



# Building a Fully Connected, Intelligent World

Speech by Eric Xu at the Huawei Global Analyst Summit 2018

In 2017, our performance was in line with expectations. We achieved robust growth. Our sales revenue was 603.6 billion yuan, representing a year-on-year growth of 15.7 percent and a five-year compound annual growth rate of 26 percent. Our net profit was 47.5 billion yuan, for a five-year CAGR of 23 percent. Cash flow from operating activities rose to 96.3 billion yuan, with a five-year CAGR of 44 percent.

Revenue from our carrier business was 297.8 billion yuan, up 3 percent over 2016. Revenue from our enterprise business was 54.9 billion yuan, up 35 percent over the previous year. Our consumer business earned 237.2 billion yuan in revenue, representing year-on-year growth of 32 percent. Our consumer business and enterprise business were our two major growth engines, driving Huawei's ongoing rapid growth.

In recent years, we've emphasized the importance

of innovation in achieving future growth. Last year, we invested 89.7 billion yuan in R&D. That was 14.9 percent of our total revenue. From 2008 to 2017, our total R&D investment amounted to 394 billion yuan. We forecast that over the next decade, we will continue to invest about 15 percent of our annual revenue back into R&D every year. This will fuel ongoing innovation and, in turn, drive future growth.

The world is changing rapidly and profoundly impacting every person, home, and organization. These changes have brought new experiences, greater efficiency, and a new level of convenience in study, life, and work. However, not every individual, home, or organization around the world is enjoying the benefits that many of us do.

## Individuals

Smartphones and the mobile Internet have produced a ton of value for everyone. These days we enjoy

“

5 billion people still don't have smartphones and 4 billion don't have access to mobile networks. And 40 percent of people who have access to mobile networks lack access to mobile broadband.

”



healthier lives and better entertainment. However, a lot of people still don't have access to these things.

Right now there are 3.8 billion smartphones in use around the world. However, 5 billion people still don't have smartphones and 4 billion don't have access to mobile networks. And 40 percent of people who have access to mobile networks lack access to mobile broadband. In many countries, mobile traffic per user per day may reach 10 to 20 gigabytes. But if we take a step back and look around the world, the global average is only 0.03 gigabytes of mobile data consumption per user per day. This is far from enough to meet everyday needs in life, work, and entertainment.

Many innovative technologies, like wearables, connected cars, augmented reality, and virtual reality, aren't been widely applied. According to our forecasts, there will be over 8 billion smartphones in use by 2025. The number of mobile users will exceed

6.5 billion, 80 percent of whom will have mobile broadband. There will be 440 million AR and VR users and 40 percent of cars will be connected.

## Homes

Home broadband and home networks enable people to better interact with their families, receive better education, and enjoy more convenience in their daily lives. But many homes still don't have access to any of this. So far, only 40 percent of homes around the world have broadband access, less than 1 percent enjoy a Gbps per second broadband experience, and many home devices remain unconnected.

Smart home solutions aren't yet mature. For example, the penetration rate of smart robots is only 1.5 percent, and most robots are only able to do things like vacuum the floor. They're unable to provide at-home healthcare or satisfy the many other needs that users might have.

“

By 2025, it's our goal to see 75 percent of homes with broadband access, and at least 30 percent within range of a Gbps experience.

”

By 2025, it's our goal to see 75 percent of homes with broadband access, and at least 30 percent within range of a Gbps experience. The number of connected home devices will reach 20 billion and the penetration rate of smart robots will grow from 1.5 percent to 12 percent.

## Organizations

Digital technology helps organizations work more efficiently and speed up innovation, but there are huge gaps in digital adoption between different industries.

On the whole, digital uptake is relatively low in most industries, especially traditional ones. Huawei is taking action to address this. For example, we worked with Shenzhen municipal government to roll out a safe city project that greatly enhances safety across the city. We have helped many enterprises and cities deploy intelligent innovations for preventive maintenance, flexible manufacturing, smart manufacturing, smart transportation, and smart city initiatives. These solutions are already delivering tangible benefits. And yet a huge number of organizations still aren't embracing these solutions. Why is that?

To start with, the development of network infrastructure is uneven worldwide. The private lines of 90 percent of enterprises are slower than 10 Mbps.

This type of bandwidth can't support digital or cloud services.

Second, the majority of organizations only have office networks. They haven't connected their production networks, products, and customers, let alone embraced digital production and smart manufacturing, or used digital technology for sales, service, and marketing.

IT infrastructure is also unevenly developed. Less than 10 percent of enterprise applications are in the cloud and only 13 percent of data is fully utilized. If we don't use data, it doesn't produce value. It'll just become an extra cost, not the fuel of new business opportunities in the digital age. AI is not widely used by enterprises either: only 5 percent have experimented with the technology, and less than 1 percent have used it in any meaningful capacity.

We estimate that by 2025, the majority of organizations will experience explosive growth in digital adoption. By then, 85 percent of enterprise applications will be in the cloud, 80 percent of data will be utilized, and 86 percent of enterprises will have experimented with AI.

It's clear that digital and AI technologies have created real benefits for people, for our lives at home, and



Source: Huawei Global Industry Vision 2025

for organizations. It's also clear that we face many challenges ahead. Despite all these gaps and challenges, our industry is in the midst of a great opportunity.

We're at the point in time where ICT and digital technology are rapidly changing every person, home, and organization, and redefining how we live, work, learn, and stay healthy. In this age of greatness, Huawei aspires to become a great company. We want to help humankind take its next step forward.

This is the basis of our new vision, our new mission: Bring digital to every person, home and organization for a fully connected, intelligent world.

Huawei is committed to making this intelligent world a reality and extending the benefits of digital technology and AI to every person, home, and organization, so its value is accessible to all, whether it's in life, work,

education, or fitness.

In this fully connected, intelligent world, all people will be empowered. For example, with connected smart helmets, the visually impaired will be able to move around with complete freedom. Smart translation services will remove language barriers. AI-powered cameras will allow unskilled photographers to create masterpieces.

In this fully connected, intelligent world, home life will be more fulfilling: A diverse array of home services such as robots for at-home healthcare and education will be available. Ultra-broadband and AR and VR technology will make holographic communications possible. Wherever you are, your family will be within reach.

In the intelligent world, organizations will become more innovative. Businesses will deliver scalable,

“

Our strategy is to focus on ICT infrastructure and smart devices. Imagine when everyone has a smartphone linking all of our smart devices; then, everyone will have full access to the digital world.

”

customizable products to meet unique user needs. Governments will have smart solutions for administration and will be able to make our cities safer.

Looking ahead, we will position ourselves as a pioneer of the intelligent world.

Our strategy is to focus on ICT infrastructure and smart devices. Imagine when everyone has a smartphone linking all of our smart devices; then, everyone will have full access to the digital world. This will bring new experiences and value in life, work, education, and fitness.

## Our vision

To bring digital technology to every home, we will continue to invest in broadband and home network solutions. When you're at home, learning, playing, or just enjoying life, you'll be able to experience the entire digital world through smart devices in your home. You will have access to all the benefits it brings to healthcare, entertainment, and other areas of your life.

To bring digital technology to every organization, we will invest in networks, cloud, big data, and IoT to continue to boost the digital transformation of all industries, enabling enterprises and governments to

go digital and embrace intelligence.

We will build a fully connected, intelligent world through ongoing investment in connecting the unconnected and with AI. This will help converge the digital and physical worlds, unlock new potential, and cultivate greater intelligence for all.

These were some of our considerations throughout the process of defining our new vision and mission last year. We want to work with the entire industry to enrich these ideas so that we can continue to maximize our investment, and ultimately make our vision and mission a reality.

## A look back at our strategies

I've talked about Huawei's key strategies previously, our ALL Cloud strategy for products and solutions and our services strategy. Last year, I shared Huawei's approach to AI. We consider AI to be an enabling technology, and are integrating it into our products and solutions.

Over the past year we've taken our ideas and solutions to a new level. We want to apply artificial intelligence to our smart devices, cloud offerings, and networks to make our solutions more competitive, improve customer experience, and create more

“

We're working to incorporate AI throughout our entire network solution portfolio. We will continue advancing towards self-driving networks and addressing industry pain points, including inefficiency and high costs.

”

business value.

In 2014, I spoke about carrier network architecture – the data center-centric architecture of the future. We call this architecture SoftCOM. At its core, it's about the complete cloudification of telecom networks. It was the natural evolution from ALL IP to ALL Cloud. Now, we're applying AI to our SoftCOM architecture and solutions to develop next-generation architecture. We call this SoftCOM AI.

Last year, I mentioned that the telecom industry was in an unhealthy state. By adopting AI technology, we aim to build self-driving, self-evolving networks with zero faults. We want to use architecture innovation to address the structural issues facing the telecom industry. By making telecom networks automated, autonomous, self-healing, and self-optimizing, we will significantly improve network utilization and O&M efficiency.

This new network architecture will create tremendous value for end users, carriers, and equipment vendors alike. We believe that only innovation that benefits the entire value chain can promote the healthy development of the telecom industry as a whole. Specifically, end users will enjoy a ROADS experience (Real-time, On-demand, All-online, DIY, and Social) that can be delivered in minutes. Users will receive the best connection every time, and will always be

within range of a network.

Carriers will see a huge leap in O&M efficiency, resource utilization, and energy efficiency – at least ten times higher than existing rates.

Equipment vendors will benefit from intelligent new product features. They will see a leap in service efficiency, and will be able to provide new services to tap into the value of their installed base throughout the network lifecycle.

We're working to incorporate AI throughout our entire network solution portfolio. We will continue advancing towards self-driving networks and addressing industry pain points, including inefficiency and high costs. Ultimately, we hope to help the industry extract itself from a state of ill health and get back on the path to robust growth.

We're working hard to make the leap from smart to truly intelligent devices. In December 2016, we released a phone with intelligent functions – Honor Magic. Last year, we released the Kirin 970, a mobile phone chipset with an embedded neural processing unit. We're now using that chipset in all our flagship smartphones, including the Mate 10 and P20 series. Our mobile phones can understand consumers better than ever before, with a greater capacity to see, hear,



“

To enable our partners and developers around the world to leverage the AI processing power of our chips and develop all kinds of new applications, we built the HiAI platform, which has opened up our AI capabilities across three layers: cloud, devices, and chipsets.

”

and feel. This has significantly improved experience across a number of user scenarios, including photography and voice processing.

To enable our partners and developers around the world to leverage the AI processing power of our chips and develop all kinds of new applications, we built the HiAI platform, which has opened up our AI capabilities across three layers: cloud, devices, and chipsets. This platform enables all of our industry partners to develop a limitless array of AI applications, delivering a better user experience and giving the entire industry access to the benefits of truly intelligent phones.

In the cloud domain, we officially launched Huawei Cloud in 2016. In 2017, we integrated all of our cloud resources to form a dedicated Cloud Business Unit. The mission of this BU is to provide a robust cloud platform that fosters the growth of governments and enterprises throughout the digital transformation process.

We've opened Huawei Cloud to our partners around the world so they can develop and deploy applications directly in the cloud to help organizations of all sizes resolve the issues they face as they go digital and intelligent.

We're working hard to make Huawei Cloud into a platform that's technologically strong, has a solid future, and earns the trust of our customers around the world. It will be the focal point for 30 years of Huawei's experience, technology, and services, making them all available to our customers and partners.

We've also introduced AI-enabled services to Huawei Cloud, which form the basis of our EI (Enterprise Intelligence) platform. On this platform, all types of organizations, including enterprises and governments, can use AI to develop new products and services. It's simple and convenient, and will help organizations improve efficiency and generate greater value.

Last year, we stated that our aim was to use it to improve the competitiveness of the products and solutions we provide for our customers. After another year of exploration, we've decided to integrate AI into our smart devices, networks, and cloud, to deliver a better customer experience and create greater customer value.

Alongside our full-stack AI solutions for all scenarios, we have in place a complete AI strategy, which we will officially unveil at Huawei Connect 2018 in Shanghai. [www.huawei.com](#)