age of hyper-connectivity

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and the Internet of Things. With this strategy, we plan to expand the scale of connectivity, optimize connectivity services, and focus on different types of applications.

We've decided on an ambitious goal for 2020: doubling our total connections to over 1.75 billion based on our 860 million users. People will soon be connecting to objects around them like cars, fridges, and all kinds of control platforms and control gateways. If every person in China connects to ten objects, there will be 14 billion connections in total. So, it's perfectly feasible for us to hit nearly 2 billion connections by 2020, with the rollout of 5G. In 2017, we'll push 5G field trials and in 2018 we plan to launch some small-scale commercial trials of 5G. In 2020, we hope to see 5G go commercial in China.

To reach this point, we've set up a joint innovation center for 5G with GSMA, TDI, and other players in the communications industry. The center promotes basic communications capabilities, enables R&D on integrated products, and provides an open lab, which is currently home to 30 research projects. We've also set up research labs in Beijing, Qingdao,

Shanghai, and Chengdu that specialize in 5G service applications like IoT, Internet of Vehicles (IoV), basic capabilities, and smart homes. We hope to coordinate the development of 5G technology, vertical industries, and applications in different areas.

Of course, building a new IoT era will require us to develop in many areas. We're interested in mobile, home and enterprise customers, and new telco services such as digitized connectivity.

China is currently home to the world's largest VoLTE network, covering more than 300 cities. To integrate network technologies, we plan to build new types of data centers and new types of networks. Cloud-based network architecture will revolutionize traditional networking technology and is the key for operators to unlock low-cost, rapid growth. Recently, we've been looking at the wide-scale deployment of data center virtualization and SDN in traditional networks.

Partnerships are the key to the success of 5G, and everyone's combined efforts are necessary to pave the way to the truly connected IoT era.

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From terminals to IoT modules

Currently, there are more than 3,000 types of five-mode multi-band devices available on the market, and terminals in large part explain our success in 4G, with annual sales in China topping 200 million units for three consecutive years.

Our next focus is on IoT modules and chips. We aim to lower the bar of entry for different vertical industries to enter the IoT ecosystem to the point where module prevalence will remove the bar altogether; for example, if it costs around US\$5 to connect a fridge to the Internet, fridge manufacturers will be happy to do so. Thus, we hope that our efforts in terminals will help lower the cost of smart homes, IoT, and wearables, and increase the number of connected devices exponentially.

Application platforms for innovation

Application platforms, such as OneNet for IoT, which is open to everyone, are also important to our overall strategy. Currently, more than 3,000 enterprises, 30,000 developers, and 90 million users

are on the OneNet platform, and we hope to attract more. OneNet will play an increasingly important role because, as the number of connected devices grows, more vertical industries can use the existing platforms and customers can develop services that create value.

Big data for telcos

When it comes to big data, telcos have unique strengths that they have yet to fully exploit. Data gives us an accurate understanding of customers and detailed descriptions of their behavior, which telcos can turn into new services and products that create value. Operators also have strengths in services; for example, we interact with 860 million customers on a monthly and sometimes daily basis. Operators also have connectivity strengths as the gatekeepers of mobile Internet services for customers.

In the future, technologies such as cloud computing, big data, and, in particular, AI will undoubtedly contribute much to innovating new products and improving customer services and business value. At the heart, though, connectivity and connections makes everything possible. [www](#)