

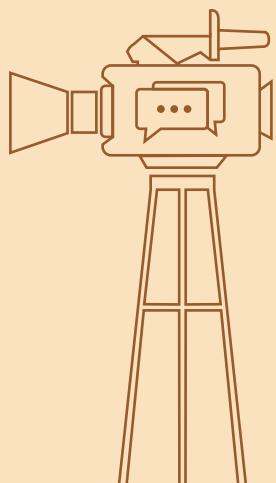
IN HIS OWN WORDS

DIALOGUES WITH REN

VOLUME II

2019.05

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2019.08





Commitment at 6,500 meters above sea level

In August 2007, Huawei helped customers build sites at 5,200 and 6,500 meters of Mount Everest. The weather on the plateau changed constantly, and the sites were frequently buffeted by wind and snow. Huawei employees broke down the loads of goods and materials needed for the sites and carried them up the mountains on their shoulders or in their hands. After ten days of hard work, the team built a mobile network that provided coverage for all major mountaineering routes and camps.



Conquering Valley of the Kings

In 2008, Huawei delivered a turnkey project in Egypt. Huawei's logistics manager was not intimidated by a steep 280-meter-high slope. He led the team in carrying 320 kilograms of equipment up the slope with their bare hands. Through this project, Huawei deployed thousands of base stations in Egypt, significantly improved the connection in local areas.



Reaching the remotest village

In 2011, Huawei implemented a turnkey project in Cambodia to deploy sites for many of the country's remote villages, some of which were scattered across forests and isolated from the outside world. To get to these sites, Huawei's engineers rode motorcycles and ox carts, and sometimes even walked long distances. We were able to bring the most advanced telecommunications technologies to the villagers, better enabling them to access the outside world.



Covering the Artic Circle and the world's northernmost base station

In May 2011, we deployed wireless broadband in the Svalbard Islands for a Norwegian customer. This was the first-ever LTE network in the area. The islands lie close to the Artic Circle, and temperatures there can reach as low as -50°C. The terrain is also very complicated. To transport equipment, we used all kinds of tools, including snowmobiles, forklifts, helicopters, and small airplanes. We also had to carry a loaded gun at all times to prevent attacks from polar bears.



Heroes are forged, not born.

During World War II, the famous IL-2 kept flying even after being riddled by anti-aircraft shells and machine-gun fire from other planes. Although badly damaged, it finally made its way back home.

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May 20, 2019 Shenzhen, China

01 Hubert Seipel: Mr. Ren, you are seen as the kind of Chinese Steve Jobs, and Huawei is seen as the kind of Chinese Silicon Valley. How did you do that?

Ren: First, I am not Steve Jobs. He was instrumental in the development of the mobile Internet, making significant contributions to humanity. Philosophically, he sought perfection. I myself do not have exquisite skills. All I do is take a bucket of "glue" and stick our 180,000 employees together to ensure collective dedication. The honorary titles that have been bestowed on me are actually the achievements made by our dedicated employees. In philosophy, I believe in *huidu* and compromise. I think there is *huidu*, or a shade of greyness, between black and white. In contrast, Jobs pursued perfection. There are many differences in our character. I am not as great as he was, so I could never be named the Steve Jobs of China. This is not because I am humble, but because I don't think I am a great man.

Hubert Seipel: We could probably come to the conclusion that Huawei is a global giant and you manufacture equipment that makes up the backbone of the Internet.

Ren: Yes, you are right.

02 Hubert Seipel: Born in 1944, you were the eldest of seven children in South China in a rather poor province.

What did your parents do?

Ren: They were both teachers working in a very remote and poor region in Guizhou. This region is mainly populated by minorities. My mother was an elementary school principal, and my father was a middle school principal.

03

Hubert Seipel: You grew up in quite difficult times. There was a great famine at the end of the 1950s and there was a Cultural Revolution. What do you remember most about those times? How did it affect you?

Ren: Throughout my childhood and youth, what I remember the most was not having enough food. During the Three Years of Great Famine, my biggest dream each day was to have just one steamed bun. When I went to bed at night, I would dream about how I could get one bun. It was not about pursuing studies for future career opportunities. Also, I had no idea of what pocket money was during my childhood. In the third year of my high school, my mother approached me, telling me that she would start giving me five cents as pocket money each day. I felt I could do so much with this pocket money.

04 Hubert Seipel: About 20 years ago, you wrote a little piece about your memories of your parents and one of the main phrases I remember, one of the main words was "hunger". Let me quote from there: "We somewhat got used to being hungry and we managed to find several ways to stave off hunger." Hunger was obviously the most impressive thing at that time for you.

Ren: From 1959 to 1962, what haunted us was hunger. Since 1963 and 1964, when the Chinese economy started recovering, hunger stopped being a keyword. Since then, the political environment in China was turning leftist. The Socialist Education Movement and Cultural Revolution were on the rise, but I was not really into the Cultural Revolution. I wanted to dig into technologies with one heart and one mind, and I knew nothing about politics. The sudden political fanaticism I saw back then really made me uncomfortable, and I had no idea what I could do.

During the Cultural Revolution, I also wanted to join others in protests and demonstrations. But my father was labeled a "capitalist roader". For this, he was actually locked up in a "cow shed" at one point in time. In China, this approach of depriving liberty was called the confinement of monsters and demons. The house that locked them up was named a "cow shed". Because of my family connections, there was no possibility I could

become a part of the activities at the time.

In 2001, when I wrote the *Reminiscences of My Parents*, I suddenly realized that I was not one of the millions of Red Guards that had existed in the proletarian Cultural Revolution. Why? On one hand, the big organizations did not want to take me in due to my family connections. On the other hand, I myself did not want to join any of the small organizations. I was sort of drifting away.

Hubert Seipel: Why did the revolutionary guards choose to target your family?

Ren: Because my father was the principal of a teachers' college. The Cultural Revolution targeted school principals and teachers first. My father, though as an intellectual of the Communist Party back then, had a very different political identity from the officials for farmers and workers. These officials came out of remote mountain villages and had no chance to connect with other people from the outside world. They had a very clean background. However, intellectuals had roots in the old society and inextricable links to that society. Therefore, they became the first targets.

05 Hubert Seipel: You could obviously finish your studies; you studied architecture and engineering. How did you end up in the army?

Ren: Premier Zhou Enlai sought to mobilize regional engineering teams to build a synthetic fiber factory with equipment from French companies called Technip and Speichim. China was in complete chaos due to the Cultural Revolution, and no regional team answered the call due to the harsh living conditions in the region where the factory was to be located. Premier Zhou Enlai had no option but to mobilize military forces. But the military lacked technological strength, and couldn't temporarily bring in engineers from regional engineering corps. As a result, the military sent students like me, who had a little technical know-how, to build the factory.

I was fortunate to be able to work in a modern engineering project and join the military.

06 Hubert Seipel: In October 1976, if I remember correctly, the Cultural Revolution was done, and the Gang of Four disappeared. What happened to you at that time?

Ren: In 1976 when Chairman Mao passed away, I was helping to build the synthetic fiber factory in Liaoyang. The building work had just started at the time.

07 Hubert Seipel: You were not allowed until 1978 to join the Communist Party because of the background of your father, but your father had been cleared then and

that's how you joined the Communist Party, is that correct?

Ren: After Chairman Mao passed away in 1976, Hua Guofeng, then Chairman of the Communist Party, brought down the "Gang of Four". This shook up China's politics and changed the course of history. China began to stress the importance of science and technology and the contributions of labor.

When I was working on building the factory in Liaoyang, I invented an instrument through mathematical inference. It was the first of its type in China and many other countries. During that historical period, my little invention was hyped up into something really big, and I was chosen to attend the National Science Conference.

During the conference, I was strolling in the garden while a party meeting was being held to elect party committee members for the delegation to the conference. The meeting organizer saw me and criticized me for not attending the party meeting. I replied, "I'm not a party member." The organizer was taken aback by my answer. At that time, you could not even become the head of a cooking squad in the military if you were not a party member. How could a non-party member possibly attend a national event like the National Science Conference? But the government didn't think I was unqualified; if not qualified, I would not have been able to overcome a host

of difficulties and attend the National Science Conference. The government called my military commander, saying that the organization took the wrong line and that my matter should be reconsidered.

After the National Science Conference, the military force discussed my application for joining the party again. There was a huge pile of documents about the allegations against my father. The military decided that it would be too slow if the approval of my application had to wait until the local government reached a conclusion on my father's case. Thus, the military launched a new investigation into my father. They later told me about the things that my father had done wrong as well as the things that he had not done wrong, and reminded me of the few key issues that would be put in my personal file. Through this investigation, my family background was finally cleared, and there was no big issue with it, so my application for joining the party was discussed again. There were still obstacles at the party branch level, because people tended to be very conservative. But the upper levels wanted me to join the party, so I was able to join the party.

Before I joined the party, the military designated a journalist named Xu Guotai to investigate me, and he told the political commissar of my division about the details of the investigation. One day, he asked me out

for a walk, and I said I needed to change my clothes first. He followed me to my bedroom. I grabbed some socks and clothes from under my bed, gave them a sniff, and put on the ones that didn't stink. I was a lazy man and tended to throw my socks and clothes on the floor when I took them off. Xu told the political commissar, "Ren is very dedicated to in-depth technological research. I would like to be his referee for his party application." The political commissar also showed a willingness to be my referee. That's how the obstacles at the party branch level were overcome. About 30 years later, when I met Xu again, he told me that back then he was representing the central government in investigating my history and performance. I wouldn't have known this secret if he had not told me. This is how I managed to overcome the obstacles, join the party, and keep pace with the times.

08 **Hubert Seipel: It was in December 1978 that Deng Xiaoping introduced the reforms for China, which led to 40 years of reforms and economic growth. How did this affect you?**

Ren: During the National Science Conference in March 1978, we listened to reports from our seniors, including Chen Jingrun. We were moved to tears because we were finally recognized as the "sons" of this country. During his speech, Deng Xiaoping said that we were "part of

the working class", to thunderous applause. We were overjoyed to be part of the working class rather than the capitalist or intellectual class. Deng Xiaoping also said that we should "work four days and study one day every week". We were delighted to hear that. There had been too much focus on political study before, and now we needed to reduce this.

At the Third Plenary Session of the 11th Central Committee of the Communist Party of China in December 1978, the Chinese government decided to initiate the reform and opening-up policy. We didn't understand this very well at that time. We didn't realize that this would be an epoch-making reform. Instead, we just felt that the tone was different. We were excited because the government had decided to develop the country's economy and we would have opportunities to work hard. Previously, it was important to "have a 'red' background and be specialized", but I didn't have a 'red' background. We were young at that time and were not sensitive to politics, so we didn't have a deep understanding of the decision made during the third CPC plenary session. As we saw changes day after day, we began to realize that a theory or a change to the social structure would have a huge impact on a country. We didn't understand the meaning of this: "The flap of a butterfly's wings over the Amazon can set off a tornado in Texas." We just felt that changes would take place in China.

09 Hubert Seipel: But as a consequence of this, actually the army got recused and you lost your job.

Ren: The most important thing that was happening during 1978 and 1982 was "bringing an end to chaos and restoring justice". The situation gradually became stable. After that, Deng Xiaoping decided to disband large parts of the military. From the central government down to local governments, people didn't understand why he had made this move. I heard Luo Ruiqing's report in 1978, which he delivered at the National Science Conference three months before he passed away. He said, "We are going to enter a hard-won period of peace for more than a decade." He said that there would be no wars in the next 10-plus years, so we should focus on economic development. He reflected on his mistake of dividing China's scientific research system for national defense into the Second, Third, Fourth, and Seventh Ministries of Machinery Industry in 1965, which actually weakened China. But he was quickly removed from office and had no chance to correct this mistake. Ten years later, he regained his position and reflected on this mistake he had made before the Cultural Revolution. He thought that China was going to embrace a period of peaceful development, and that the military should stop expanding. At that time, we didn't understand what he meant.

During the 12th National Congress of the Communist Party of China in 1982, China started to disband large parts of its army, mainly the Railway and Civil Engineering Corps. At that time, we were considered a "miscellaneous corps", and one that would be disbanded first. We thought that the regular armed forces wouldn't be disbanded. However, after the "miscellaneous corps" were disbanded, the financial statements of the military didn't change for the better. Instead, military expenses increased. That was because "the disbanded Railway and Civil Engineering Corps were the ones making money for the military". Then the government continued disbanding military personnel, and dismissed one million soldiers from the field armies. The military shrank from 5 million to 4 million, and then to 3 million soldiers. Even today, the military is still being downsized to support the country's economic development. I now understand the logic behind all this, but I didn't at that time. I had become familiar with the military and my work there, so I was reluctant to change my job at that time.

10 Hubert Seipel: You founded Huawei in 1987, but what were the conditions? Because to have a political reform is one thing, but the reality is different. At that time, the market economy was more or less unknown in China. So, what kind of experience did you have in the beginning?

Ren: First, when I came to Shenzhen in 1984, I found it difficult to adapt to the market economy system. As I jumped straight from the army to the market economy, I still had a very traditional mindset, but society had shifted to a market economy. There was a question I kept wondering about: In the army, we talked about serving people. But here, we could make money from others. Why? I felt that all companies were cheating for money. Why should a product bought at 10 yuan be sold at 12 yuan? This is the first thing that made me uncomfortable. Second, when I worked in Liao Yang Chemical Fiber Factory, I focused on its automatic control system, a proportional-integral-differential analog control system. But when I came to Shenzhen, a city at the forefront of the reform and opening-up, I found that the world had started to enter a computer age. These two worlds were completely different. How could we keep up with the young people? This is the second thing that I couldn't adapt to. Third, I trusted people too much. In the army, the command itself was based on trust, so I thought it would be the same in other places.

I used to be a deputy manager in a small state-owned company with over 20 employees. I had no power to make decisions. I didn't know when an office director came or who would change to which position. They didn't necessarily report to me, but I had to be

accountable for their mistakes. I also made a lot of mistakes at that time. For example, I gave money to others out of trust but I didn't receive goods in the end. I was cheated out of two million yuan, and later I spent a whole year trying to get the money back. Most of the money was recovered, but there was still some left to be paid. When I made some money after I set up a small company, I paid some of the debts of the company I previously worked for.

What was the biggest lesson I learned from that incident? I didn't have money to hire a lawyer or ask for help by offering gifts. I read almost all the law books that were available to me. Then I came to understand that a market economy is composed of the supply of goods, customers, and transactions, and that the law plays a role in the process of delivering goods to customers.

Hubert Seipel: So, you were basically broke and then you founded a firm?

Ren: It's not because I was broke, but because I was dismissed. I had to look for another job. I happened to find out that Shenzhen was encouraging people to start tech companies. I thought I might as well try it out. Under the old system, I couldn't do what I wanted, and then someone suggested that I start a company. With my own company, I could do whatever I wanted in my

own name. So I took the suggestion and set up a private tech company.

At that time, 20,000 yuan was needed to register a company, but my entire military severance pay was only 3,000 yuan, so I had to raise funds from others. Some people joined me without investing any money. So the capital we used to start the business was actually less than 20,000 yuan – something like 16,000 yuan. In reality, I was forced to take this path. If the government had appointed me as a junior official at that time, maybe I wouldn't have started a business. Instead, I would have worked as a government official, ended up as a division head, retired, and then spent the rest of my days fishing. However, the fact is that I had no choice but to found Huawei with this little money.

At the very start, we had only one or two people. As I couldn't afford to rent a truck to ship goods, I had to carry sacks of goods onto the bus myself. I first had to carry one sack at a time and put it by the road 20 meters away, then go back to get another one. This same process continued 20 meters again and again until all the sacks were by the road. Then, I loaded them onto the bus. At that time, I was a promising man in China. Young, revolutionized, knowledgeable, and specialized, I had almost all the characteristics of that age, so I was undoubtedly supposed to be on the list of

future provincial and ministerial-level officials. Having suddenly become self-employed, I faced a lot of ridicule. Fortunately, the bus conductor was nice enough to allow me to load the sacks onto the bus one after another. When the bus arrived at Shekou, Nanshan District in Shenzhen, the conductor allowed me to unload the sacks and carry them 20 meters away one by one. Then I had to carry the sacks upstairs one after another. If the sacks were ever out of sight, there was a chance they might have been stolen. This is how Huawei has gradually developed.

11 Hubert Seipel: What was your breakthrough, so to speak, in the early years? When did you think, "Okay, I'm going to make it"?

Ren: In the early years, we acted as an agent. We helped other companies sell equipment and took a little commission. Gradually our staff grew to 20. We often unloaded goods from trucks by ourselves. Like dockers, we unloaded wooden boxes and carried them to the warehouse. Whenever customers asked for goods, we would go to load them up and deliver them. Three decades ago, we mainly worked as an agent.

Later, when a company in Hong Kong called Hung Nien came to us, they asked many people to investigate my personal history. I was so angry at the time. What

was the point of doing that? After hearing what people said about me, they came to the conclusion that I was a trustworthy person. They authorized me to distribute their products, saying "We have 100 million yuan worth of goods in our Guangzhou warehouse, you can collect them. When the goods are sold, you don't need to give us the money immediately. You can use it for a while." And they offered me a reasonable base price, so we could make money if the goods were sold out. China was developing fast at that time, so there was a high demand for those goods. Hung Nien trusted us a lot. The owner, Liang Kunwu, was a very well-educated scholar. Thanks to their trust and support, we began to develop gradually and accumulated some funds for future development.

12

Hubert Seipel: At that time, the US was an up-and-coming country for this kind of technology and for the industry that you were trying to enter. When did you go to the US for the first time?

Ren: In 1992.

Hubert Seipel: I read the report you wrote at the time and it's fascinating to revisit it now in 2019. It is called *Impressions of America*. And what you basically described is that you admired the US. You admired the whole country, to a certain extent. You admired the

technology, you looked up to it, and you saw yourself, in comparison, as a rather weak person, especially your management. You concluded simply in this report, "Actually, we are not experienced enough." So, the US was the country of promise for you at the time.

Ren: Yes. I did some reading about the US during the Cultural Revolution in China. Back then, a delegation from the People's Liberation Army of China visited West Point and there were a series of articles about West Point in *PLA Daily*. I was deeply impressed by the academy's management style. So in Huawei's early years, I drew on some of West Point's ideas in managing the company. Of course, as a manufacturer, it's impossible for us to be as strict as a military organization.

After I arrived in the US, I saw in person what the US was like. Before that, I had never been abroad. Before China's reform and opening-up, I had thought two-thirds of the world's population were living a hard life and suffering from hunger; only we had enough to eat and they were relying on us to save them. That's what we thought of the world. When we were abroad, we found that we were the poor ones and came to understand what the outside world was really like, which broadened our minds.

I was also deeply impressed by the US spirit of and mechanisms for innovation. There was an article

titled *Sleepless in Silicon Valley*. It talked about how hard companies in Silicon Valley were working. Their employees worked sleeplessly under harsh conditions – even in garages. This spirit is still alive today in Silicon Valley. We learned a lesson from their spirit: We also needed to work hard and remain dedicated if we were to grow from a company that provided simple products to a mid-to-high-end brand.

Even today, I still admire the US as I did when I was young. Despite the fact that they are attacking us at the moment, I still believe that at some point in the future we will meet at the top of the Himalayas – that is, the peaks of science and technology. The US will be climbing from the south bringing coffee and canned food, while Huawei will be climbing from the north, carrying dry food. When we meet at the top, we will not fight with each other; instead, we will embrace each other to celebrate our joint contributions to the digitization of society.

We should contribute more to society. We shouldn't be narrow-minded. It is open-mindedness that has earned us the trust of so many customers. Today's attack will not spell the end of Huawei. Hopefully when we have an opportunity to meet again several years from now, we will toast to our success.

13 Hubert Seipel: The first crisis for your industry in the West was in around 2001, and many US companies suffered heavily. How did you get through this crisis?

Ren: When the IT bubble burst, we also faced a huge crisis, and we were on the brink of collapse. We faced trouble both internally and externally. Externally, we lacked the capabilities necessary to serve our customers. During the IT bubble, high-quality parts were all purchased by large companies; we could only buy poor-quality parts to make our products and sell them to customers. Internally, we also faced a huge crisis. In 2002, many employees stole the company's intellectual property and took people away with them to start their own companies.

We just couldn't bear this anymore, so we held a meeting attended by 400 senior managers, where we studied *On War* – a book by Carl von Clausewitz from Germany. There was one line in the book: What makes a leader? A leader is someone who lights up their own heart in times of darkness and leads their team to victory with a glimmer of light. What is the role of a leader when their team is suffering during a war? To use their glimmer of light to lead their team forward. Now was the time for us to light up the road ahead with our hearts and boost the confidence of our team.

The first decision we made was to take back our

poor-quality equipment from customers, which cost over 1 billion yuan. Back then, we were running out of money, but we took this action in order to earn customer trust. The second thing was that we chose the right strategy: the "chicken rib" strategy. During that economic bubble, Nortel was heavily investing in optical transmission. When the prices of this equipment fell sharply, the equipment was like chicken ribs with hardly any meat on them. We then chose to work on the worthless "chicken ribs" that no other company wanted to focus on.

After working hard for 10 to 20 years, we have become the absolute global leader in optical transmission and optical switching. Other companies will find it very hard to catch up with us in this domain in the short term. That's why we have recently said that we will develop photonic computers.

We held a management meeting at the right time to ensure that everyone was aligned in terms of their thoughts. That way, we ensured that those who stayed would continue to keep up their good work. We chose the least profitable segment but managed to survive this huge crisis.

14

Hubert Seipel: Despite your love for the US, since Huawei is successful, there is obviously a never-ending war going on between Huawei and the US. Obviously,

it had already started some time in 2005. You were considered a kind of danger for the US, or for US politicians. Can you explain that?

Ren: I don't think US politicians are representative of the US. My aspirations for the US remain unchanged, and I don't hate US politicians. Why? Because they are "whipping" Huawei – propelling us to work harder. If we don't work hard, they will beat us. Actually, this is good for us. Without external pressure, there would be a lack of motivation to move forward internally.

15 Hubert Seipel: But as early as 2007, the NSA was getting into your network, and was even going directly into your communications. You certainly know the name of the NSA operation at the time – it was called "Shotgiant". The whistleblower, Edward Snowden, told us about this. Why was it about Huawei so early?

Ren: First, when we build internal networks, we have a principle of only preventing the malicious competitor from accessing our internal networks. Our internal networks were not designed to block Western competitors or any governments, including the US and Chinese governments. We don't have enough money to build such thick walls against all external parties. We only target the malicious competitor who intends to steal our technologies.

Second, few companies in the world perform as well as we do in terms of internal and external compliance. That's why you see international media reports talking about how Huawei subjects itself to "the toughest and most rigorous oversight regime in the world". In the UK, for example, even if there is some criticism of Huawei, they still have trust in us.

Therefore, the US move to access our networks may not have been due to our strengths, but may have instead been triggered by curiosity. They seemed to have thought I was rich, but just found out I was not. Fortunately, I didn't have much money at that time. That was my biggest advantage back then. Today, many people say I am a capitalist, but I really didn't have much money in the past. China has been ramping up its efforts to fight against corruption in recent years, but we've never been involved in any incidents of corruption. We have also been very careful when doing business outside China. Moving forward, we will focus more on internal and external compliance and meet even higher standards.

For the first three decades, we were like a farmer wearing overalls that was entering a grand palace. We needed time to adapt to internal and external compliance regulations that we were unfamiliar with. Therefore, we decided that we would only prevent the

malicious competitor from accessing our information networks and stealing our core technologies, but we would not guard against any governments.

16

Hubert Seipel: We are living in the very moment, a very heated period. Nevertheless, the accusations of the United States have been going on for years and it was always the same thing – that Huawei is a spy tool for the Chinese government, and that Huawei gets direct orders from the Communist Party. President Trump even issued an Executive Order to ban US technology companies from doing business with you because, let me quote him, "Huawei is engaged in activities that are contrary to US national security or foreign policy interests." What is this? Speculation? A trade war? A political objection? What do you think?

Ren: I don't quite understand the decision made by Trump. We have hardly any networks or any kind of presence in the US, so how could we threaten its security? The decision made by the US does not follow the rule of law. The US District Court for the Eastern District of New York has sued us, and we maintain that we are not guilty. If the US were to penalize us after reaching a verdict in the court following due process, we would be able to understand that, because we have respect for legal procedures. However, the US isn't playing

by the rules. I don't know how to understand this.

Our company won't collapse because of this. Some Congressmen have said that Huawei is dead, and on the Internet some people have said that Huawei is ruined. Huawei won't be ruined, but our business will be scaled down. If the size of our business was currently the size of a goose egg, then it will be scaled down to the size of a chicken egg, but never to the size of a pigeon egg. I think our business will shrink, but there will be no major issues. We won't be beaten by the US in the highest-end domains. We may choose to abandon some lowest-end domains. We never develop any components ourselves in low-end domains, because products in low-end domains will be phased out sooner or later. Our sales growth may slow down, but we won't see negative growth. We will still see positive growth.

When making this decision, US politicians may not have considered the interests of US companies. US companies also need markets. They need to supply chips and components to China, a market with a population of 1.3 billion. If the US doesn't supply anything to China, China will be forced to manufacture everything by itself. As a result, the US won't be able to remain the world leader. The world leader should be serving all 7.5 billion people around the world, and the 1.3 billion Chinese people account for roughly a sixth of this. High-

end components are already controlled through the *Wassenaar Arrangement*, and the US can just stick to this arrangement. Is it necessary to impose restrictions at the level of nuts and bolts? It's possible that the US politicians do not know much about technology.

17

Hubert Seipel: China is not a cheap workshop any more. In the last 40 years it has developed into a leading economic power – presently, number two behind the United States, and probably, rather soon, replacing the United States as number one. Is this the fear behind this kind of action, or is it a kind of tradition that in China, the Communist Party is still responsible for the government, and anti-Communist policies have long been a tradition in the United States?

Ren: I don't know the answer to that question. I'm not a politician, so I'm not very sensitive to political issues. In spite of the attacks launched by the US, Huawei is still the world number one in our industry. I have confidence that this will not change. In a few years, let's meet again and celebrate this together.

I think that the world should accept China's rise. Only after China rises up in the world will more and more Chinese people buy goods from outside China.

When you visited our production lines, you may

have noticed that a lot of the equipment we use is from Germany. Our production systems use software from Siemens, Bosch, and Dassault. Most of our production equipment was made in Germany. China's development will bring a lot of trade from Europe to China.

China used to be a very poor country. The clothes I wore when I was a university student were full of patches. When my pants had holes on the back, they would be mended on the sewing machine using another piece of cloth. I don't remember wearing any decent clothes back then.

However, we can all see that Chinese people are buying a lot of luxury goods from Europe. They are hugely popular in China now. The growing demand in China will create a huge market for Europe and the US.

During a speech in Australia, former US president Barack Obama said that if Chinese people lived the same life as Americans and Australians, it would be disastrous for the world. However, Google Maps show that there are many "small houses" in the coastal areas in China. They are used to breed marine animals for food in floating net pens. A lot of the seafood in China is manually bred rather than being caught from the sea. We do not harm the sustainable development of the world. Of course, Chinese people should be more frugal, as many are squandering too much money.

What I'm saying is that the world should embrace China's peaceful rise, and we really want to see China rise peacefully. The US is the strongest military power in the world. If the US does not start a war with anyone, no one in the world will go to war with them. I don't think the world needs to worry about China's rise.

You are welcome to visit our company anytime and talk with anyone you like. Our Chinese employees think similarly to Westerners – especially the younger employees; they identify more with Western concepts and approaches. I believe these concepts and approaches will become generally accepted around the world and become common values shared by all humanity.

The world we live in should move towards peace rather than war. If there is even a single individual that doesn't want war, I believe they can influence the rest of the world, who may then follow suit. We need to eliminate the sources of war to ensure a peaceful rise. We want to do business in a peaceful world. Creating a sense of fear does not benefit anyone. If everyone is scared of one another, the whole world will be a really scary place.

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Hubert Seipel: Now, the tensions between these two countries, as far as the trade war and Huawei are concerned, have become a bit personal. Your daughter

was arrested on December 1 last year in Vancouver. What was your first reaction when you heard that she had been arrested because she was the CFO of Huawei?

Ren: My first reaction was shock. My daughter is full of integrity. It would be impossible for her to have engaged in any criminal conduct. I had no idea what the reason behind the arrest was. She sent me a note through her husband the day after she was arrested. She told me, "Dad, they are coming after you. Please be careful."

I had to fly to Argentina to attend a meeting on the third day, which was actually organized by Meng Wanzhou. I believe that meeting was very important to our company's transformation, stability, and development, so I still decided to take the risk and attend the meeting.

Back then, we didn't know the US would impose such severe sanctions against us. My wife was extremely worried about me taking the trip. She stayed up all night, and kept asking me these questions: "Have you crossed out of China yet? Have you boarded the plane?" She went to sleep only after I told her the plane was taxiing.

I took a plane and returned to China right after the meeting. My family stopped worrying about me only after I returned home safe and sound.

Actually, I really don't care much about my own safety, and I don't think my life is that important. I believe the most important thing is our company's transformation. Our transformation in the Argentina Representative Office has been very successful, and has driven a company-wide transformation. In the context of the trade war, we have realized the huge role the seven documents we released about the transformation in Argentina played in helping our company build our fortresses. The heads of our three business groups have all told me that these documents are critical, and things would have become chaotic if we had not made sufficient preparations over the preceding six months. I risked my life to attend the meeting in Argentina.

I think I will still continue to travel around the world. What would be the value and meaning of my life if I were put in a cage? Some people have told me, "You are a thinker. We only need your ideas. You don't have to travel in person." But how can I have any brilliant ideas if I don't go into the trenches?

A journalist once asked me, "What would you do if you had been arrested in Canada with your daughter?" I said I would spend time with my daughter and talk to her every day. Another question was, "What if you had been sent to the US?" I told them that I would take the opportunity to study the US's 200-year history and write a book about how China should learn from the US and

rise up in the world over the next 200 years.

Another journalist asked me, "What if the Chinese government locked you up in prison for rejecting an order to install backdoors?" I said that prisons in China are well managed; some prisoners even have their own rooms, and there are decent bathrooms. They can read books and watch TV. That is pretty nice and it's totally free! I think that's kind of a nice thing.

If that was the case, I would stop thinking so much. I might no longer need sleeping pills, and my diabetes and high blood pressure might be cured. I might even be able to live for an extra two or three years. So what should I be worried about?

I'm having a relaxed life right now. Our company is on the right track, and can develop well without me. It is having a tough time now, but I still don't have much work to do. The reason for this is that we manage the company with rules and regulations, which we have learned from countries like the UK and Germany. This company is not managed by one or two particular individuals. I'm pretty confident about everything after 30 years of hard work.

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Hubert Seipel: She's charged with violating the US sanctions against Iran, and the US is demanding her

extradition. According to the *Washington Post*, the stand over Meng, and I'm quoting, "came at exactly the moment the Trump administration was engaged in high stakes negotiations, so there seems to be a relation to that". I mean, Europe is not following America's way, not Trump's way, like Germany, Denmark, or France. We checked France's decrees. But can you survive without the US? Can the US crush your company?

Ren: As for your first question, regarding Meng Wanzhou, I will not comment much on the case, as it is undergoing legal proceedings. We don't think she is guilty. We have evidence for the defense. US prosecutors also need to present evidence.

For your second question, if we were technologically severed from the US, could Huawei continue to survive? I believe that the world should collaborate for shared success, because in a globalized economy, all are interdependent and no one can exist in isolation.

But now we can say that, even without supplies from the US, we can survive and maintain sound operations. We may continue to be the world's number one. However, we always admire US companies. Many US companies want to collaborate with us. They are different from US politicians. We will always be a long-term strategic partner of US companies. They are now

seeking to ask the US government to approve their supplies, and we are determined to buy their products.

For example, we have components that can replace Qualcomm's, but we still buy 50% of our components from Qualcomm, and we are not solely using our own components. I've made it clear that we will always use American components, and will never take all the benefits for ourselves. We will always embrace US companies. Historical setbacks will test our friendship with US companies. But only through collaboration can we drive human civilization forward.

20 Hubert Seipel: According to the UN, the last 40 years were a blessing for China. If you look at the figures, 700 million Chinese people are now above the poverty line. China's life expectancy used to be 60 years in 1978. Then Deng Xiaoping started the reforms, and it's now 76 years. How does or did this change the Chinese society?

Ren: First, in the 1960s and 1970s, China had a population of more than 600 million. At that time, the sky above us and the land beneath our feet were the same as today, but people didn't have enough food. Then the reform and opening-up policy was adopted. Today, China has 1.3 billion people and produces more food than its people could possibly eat. This is

attributable to several factors. One is the significant development of production technology. Another is that China's agriculture production has shifted from a contract responsibility system to a system that allows farmers to transfer their land-usage rights, and will gradually transform to farm-based production like what we see in Western countries. Additionally, advanced agricultural tools have become much more widely used. These factors have drastically increased China's grain output.

Western countries enjoyed a prosperous economy thanks to the benign cycle of high prices, high consumption, and high salaries in the 1960s, 1970s, and 1980s, while China used to have low commodity prices. Later, when China's commodity prices began to rise, economic circulation within China was accelerated, which benefited Chinese farmers.

Second, China introduced very low taxes to attract foreign investment to set up factories in China. Because of that, 200 million farmers now work in cities. A decade ago, a migrant worker in China could earn 100 US dollars a month – an amount that they could not make in a year if they stayed in the countryside. In the late 1970s, I once worked in the countryside to help with the rural transformation. When we assessed farmers, a very strong farmer could only earn 0.08 yuan a day, equivalent to 0.01 US dollars a day. Their income was

extremely low at that time. Even now, the average monthly income in China's rural areas is only 2,000 to 3,000 yuan.

However, more and more counties in China's rural areas have been lifted out of poverty through large-scale production of agricultural products, instead of the previous small-scale farming approach. One example is Hezhang County in Guizhou Province, where it is suitable to plant a kind of thin and fragrant bunching onion. The county plants this onion across its thousands of acres of farmland. Meanwhile, an intensive industry chain has formed, including bunching onion packaging, logistics, and transportation, which is connected to the consumption systems in Beijing, Shanghai, Guangzhou, and other large cities. This has generated much higher income for local farmers. The party secretary of Guizhou's another county, Zhenning, once visited me and told me that his county planted over 2,000 acres of ginger and plums, which had lifted the county out of poverty.

Other regions, such as impoverished parts of Africa, can learn a lot from China's efforts to alleviate poverty, although the income of Chinese farmers is still very low according to Western standards. China still has a large population below the poverty line based on the UN's poverty standards. China's poverty line used to be 1.2 US dollars a day and has now been lifted to 1.9 US

dollars, while the line set by the UN is 2.5 US dollars. Our poverty line is relatively low because it matches our overall living standards.

The reform and opening-up policy has played a tremendous role in lifting China out of poverty. The efforts of government officials at all levels are also important. The Communist Party upholds the slogan "Serve the People". A government, whether it genuinely aims for this or not, must serve its people. Objectively, this can drive social progress.

21 Hubert Seipel: You went through a very difficult time within the last 70 years in China. There was the famine, there was the Cultural Revolution, and there was the change of the system to a certain extent. What word would you find if you looked back to your own life? Was it pressure which formed you the way you are?

Ren: I would say it was a hard journey. China took many detours before it found its own way out. I believe that China will ultimately find new drivers of development. The drivers of today are to build a well-off society, where the underprivileged can be lifted out of poverty, most children can access quality education, and people can enjoy happy lives. This is key to ensuring a better future for China.

This goal will keep the entire nation motivated and well-organized. The Chinese government needs to take measures to avoid anarchy and chaos, and ensure the country continues to reform and develop in an orderly fashion.

22

Hubert Seipel: If you look at people who are 40 years younger, who do not have your experience, and who have not been through this kind of hardship, what is the difference? What do you realize as far as they are concerned?

Ren: I don't think hardship is something everyone must go through. If we all have to go through it, what is our nation pursuing? I think the younger generation should increase their knowledge, aim for greater creativity, and enhance their capability to contribute to the country and its people.

Top US universities have two standards when admitting excellent students: Have you ever taken care of the elderly? Have you ever volunteered to help orphans?

If a student fails to meet either of these two standards, their scores for entering these universities will be reduced by 20%. Even if they score full marks in the exams, they will find it difficult to enroll in these top

universities.

What is the purpose of the US's top universities? To cultivate leaders, be they national leaders or business leaders. Leaders cannot be self-interested and only focus on putting money into their own pockets. Otherwise, they would destroy society. Leaders always need to have society on their minds.

Then you may come to understand why graduates from famous US universities, such as Harvard, work in Africa and earn very little money. They do this for an ideal. This ideal was known as the Puritan spirit.

I don't think there is much difference between Huawei's spirit and this Puritan spirit. Huawei's spirit is driven by our ideal to contribute to humanity. If Huawei were a capital-driven company, we would prioritize profits. This would mean we would only go to places where we could earn huge profits and refuse to go to places where we couldn't make money.

Some regions in Africa are challenging, but we still go and work there. If we were doing this just for money, we would never have been there. Mount Everest is very high, but we have built base stations on both the North Face and the South Face. If we hadn't built base stations there, climbers in danger would find it much more difficult to reach the outside world and get rescue. Without timely rescue, some of them could even die.

Can we make money in these places? No, but we fight for our ideal, and we are dedicated like Puritans.

This ideal has helped shape our corporate culture. Employees at Huawei do not haggle over personal gains with the company. But that does not mean we don't pay attention to their rewards and benefits. So, our culture is similar to US culture in many ways.

23 Hubert Seipel: How many Huaweis do we have in China?

Ren: I have no idea. I think China is very receptive to German culture. Reformation originated in Germany. Germany has abundant philosophers, musicians, and artists. How can an industrial society create such a splendid culture?

Several days ago, China's Industry and Information Technology Minister visited Huawei. I took him to visit our production lines in particular. I told him how great the software products from Siemens, Bosch, and Dassault are. Why did I do this?

The industrial Internet is about digitizing the industrial experience that people have accumulated over the past decades, rather than turning Internet companies into an industrial Internet. We help promote Germany's automatic control software across China, as this can help

improve productivity and efficiency.

We believe that China and Germany are highly complementary in their economies. China needs to develop, and Germany boasts many advantages that are valuable to China. In turn, Germany needs the Chinese market, which has a population of 1.3 billion.

When I visited Stuttgart in Germany, the dean of the University of Stuttgart's faculty of engineering took me to see their first-year students. Each student was given a piece of iron and a drawing of a wheel gear or shaft. They then had to make a gear or shaft with just a knife. Even if they made a gear or shaft, they would not be graded. They could only receive a grade when they fitted the gear or shaft into the gearbox, and the car had driven away and back safely.

I think that German machinery is unparalleled around the world. German cars are still much more expensive than other cars, even though they do not require more steel.

Germany has many good things and needs a large market to maximize the value of these things. This will require trade facilitation and liberalization. China may have been a little slow in its reforms, but since last year, it has begun to lower the threshold for investments in machinery manufacturing and industrial products and bring down tariffs. All these measures are

conducive to further growth. China and Germany should avoid confrontation and further enhance economic cooperation. We strongly agree with Europe's viewpoints. The EU is an economic community that does not seek to pursue too many political goals. Similarly, China has no intention of seeking hegemony. China still makes low-end and mid-range products. There should be some exchanges between low-end and mid-range markets and high-end markets.

Second, China still lags behind many other countries in the service sector. When a friend of mine got sick, I recommended two countries for the surgery: Germany and the US. Germany's medical system is very advanced. If they could set up some hospitals in China, they would very quickly earn back the money that China has earned from Germany, without sending too many people here.

When it comes to education, you have to work extremely hard to get a PhD in Germany. This shows that German PhDs are really of high quality. Our factories in the UK and Germany have hired many German PhDs because they are excellent. Germany has a very strict education system. Why don't we introduce Germany's primary and middle school education approaches to China? China is also opening up its service sector, which is a "smokeless" sector. Germany can earn money from China through this sector to hedge against trade deficits.

24 Hubert Seipel: So, your conclusion is a strong China and that after 40 years of development, China shares a common future with Europe?

Ren: I think so. I think Europe and China complement each other in many ways. The European Union is a community comprised of 28 countries. Its goal is to pursue economic interests instead of political hegemony. China does not seek political hegemony, either. China and Europe should collaborate and reinforce each other's strengths. And this collaboration can be linked by the "Belt and Road" initiative, through which China can pool the energy resources it does not have from the Middle East and Central Asia to fuel its engine of growth and ultimately drive faster common growth.

A couple of days ago, when I was talking to Japanese media, I said I would like to see a free trade zone established between China, Japan, and South Korea. We should also push for the establishment of a China-Europe free trade zone. If European goods became tariff-free, a huge number of European goods would flow to China, including services. Chinese products would also be exported to Europe. There wouldn't be the same large trade deficit that exists today. I think this would create a new form of balance. I hope that both Europe and China will work to make this happen.

I have made contributions to Europe. I've been

persuading the Chinese government to align with Europe and establish a Chinese-European standards system. This has already been done. Now, Chinese and European standards bodies are on the same wavelength. Next, I hope American standards bodies can join them, creating a truly global standards system.

25

Hubert Seipel: What might be the biggest obstacle to China-EU cooperation in the future?

Ren: I think two things are critical to China-EU cooperation. The first is intellectual property protection. In the past, China didn't pay enough attention to intellectual property protection. But now, if you watch Chinese TV programs or read media reports, you'll see China is paying a lot of attention to intellectual property protection.

The second is allowing wholly foreign-owned enterprises to be established in China. Intellectual property protection for these enterprises should be more stringent. If things work this way, I don't think there will be any obstacles to the development of European companies in China.



A Coffee with Ren

June 17, 2019 Shenzhen, China



A COFFEE WITH REN



Tian: Absorb the energy of the universe over a cup of coffee. I'm Tian Wei. They say a good conversation could be just like drinking a cup of black coffee and as stimulating as it is hard. I'm not sure whether today's conversation is going to be a really difficult one, but it should certainly be stimulating intellectually and thought-provoking. If you take a look at the panelists on the stage, they're trailblazers in their respective fields and certainly very outspoken about the challenges that we are facing today. I hope it's a conversation among minds without borders.

First up, A Coffee with Ren, so let's start with Ren. Ren Zhengfei, founder and CEO of Huawei. Of course, a legendary entrepreneur from China who has made China one of the world leaders of 5G. Huawei now, as far as I understand, is the world's largest manufacturer of telecommunications equipment and the second largest maker of smartphones. So, Mr. Ren, welcome.

On his right, Nicholas Negroponte. The reason I introduce Mr. Negroponte second is because he has just accepted Mr. Ren as his student. Big news. A tech visionary and co-founder together with Jerome B. Wiesner of the MIT media lab. And he has been providing funding for start-up companies around the world, including WIRED magazine and Sohu. He has also decided to devote the remainder of his time, which is a lot, to open science and global connectivity. Good to see you, Nicholas.

Next, we have George Gilder, certainly a fun individual, as well as a tech guru and a futurist, according to many. George is President Ronald Reagan's most quoted leading author and has been a venture capitalist in the US and Israel on many important projects. He enjoys his time as a runner and also as a skier. George, good to see you.

Last but certainly not least, we have a wonderful lady sitting on the stage as well. A long-time commitment to Huawei, 25 years working for this company, and a colleague of Mr. Ren, Ms. Catherine Chen, Senior Vice President and Director of the Board of Huawei, welcome.

01 Tian: Okay, A Coffee with Ren. I really need to start with Mr. Ren. Mr. Ren, is it because you cannot go to the US so you have all your friends coming to China for coffee?

Ren: Professor Negroponte was a teacher of Steve Jobs, and his son was once Jobs' roommate. That means that by becoming his student today, I am becoming one of Jobs' peers. I feel very honored. As for Mr. Gilder, he wrote the preface for Built on Value, a book by Professor Huang Weiwei. The preface is excellent, and I greatly admire him. I respect both of them very much. It's also fantastic that we have this opportunity to meet you, a very famous TV host, here today.

02

Tian: I want to turn the table to both of you here. Aren't you afraid of being politically incorrect, coming to China and sitting here in the sitting room of Huawei while knowing what's going on between the US and China?

George Gilder: No. No, I think that I am contributing to saving the United States from the terrible mistake that it's currently making, epitomized by the outrageous bans and tariffs, as well as restrictions it is placing on Huawei. But also, I can contribute to a re-construction of Internet architecture to address the terrible security collapse across the Internet that is making everybody paranoid and preventing everybody from trusting anybody else. This is really a technical problem that Huawei can address and not a political problem.

Tian: Are we facing a technical problem or a political

problem?

Nicholas Negroponte: I have more of a feeling that we're facing a cultural problem. I'm here for a different reason, and I invited myself to come here and even told Mr. Ren what day I could come. And it was surprising that George, whom I have known for 40 years, was here on the same day, so I'm very pleased.

We don't agree on political issues. Anyway, we agree on the fact that the United States is making a terrible mistake, first of all, picking on a company. I was on the Motorola Board of Directors for 15 years. One of the first joint ventures you did was probably with Motorola, I suspect. My interest is open information, open science. I come from a world where what we value isn't so much about trade, commerce, and stock values. We value knowledge, and we want to build on the people before, and the only way this works is if people are open at the beginning. Then we can all build on each other, and that's, to me, the priority.

There are other issues, and I'm not denying them, but that's the one I'm focusing on: How does the world collaborate? It's not a competitive world in the early stages of science; it benefits from collaboration.

Tian: Mr. Ren, some people say this is a technical issue, and some believe it is a cultural issue. What do you think? What kind of issues are we facing here?

Ren: I think the most important goal for our society is to create wealth, so that more people can be lifted out of poverty. Social progress requires collaboration for shared success. It's simply impossible for individual countries to develop on their own in the information world. In the industrial era, transportation problems led to geopolitics and geo-economics, so a country could manufacture sewing machines and tractors entirely on its own. But in the information era, it's impossible for a country to single-handedly make anything. That's why open collaboration worldwide is a must. Only through open collaboration can we meet people's demands, and bring the benefits of new technologies to more people at lower costs.

I believe collaboration is the only way to make social progress. Economic globalization was first proposed in the West. We believe it is a great concept. There definitely have been and will be ups and downs during the process of economic globalization, and we need to take the right approaches to these ups and downs. That means we need to use laws and rules to reconcile and resolve issues, instead of imposing extreme restrictions.

The progress of human civilization is built upon the discoveries and innovations of scientists, the leadership and facilitation of politicians, the products and markets of entrepreneurs, and the joint efforts of all people. That's how we create new wealth. During the Dark Ages,

famine was prevalent in Europe. About 40 to 50 years ago, China was very poor, and people suffered from hunger. But now we have an abundance of food. Why is that? It's not because the natural environment has changed much since then. It is the result of advances in science and technology.

03 Tian: There are companies who are not providing Huawei with components and parts anymore, despite the fact that you had contracts with them. How will you treat the US companies who wish to keep supplying Huawei?

Ren: All of the US companies that we work with are great companies that hold themselves to high standards in terms of business integrity and ethics. Huawei's development over the past 30 years can be attributed in large part to the support and help we have received from leading companies around the world. The current setbacks we are facing are not caused by those US companies, but by politicians who see things differently from the way we see them.

We predicted long ago that we would encounter market competition issues and conflicts when our growth is fast. But we never imagined that the US government would be so committed to attacking Huawei within such a broad scope. The US government

is banning US companies from supplying components to us. They are also restricting our participation in international organizations and our cooperation with universities. That said, these restrictions will not stop Huawei from forging ahead.

We didn't expect that the US government would launch such precise "strikes" against us, with each "strike" hitting our vital parts. Now we have several thousand "holes", and fixing them will take time. We didn't expect such extreme measures, but we did make some preparations. We are like a bullet-riddled Il-2 aircraft during World War II. We prepared to protect our core parts only, like our fuel tank. We didn't prepare to protect non-core parts. In the coming years, our production capacity may decrease, and our sales revenue will be about 30 billion US dollars lower than forecasted. In 2019 and 2020, our annual sales revenue will be about 100 billion US dollars. But maybe in 2021, we will regain our growth momentum and provide even better services to society. In the next two years, we are going to switch from many old product versions to new ones. In such a massive switchover, it will take time to test whether things work properly, so a moderate decline is understandable. But when this step is finished, we'll become stronger.

When we were not as strong in the past, we were

determined to work more closely with US companies. As we become stronger, we will work even more closely with them, and we won't be afraid of encountering more challenges like the ones we are facing now. We are not afraid of using US components or US elements, and we are not afraid of working with US partners.

Companies that are not as strong as Huawei might be very cautious when it comes to using US components or US elements. This will hurt the US economy in one way or another. But Huawei won't be hurt much. We are already strong, and we can withstand whatever is thrown at us.

Tian: Did Mr. Ren tell every Huawei employee about his plan regarding 2021, Madam Chen?

Catherine Chen: He talks about that sometimes, and the numbers may not necessarily be the same every time he speaks about it.

04 **Tian: It seems that Mr. Ren gave us a lot of information earlier about the bottom line he is thinking about. What do you think George?**

George Gilder: I think it's absolutely important that all these new ventures be founded on a level of a ground state of security on which these innovations can depend and which makes them trustworthy,

recognizably trustworthy around the world. Because a worldwide network or a worldwide Internet of Things or a worldwide 3D virtual reality Internet, smart cities, or all of these various goals will depend on a secure ground state of timestamped factuality.

Tian: We understand that it's security, security, security. But how? That is the issue.

George Gilder: Blockchain, have you heard of it? It's an innovation and is what the new generation of technologists around the world are working on and developing, and I think it should be incorporated in the Huawei plan for the future.

Tian: What about standards? Since we talked about security and since we talked about some specific issues. Mr. Negroponte, what about the issues? From your perspective, starting from earlier days and thinking of what's going to happen today, what about standards? Do we have global standards? And how fast can we build the global standards? Do we want to build a global standard?

Nicholas Negroponte: First of all, I've been doing this for so long that when I was first on the Internet, I knew everybody else on it. That's how long ago it was. And nobody imagined how it would grow. And if they're telling you now, they're being revisionists. It was not in any way imagined to be this dominant. And I

experienced over my life, first as a teenager, Sputnik. It's very interesting because Sputnik caused the United States to do things that it wasn't already doing. So this is your Sputnik moment.

What the United States has done created Huawei's Sputnik. You're going to wake up and do things and there is no going back. I saw it again in the 1980s, with Japan, terrified by Japan. There was a whole period when Japan was this enemy and we were not supposed to collaborate and yet that's sort of attenuated. Standards are important, but not as important as they used to be, partly because you have enough intelligence in the system that you don't have to necessarily have a precise standard that everybody is following, as long as the system can recognize what it is, and says, oh, that's that signal, and adapts itself.

So there is a change, but it's important to collaborate on the basis of knowledge. Because if we start going in other directions separately, it's going to be an enormous shame.

05 Tian: Talking about the basis of knowledge, I really need to ask Mr. Ren. Because right now, Huawei's collaboration with quite a number of American universities and labs has been halted, including some of those where you originally came from. And that is

not going to contribute to the open science we are talking about. But to Mr. Ren, it's also going to have a big impact on where Huawei could be in terms of your capacity for science and technology. How would Huawei address the situation?

Ren: Inventions can be divided into theoretical inventions, engineering inventions, and inventions driven by market demand. China is very strong in engineering inventions, but weak when it comes to theoretical research. We have to diligently learn from the West in this regard. The West took several hundred years to invent theories like calculus. They have contributed greatly to advancing basic theories.

Huawei invests heavily in R&D. We have more than 80,000 engineers. Despite that, we have not made any great inventions. Mobile communications were not invented by Huawei, nor were fiber communications, IP transmission, mobile Internet, airplanes, cars, or horse-drawn carriages. When it comes to inventions, we have made little contributions to humanity. We have focused on improving engineering capabilities.

We are now supporting more than 300 universities and 900 research institutes around the world. In doing so, we hope that we can contribute to theoretical innovation. We will not cut our investment in this area just because of the attacks on us. We will work harder. Even if the US

government does not allow some universities to work with us, there are many others who are willing to do so. It is understandable that a few universities are having concerns about working with us. It is just short-term because they don't know much about us.

We welcome more US politicians to come and visit Huawei themselves. Some of them may think we still live in grass huts and wear long queues – a hairstyle from dynastic China. If they come and look at Huawei's pace of innovation, they will believe that it is worthwhile to make friends with us and that we can be trusted.

Just now, Professor Gilder mentioned building trustworthy networks. Huawei is determined to do that. And it is also a decision included in our business plan. In the next five years, we will invest 100 billion US dollars in reshaping network architecture, so that networks can be simpler, faster, more secure, and more trustworthy. At the very least, we should be able to meet the standards of Europe's GDPR when it comes to privacy protection. Of course, our revenue will need to double. If we face financial difficulties, we may cut our R&D investment, but the amount will still be close to that figure. We need to restructure networks and make more contributions to humanity.

We also need to look at Huawei's contributions to society. Huawei employees are everywhere – in the

poorest areas of Africa, in places stricken with malaria, Ebola, or AIDS, and in the wilderness. We don't make much money there. We are there because of the commitment we have to humanity.

Since we have not contributed much to theories, we want to contribute more to serving humanity.

06

Tian: That's a great thing. And having a good market is a good thing, too, I guess. To you, Mr. Gilder, talking about security earlier, Mr. Ren has mentioned that. So there are lots of questions about whether Huawei has backdoors. Mr. Ren, please answer this question as well. Which security is it? Who will guarantee the security? Who are the ones to judge whether one system or another system has security or not?

George Gilder: The question is an objective question – whether a specific telecom system can be tested, whether it is open, whether it can afford to be using the new cryptographic techniques, cryptographic signing of software that can render it inherently trustworthy, because it cannot be changed gratuitously. There are lots of technical remedies for the kind of distrust that arises around this catastrophically insecure Internet architecture that we find ourselves using today. Just as we have catastrophically broken monetary system, which causes trade wars, we also have a catastrophically

broken Internet security system. And I think among all companies in the world, Huawei is probably best situated to solve both these problems and to pursue both these opportunities.

Tian: Is Mr. Gilder having too much hope for Huawei and is he being too optimistic or pessimistic?

Nicholas Negroponte: Well, I hope he's correct. And there's some evidence that he may be, because our President has already said publicly that he would reconsider Huawei if we can make a trade deal. So, clearly, it's not about national security. We don't trade national security. It's about something else. And this trade war has got to end, and that, I believe, will end sooner rather than later. Crossing my fingers.

07 Tian: Mr. Ren, has Huawei installed backdoors into its equipment? Are there any security issues? Please tell our good friends, and the audience joining us online what Huawei's position is regarding this issue.

Ren: First, we need to separate the issues of cyber security and information security. Cyber security relates to the networks connecting our society. We can't ever allow these networks to break down or malfunction, and this is a security issue. These networks need to connect 6.5 billion people, tens of millions of banks, and hundreds

of millions of SMEs and large companies. For a bank transaction to take place on a network that connects 6.5 billion people, the transaction must be able to accurately link the right individuals and transfer the correct amount. This is a cyber security responsibility. Huawei is responsible for providing connections to 3 billion people and providing connections for banks, businesses, and governments. Over the past 30 years, Huawei's networks, spread across 170 countries, have never broken down, proving that our networks are secure.

In terms of information security, we provide pipes and taps, which we refer to as networks and devices, respectively. The pipes don't determine what passes through them, which could be water or oil. Instead, carriers and content providers determine this.

In regard to whether Huawei installs backdoors, we don't have any backdoors at all. We are willing to sign no-backdoor and no-spy agreements with any country. Why haven't we signed any, you might ask? Because some countries have required that all network equipment suppliers sign such an agreement. This raises the bar in these countries and makes things more difficult. Why not just sign an agreement with us first? Huawei can set an example, and then these countries can use this example to negotiate with other suppliers.

Tian: Which countries are you referring to?

Ren: I've discussed this topic with many state leaders. Once we get an agreement signed, we can set an example, and everyone will see that Huawei is bold enough to enter into such agreements. We can guarantee that we won't install backdoors, and we can then take on further responsibilities.

Whether something is secure or not is relative. The thickness of the atmosphere in the physical world is about 1,000 kilometers, but the information cloud will be much thicker than that. In a cloud that thick, errors are inevitable. For example, if a lightning strikes the wrong place, what can we do? We should investigate accountability, correct the mistake, and impose punishments. Attacking a company from all sides without fair reasons is unacceptable. Countries following the rule of law must act based on laws. How can they make judgments without even holding trials?

As the cloud society continues to develop and the number of portals increases, we will become more prone to making mistakes. If a society cannot tolerate even a single error, it is too conservative. Such a society will lose its drive for progress and creation.

Tian: Ms. Chen, I just asked Mr. Ren which countries he was talking about, but he didn't give a precise answer. I know he has been saying internally that he is a fan of the US. Does he still say that considering the current

situation? Things have changed a lot.

Ren: The US is a developed country, but long ago, the US was an undiscovered continent. After the Puritans arrived, they started introducing British laws and regulations. The US gradually became more open and developed into the strongest nation in the world. We have a lot to learn from the US. A few setbacks won't make us suddenly hate the US. The US has a long history, and these recent events only make up a very small part of its history. If we started hating the US forever because of this, we would be pushing ourselves backwards. We must learn from the US. This is the only way that we can remain a leader in the industry.

08

Tian: Mr. Negroponte, what Mr. Ren just said is very interesting. He seems to want to look at history over a long period, rather than focusing on one specific point of time. So what exactly can we learn from history? I mean, you've already also talked about history, whether this is regarding Japan or Sputnik. What can we really learn? They say it's the rule of the jungle anyway.

Nicholas Negroponte: Well, we can learn by looking at various technologies that were invented in the United States and were then taken elsewhere. The US didn't have the industry, commercial skills, courage, or ability

to develop them because it was too long-term. I'll give you two examples. One example is flat panel displays. A piece of glass in my laboratory in the early 1970s is the beginning of flat panel displays. The United States couldn't bring it forward. It took too much investment, so it went to Japan and then later to other places. The same thing happened even before that with video tapes. There was a big commotion when video tapes were invented, but we didn't develop the technology. The same thing also happened with telecommunications. Government funding in my lab stopped 20 years ago and interest in the telecommunications development went elsewhere.

It's not the United States. Let's say it's Europe, it's Ericsson, and it's Nokia. It's not really the United States anymore. History has shown that the short-term, usually quarter to quarter, view of American industry precludes some of these big long-term developments. And Huawei looks beyond that and has been able to develop things in 5G and other areas. That couldn't happen with the way we're set up. It didn't lend itself to small entrepreneurship and it doesn't lend itself to big American corporations the way they're currently shaped.

09

Tian: Mr. Gilder, many say, wow, we're already at the very beginning of a technological Cold War. We're

going to have to decouple between China and the United States and between China and some of the other countries, technology-wise. Are you as easygoing about the reality as Mr. Ren, or as historical as Mr. Negroponte?

George Gilder: I think Mr. Ren is right to be confident. I mean, he's in a strong position. He has more than 87,000 patents. He has the 80,000 R&D employees. He's focused on the technologies of the future. It's the United States that really will suffer from any effort to decouple itself.

Tian: Are you bashing America right now?

George Gilder: I'm not. I'm an American and I believe we have wonderful entrepreneurial energy, wonderful creativity, and wonderful technology. But it's always thrived on collaboration with other countries. When we were an underdeveloped economy, Ford, Edison, Carnegie – all our great entrepreneurs that established the oil, automobile, and electrical industries – stole from Europe. Everybody said they stole from Europe, that they sent spies into European companies and brought back crucial insights that made Ford automobile possible. What we see here from historic terms is merely the incumbent established technology power of the United States being challenged by an ascendant challenger, China, and we are trying to beat them back. And that's

a terrible, suicidal mistake for the United States to make.

So, I'm being pro-American when I say America has got to deal with Huawei and with the existence of challenges around the world. We are not in the lead in semiconductors anymore. This idea that we have some impregnable lead in semiconductors that we can use to negotiate and force China into compliance with some requirements that we imagined, is wrong. We don't lead in semiconductors. Taiwan leads us in semiconductors, and Apple's new CPU had to be made in Taiwan. 7nm geometries were not feasible at Intel anymore.

I mean, it's just false that the United States is in an impregnable position that it doesn't have to collaborate with China and other countries around the world. This is an illusion from years gone by and we've got to get over it if we're going to accept the challenges of the future and accomplish the goals we have set.

Ren: First, generally speaking, the US still has more advanced science and technology than China. After all, China is still catching up. China has made much progress over the past 40 years since the reform and opening-up, but the US has been developing for one or two hundred years. So the US has a more solid foundation for innovation. Suppose the world is a river, the US is a bit like water at the upper reaches, which will naturally flow downstream. If the water upstream does not flow

down, the lower end of the river will dry up. However, the upper reaches will also dry up without lower reaches. This is similar to our value chain. Downstream market demand is critical for those in the upstream. Therefore, technological decoupling goes against the trends of historical development.

Second, the law of the jungle does not fit into human society. Humans need to collaborate for shared success and various forces need to be balanced. That's why we have adopted a market economy rather than a planned economy. Although the counterbalance between various factors in a market economy will cause some waste, it underpins orderly development of the market. In addition, human society is also governed by laws, regulations, religions, and moral codes. All those factors prevent the world from simply following the law of the jungle. Many countries have also issued anti-monopoly laws to prevent one lion from becoming too strong in order to maintain balanced development.

While Huawei happens to have some leading advantages in 5G, we will not be complacent. We still want to openly collaborate with the rest of the world. So I think technological decoupling between China and the US is in no one's interests. Both sides will suffer.

Tian: So there is a big jungle which has many players like rabbits and lions. Ms. Chen, it seems like Huawei

has figured out a way to survive and thrive after this crisis.

Catherine Chen: I don't like people describing the world using the law of the jungle, either. Everyone knows that tigers and lions are the strongest animals and no one can defeat them. But how have humans achieved what we have today? It is through unity and collaboration. I think that's the law that always holds up well, rather than the law of the jungle. Many people wonder whether Huawei is facing unprecedented pressure and difficulties. Honestly, I don't think this is the biggest problem or challenge we've ever faced during my 25 years with the company. I think the most difficult time was when Mr. Ren founded the company. We didn't have money, technology, or people. I believe Mr. Guo Ping understands this even better as he joined Huawei earlier than me. We had nothing back then, but we managed to develop into what we are today. So I don't think the current challenges and pressure are that a big deal. Once a problem, issue, or challenge appears, Huawei always meets it head-on and works hard to resolve it. That's what we've been doing for the past three decades, and we will continue to do so in the future.

10 Tian: If it's not that challenging, as all of you illustrated, I feel happy as a journalist. But now, there's another

thing. We cannot just concentrate our conversation on Huawei and the current specific challenges. But rather, we're going from here, every one of us. Mr. Ren has been very passionate about 5G. That's certainly going to help build the infrastructure in the world to empower communication and many other things. Mr. Gilder has been arguing over the years that artificial intelligence is not going to replace human beings, but human capacity and also the human brain are enormous. Meanwhile, Mr. Negroponte, you have been arguing in many of your speeches and books that biotech is the new digital, as you wrote in the book Being Digital back in 1995. You even argued that we can probably eventually eat a pill and learn Chinese, not only through the eyes but from within the body. So, what kind of future do you see?

George Gilder: You didn't really say that.

Nicholas Negroponte: Yes, I said it, but it doesn't mean it's true.

Tian: Let me ask one by one if we can and crossfire is also welcome here on the stage. About what we were talking about, where would you concentrate on a bigger trend? Let's start with someone many call a futurist. Mr. Gilder?

George Gilder: I believe the basic challenge of the world economy today is to address the scandal of money. We,

today, see US\$5.1 trillion every 24 hours in currency trading. But this currency trading accomplishes nothing. I believe that the real reason for the trade war is not trade or industrial machinations. It's the collapse of money. This currency trading doesn't even prevent constant hedging of every transaction across the border. It doesn't prevent trade conflicts. It doesn't really accomplish its goal. So I think the great contribution of blockchain is that it allows a new global currency that plays the role that gold played for hundreds of years of the fastest growth of the world economy. And that's really what blockchain provides: not only a new Internet architecture, but also a new global architecture for the world economy.

Tian: You don't think that's virtual wealth only? Like the stock brokers?

George Gilder: It's [money is] not wealth itself. It's the measuring stick of wealth that guides entrepreneurial visions and creativity. You need to have a measuring stick, just as you need to measure the second, the meter, the kilogram, the amp, the mole, the degree Kelvin, all the various measuring sticks that make it possible to make a chip in Taiwan, and incorporate it into a smartphone in Shenzhen, and send it to Cupertino for marketing and to Israel for amplification. All that is made possible by common measuring sticks. The nanometer is the same in Shenzhen as it is in Timbuktu.

But money, which is a critical measuring stick, is different all around the world. It's being manipulated by national central banks. So we have chaos of money. And that's why the world economy is slowing down now, why trade is no longer growing, and why countries are constantly fragmenting and fighting over valuations. I think this is a big opportunity. I think Huawei can play a key role in surmounting this challenge.

Tian: Mr. Negroponte, of course you disagree with your friend?

Nicholas Negroponte: No, I don't disagree. I don't know enough about that. It's fascinating to listen to. I believe the question was what some of the big future trends are. I think they all surround one aspect of the scientific and technological world that has changed in the past 30 years. And that is, we can make things and design things and build things that are so small and get smaller and smaller. But there's been a crossover point with nature. When I grew up, the natural world and the artificial world were very different. In fact, I was trained as an architect. Good architecture is architecture that fits well with the natural world. But now, the natural world and the artificial world are the same. And they're the same in the ways that are very surprising. When I founded the media lab, I never imagined that we would have a team like we have today that designs mice. They design

new mice! And are the mice real? Or are they artificial? They're manufactured, and they're walking, living mice.

And so there are certain things that you think about. For example, ten years from now, maybe Huawei will ship base stations as seeds that you plant and water. And they'll grow and guess what? They will grow into base stations that are powered by the sun and the leaves. And then all of a sudden you have base stations in the middle of nowhere! 10 years from now, that's perfectly plausible. So, I think the reason why I say biotech is the new digital is more because of synthetic biology and the fact that they're indistinguishable.

Tian: The digital world is combining with the world of biotech.

Nicholas Negroponte: They're very much the same.

11 **Tian: Growing from a seed is something we can discuss. Mr. Ren, what about your future? What do you think?**

Ren: Professor Negroponte was talking about what fundamental changes the convergence between DNA and electronics will bring to humanity. I am not in a position to comment because I haven't done any research on that. But I think in the next 20 to 30 years, the biggest driving force for human society will be AI.

AI is augmenting human capabilities, but not replacing them. Society is getting more and more complicated, trains are traveling faster and faster, and networks are also becoming more complicated. This is not something that can be handled with individual intelligence.

In the future, some tasks that are certain will be directly done by AI, and the problems will be solved on the edge. Tasks that deal with uncertainties will be first transmitted to the central networks, and then undergo fuzzy processing using AI. AI might get it wrong, or get it right. It's a process of deeper learning to promote human progress.

We should be tolerant towards innovation. If there is something wrong with networks, we can now maintain them remotely. Do we still need people to climb up towers to do maintenance? This will generate high costs. So we need to be tolerant of future-oriented innovation. This is the only way for us to build a great society. AI should not be seen as something negative. AI is an extension of human capability.

As Professor Negroponte just mentioned, the concept of AI has existed for decades, but it failed to become a reality. Today, we have what it takes to make AI a reality. AI will help create more wealth for humanity, rather than replace humans. How could AI appreciate music? How could AI understand jokes? These will be addressed

in the near future. Now AI is mainly used to improve productivity.

Tian: So, the teacher and the student. Mr. Gilder, it seems they are disagreeing to a certain extent with what you just said.

George Gilder: Well, I've been studying connectomes for a while, and for years, I specifically studied the connectome of the Internet. That is, how voluminous all connections are, all across the entire global Internet, and how they are connected to all its memories. And I was often focusing on the point where the connectome of the global Internet would pass a zettabyte. That is, when would all the memories and all the connections take a zettabyte, 10 to the 21st power, to map.

Recently, I've been studying the connectomes of the human brain. The connectome of one human brain takes an entire zettabyte. In other words, one human brain has as much connectivity as the entire global Internet. Yet the entire global Internet consumes gigawatts, terawatts of energy, while one human brain runs on 12 to 14 watts of energy. So, I believe what will really determine human progress and prosperity is unleashing the individual human zettabytes running on 12 watts. That's 6 billion you're interconnecting through the Huawei fiber optics and wireless, not creating some super mice out of a pill. Life is not the same at

electronics. It manifests electronics but it's a different phenomenon which is not well understood and is not illuminated by facile statements that we're going to be able to read Shakespeare by taking a pill.

Tian: Mr. Negroponte, I think it's a perfect time for you to speak out.

Nicholas Negroponte: Look, whatever is true, in computation and connectivity, I can make more of it. I can make more and more out of it. And some of that can happen naturally. So, a lot of people have worked on really two kinds of, or really two distinct AIs. There's the AI, if you will, that helps to do as well as or even better than the human brain. That's the one called the classic AI, the one that the people of the 1960s and 1970s, very deep thinkers, were thinking about. It's not an AI composed of 7.5 billion people, I don't know what you're doing with other 1.5 billion when you're talking about connecting everybody, but when you have 7.5 billion brains connected, you have something times 7.5 billion. That's a different area and a fascinating one. And whatever happens computationally, I just know I can make more of it. I can't make more of the human brain and that's not going to change that much. So, things will change, George.

When I say you learn French by taking a pill or Chinese, that is part of a very different agenda of how

you interact with the human brain. And the breakthrough was the idea of going from the inside instead of the outside. Instead of trying to radiate, what if you went through the bloodstream and what if you access the neurons from that direction? That's pretty interesting. I don't know where French lives. Does it live in a part of your brain? Probably not. But the process to speak French certainly does. Can you put that there? Can you take it away? It doesn't matter whether that is correct or not right now. It's certainly a very exciting way of thinking about it and people will do things and change things as a consequence of taking that kind of step.

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Tian: To take pills or not is not the question. The question is what we're going to see in the future. Let's talk about the future a little bit more. For example, lifelong learning, Mr. Ren, that's extremely important for everyone no matter what future we're talking about. So for all of you, how does that happen? What is the best tool for this? What is your method for achieving lifelong learning? I'm sure you have had to learn very fast, particularly recently.

Ren: No matter how fast you are, you cannot be as fast as machines. No matter how long you commit yourself to learning, your life is always limited. AI will be extremely capable of inheriting human civilization

in the future. Scientists' ideas and the way they think can be passed on to future generations. For example, Einstein's thinking can still be useful after hundreds or thousands of years. In addition, with super-computing and massive storage, computers can comprehensively extract a number of excellent ways of thinking through machine learning. Calculations can then continuously be performed and be improved through algorithm models. Since AI cannot die in a traditional sense, it can accumulate intelligence over thousands of years, continuously building its strength. That's why I think AI will create enormous opportunities for humanity. What will the opportunities look like? I don't know. But I'm sure it will create great wealth and benefit society.

Today, it's hard to imagine what future society will look like. But I think lifelong learning is an incentive for individuals. Learning at a societal level, however, is a never-ending iteration. During the iteration process, revisions and new models will constantly be made through machine learning and algorithms. Someday, simple methods will be used to understand sophisticated problems. That is to say, although many people are currently needed to deal with sophisticated problems, in the future such problems may be resolved with just a few people. So the issue of lifelong learning should not be discussed at an individual level, but should be explored at a social level. Lifelong learning should be

conducted across borders and disciplines.

People from our generation have this notion of geopolitics. That's because when we were young, we never traveled outside of our county, let alone our country. Only when we grew up did we leave our county. So we have this notion of being tied to one location. But because of the Internet, today, the younger generations are not tied to individual locations, and this way of thinking is dying out among them. They have looked at the world differently since they were very young.

I think future society will be even better. Some people are terrified by the possibility of AI replacing humanity, but this is just something imagined by sci-fi writers. After all, we have laws, religions, ethics, and other measures to counterbalance this. So this kind of phenomena will not happen or be very rare. We think wealth will only increase, rather than decrease.

Some say that Chinese people are getting richer and consuming more fish, which will cause a shortage of natural resources. But if you look at Google maps, you'll see that the coastal areas of China are full of net cages. That means most of the fish we consume is artificially bred. We aren't actually consuming that many natural resources, and this is a new wealth created by the release of productivity. Surely, I advocate a society of economy instead of luxury. As you know, Norway is a highly

developed country. But what impresses me the most is that Norwegians live in small houses and drive small cars. Employees at our field office in Norway cannot afford to buy their own cars. So, when I go to Norway, I take a train to visit our field office. This shows that a wealthy country can also be economical. There is an abundance of wealth, but people can still live in a frugal way. In that way, we can avoid consuming too many resources. On the contrary, we will be more capable of creating resources. So I don't think a war is possible.

Tian: You not just mentioned lifelong learning and you also mentioned how society can continue to improve. Now I have a question for Ms. Chen.

Catherine Chen: Well, I think all three of you are expressing a very long-term view, looking out over the next 30 years and beyond. I will only talk about what I envision for the next three to five years. Technology will lead us to a better life. What I most expect is that Huawei, Nokia, Ericsson, Vodafone, and China Mobile will work together, and deploy 5G as soon as possible. The other day, my son went to the US to watch some NBA matches. He supports the Warriors and I support the Canada Raptors. So, when a 5G network is deployed, we can watch the basketball together, even if he is in the US and I'm in China.

Tian: It's an interesting world, isn't it? It's a bigger

world than many people imagined. Good job.

George Gilder: It's no bigger than Ren's universe in a cup of coffee. I think we get a sense of his visionary horizons when he discourses AI. I don't think any other corporate leader in the world could give such a sophisticated and wide ranging analysis of this absolutely central theme of technological development. And that's why the United States has to come to terms with Huawei. It's a resource for the world. It's not a trivial problem of backdoors and security patches.

Tian: You really sound like quite a fan of Huawei.

George Gilder: Yes.

Tian: Mr. Negroponte?

Nicholas Negroponte: Well your description is certainly poetic among other things, which is very important. I would like to go back to your initial question about lifelong learning, and I would like to just remind people that learning is what you do for yourself and education is what people do for you. Let me just separate the two. And if you look at the best education in the world, it falls in two very distinct groups. There is the group, which is characterized by Finland, Sweden, and Norway, where students do very well, but there are no tests, shorter hours per day, shorter days per year, and no competition at all. So, the kids do very well. And then, there is the

other method. As you connect kids and bring this connectivity to very remote places, thanks to Huawei, it's amazing what kids can do.

I'll bore you with one experiment we did. We went to two villages in Ethiopia that had no electricity. No adult had ever seen a word, a written word. Then we put in the village a number of tablets equal to the number of kids, with no human beings and no instructions. Then we left. But one exception is an adult went the day before and showed another adult how to put the solar panels outdoors instead of indoors. That was it. We could monitor this remotely. Within two hours, the kids found the on-off switch, which is pretty hard because they had never seen on-off switches in their lives. Within a week, they were singing ABC songs. Within two weeks, they were using 50 apps per day for seven hours per day. That's how long the battery lasted. Six months later, they hacked Android. And today they speak, read, and write fluent English. No pill and no teacher. And it's very important that you can do a great deal of something. I want to advocate that's the way to do with anybody. But it's amazing what kids can do, and we underestimate them all the time.

13 Tian: Finally, you agree with Professor Negroponte on something, Mr. Gilder. OK. But there's one thing I

also want to ask you about. You've talked about the potential beauty of a world in which everyone can work together and overcome this current bump, but a lot of people that I have been talking to have real concerns about whether their children's generation is going to enjoy the kind of life you guys have been enjoying over the decades, which is that you see your life going up, getting better; life is getting better all the time. But maybe the next generation, some are concerned, is not going to be as beautiful as that. Mr. Negroponte, you've been working with kids a lot. \$100 laptops for them to go into the digital world. What do you think? It's actually a question of optimism or a little bit of pessimism.

Nicholas Negroponte: Right. In full disclosure, I was born very lucky. My parents were rich, and their parents were rich. Everybody went to college; they went all over the world. I had been to 10 countries by the time I was six years old. I didn't think of that as a privilege. None of my brothers went into business. They all went into the civil service or academia, and a couple of them are artists. Our measure was not the same measure you're talking about. Very often, we take these measures simply as the measure of economic growth. But after that economic growth, you have a purpose, and you die unhappy if you didn't have a good purpose. You look back on your life and say, "What was that all about?"

But some people don't have that question, because they have a purpose and they're bound to have it. But if you're struggling the whole time, it's harder. So, I think that when I hear that young people won't have the same opportunities, I say to myself, well, you know, I don't think that's necessarily true because they do have something we didn't have. It didn't matter if you were rich or poor; there was a belief that you had to work for a certain period of time; and probably hate your work, as a lawyer, as a banker, at a hedge fund. I mean, hedge funds – what an empty life that is! Then at the end, you start doing something with the rest of your life, and something happens. I think young people have learned about how to be more integrated. I see many, many young people who have mixed money and meaning. I think that's the key.

Tian: Mr. Ren, do you think that our future generations will feel that they are always growing and their lives are becoming better, just like what you have experienced in your life?

Ren: What is happiness? We must be clear about this. I think future generations will always be better than the previous ones. We shouldn't be always pessimistic about the kids of today. Maybe they haven't lived through the difficulties we lived through, but they are quick learners and they are quick to absorb new knowledge. Just as

professor Negroponte said, if poor kids can also receive proper education, then mankind will be more able to generate more wealth and lift itself out of poverty, and the world will be a better place to live. So, I feel very positive about the future, and I believe the future generations will definitely be better than the previous ones. The current generations are definitely better than the generations 5,000 years ago, right? All of today's concerns will be resolved in 2,000 years.

George Gilder: It's a foolish indulgence of rich people to believe the future will be worse than the past. If you look at the history of China over the last 50 years, of course, every generation has had vastly more opportunities than the previous generation. All around the world, equality has increased because of poor people becoming rich everywhere. It's just in America with our climate cranks and weather bores, teeming with catastrophe theories, that we imagine the future will be worse. But if you live in the world and have some sense of history, you see opportunities opening as wide as Huawei's visions.

Tian: Now, let me open the floor. It seems I've been taking advantage of this conversation on the stage so much. But I know there are a lot of people who are smarter than me sitting in the audience and they have more fascinating questions than the ones I just asked. But no pressure, by the way. Let me turn to

our audience, which I understand is made up of the media, people coming from think tanks, friends of Huawei and business partners of Huawei, and those interested in the latest developments of technology. If any of you have questions, raise your hand, and the staff will bring you the microphone. I will give equal opportunities, okay?

14 I have two questions, one is for Mr. Ren and one is for Professor Negroponte.

My first question is for Mr. Ren: I've been making videos that talk about Huawei a little bit and try to get the discussion to be more fair, especially with the American public. Will Huawei focus more on the relationship with the American people, or more on the relationship with the American government, or both or neither? And which is the most important?

The next question is for Mr. Negroponte: We know that America has an open capitalist system and we know China has a capitalist system governed by the government. But now, we are starting to see that America may be turning away technologies that are the best. So, what happens in a situation when the entity starts to shun or turn down the best technologies?

Ren: Well, we focus on communication with both the

American people and the American government. No matter whether it is an individual or an organization that makes a wrong decision, it is only for a short period of time in the grand scheme of things. Generally speaking, most of the decisions the US made have been correct. During World War II, the US sacrificed a lot, and in the recent decades, they have contributed significantly to social development and globalization. And the American people work hard, they study hard, and they have contributed a lot of advanced theories and accumulated impressive wealth. This has all been of great help to us. For the time being, I cannot go to the US, but that doesn't mean our future generations also cannot go to the US. Maybe China and the US will share 8G? Till then, it may not be 5G or 6G. It may be 8G, 9G, or 100G. I think eventually we will be able to serve the American people.

Nicholas Negroponte: This G stuff is a little overrated. I think the answer to your question is perhaps best because whatever is closing off now, we just have to stop that. 27% of MIT students come from Asia, and I don't know the exact number, but I'm willing to guess over 80% of them come from China. If you count the Chinese Americans who are born in the United States, both parents are Chinese, this number goes up to perhaps 25% or 30%.

So, we have enormous numbers. If you look at the media lab, 60% are foreign students. When I mention that, people often say, "Wait a minute, you're training our competition." No, we're elevating the whole world. It's so old fashioned to think if you have something, I don't. You're going to take my thing, and so you have it and I don't. Unfortunately, President Trump thinks that way. He doesn't think in a way that accepts that we can both have it and this can elevate us both. And training foreign students is so incredibly important.

I made a mistake 20 years ago. I thought the Internet would make people more integrated. I thought we would get rid of the importance of countries and would get rid of nationalism. And I look around now and it's gotten worse, not better. So I was wrong.

The only thing I can suggest now is intermarriage. Persuade your kids to marry somebody who is not Chinese and that will help going forward.

Tian: That's a social issue. We're going to discuss that a little bit later.

15 I have a question for Mr. Ren. You mentioned a decrease of 30 billion US dollars in comparison to Huawei's plan. What's your specific plan for the future? We have seen that Huawei's submarine cable

business went up for sale. Will Huawei put more businesses up for sale in the future? In the next one or two years, what measures will you take to alleviate the pressure you're under?

Ren: There will not be more spin-offs or businesses for sale. The submarine cable business was actually quite successful. We didn't sell it because we were affected by the recent situation. In fact, we have been planning to sell it for a long time, because it is somewhat irrelevant to our strategic business. There will be no need for other spin-offs.

However, we might shrink our business and then relocate the employees who might be made redundant to our strategic business. This will help our strategic business to grow even better and faster. Huawei will not have massive layoffs, but we have been restructuring our business.

I'll give you an example. More than two years ago, we restructured our carrier software business, which had up to 20,000 employees. We spent nearly 10 billion US dollars in this business without producing anything compelling. Therefore, we decided to shut the business down. I went to HR and quietly asked them to increase these employees' salaries before relocating them. However, it turned out that they happily went to the frontline even before they got the raise. How have our

consumer and cloud businesses grown so fast? I think a lot of credit should go to these people. They brought with them experience and achieved extraordinary things.

It's now been two years since the restructuring, and I recently checked up on the progress of these employees. It wasn't until then that I was told they had moved to strategic business departments before they received their raises. They chose to do something big in their new positions. I think their spirit deserves commendation. The department proposed that they roll out a red carpet for 10,000 employees. They told me the red carpet couldn't accommodate 10,000 people and adjusted the number to 3,000 instead, and I agreed. They made themselves medals and I delivered a speech. These medals were not fancy, but Eric Xu said they were valued a lot by the employees because my speech had given these medals meaning.

We cut such a large department two years ago, but that hasn't caused any fuss from inside or outside the company. Actually, we started restructuring long ago for many businesses.

16 I am a professor at the Harbin Institute of Technology and I used to work at MIT. I have great concerns regarding the research efforts that Huawei proposes for the future, especially now in terms of the disputed moment that Professor Negroponte mentioned. How

is Huawei going to address the issue of basic research, which you also mentioned is an important ingredient for the future creation of knowledge? Also, how will you deal with the issues with creativity that exist in China in order to support this basic research effort?

Ren: I think we'll always be willing to work with scientists and universities. We follow the US *Bayh-Dole Act* when working with universities, meaning that when we fund the research of professors or universities, we don't go after their achievements. Academic achievements belong to universities and their professors. We don't usually add our names to their papers. It's okay if certain universities don't work with us right now. There are still many other universities out there. 5G is very much overhyped around the world at the moment. Some people even think that 5G is like an atomic bomb. In fact, the key 5G technology was inspired by a mathematics paper published by a Turkish professor in 2007.

There are numerous universities around the world, so it is not a big issue if some choose not to work with us. I believe there will always be talented people that we can work with. We will not give up on what we're committed to because of short-term setbacks.

17

I would like to talk about China and innovation. How dependent has China's research system been on global

innovation networks over the last decade? Will China still be able to produce cutting-edge innovation, if transfer-border collaboration is substantially reduced?

Ren: Mass innovation seems to be booming in China, but I think most of the innovation activities focus on application, and are based on the outcomes of innovation on the global platform. Without the global platform, I believe China's innovation would experience a huge setback. China must invest more in research into basic theories and work harder to solve issues with basic education, and that will take time.

George Gilder: I just think that China is doing all sorts of innovation and basic research. You know, in collaboration with the professor in Austria Anton Zeilinger, professor Jian-wei Pan, a leading Chinese innovator in cryptographic research, implemented the first use of quantum entanglement in transmitting certain messages absolutely securely across planetary distances over satellite technology. I mean, there's just all these areas where Chinese are performing both basic research and applied research in many different ways.

So, I think all these beliefs about failure of innovation in China are out of date. There are people talking about what it was like 20 years ago, and I just don't think that's the situation today in China.

Tian: Today we heard the great news coming from

Professor Tu Youyou's team. There are new developments in her area because she's a Nobel Prize winner.

18

I have a question for Mr. Ren regarding IPR. We know many US media outlets are saying that Huawei stole a lot of trade secrets and intellectual properties from Western companies in its early years. What's your response to this? Right now, Huawei currently owns more than 80,000 patents. Are you going to use that as a weapon?

Ren: Huawei has been operating in accordance with all relevant ethical standards from its very beginning, even when we were still a small company. It would have been impossible for Huawei to become what it is today if we had not had strong business ethics. Even though several IPR lawsuits are currently going on between Huawei and US companies, we have faith in the fairness of the US legal system. Accusations regarding Huawei's theft of intellectual property are groundless.

We own a very large patent pool, but we will never use it as a weapon against anyone. However, intellectual property is created through hard work, so it is perfectly reasonable for Huawei and all other industry players to sign cross-licensing agreements and pay patent holders for the use of patents. Nevertheless, we would never use our patents as a weapon to hinder the development of society.

19

Tian: I'd like to collect all these questions and then let our panelists answer them together.

Q: I have a question for Mr. Ren. There's a report today that Huawei is expecting a 40 to 60% drop in the international cell phone sales. I just want to confirm whether that's true. And can you also clarify the status of the US suppliers? Are most US suppliers not supplying you at this point? Or are they continuing to because of the 90-day reprieve? What's the status?

Q: Hello, I have a question for Mr. Ren. We know that Huawei is not just a Chinese company, but also a global company. You have established business and offices in over 170 countries around the world and the professor from MIT mentioned that many students that you recruit come from Asian countries. What's your plan to attract global talent?

Q: Previously you mentioned that open collaboration is very important. However, facing the global situation where industry cooperation is interrupted, is it possible for technology companies like Huawei to work with other international giants, as well as science and technology forums and alliances, to explore another development path to drive scientific advances?

Ren: For the first question, did Huawei's smartphone sales in the international market drop by 40%? Yes, it dropped by up to 40%, but it is quickly recovering.

That rate has now dropped to 20%, so the situation is improving.

For the second question, Huawei advocates open collaboration, and that will never change. But the government-led cooperation you asked about is pretty much dependent on governmental dialogues.

Do we have another development path? Well that has never crossed my mind. We believe in only one path, and we will move forward along this path one step at a time. We won't give up even if we suffer setbacks, and will continue to forge ahead until we reach the top.

Another question is about how we can attract global talent. We have more than 40,000 local talent from over 170 countries. I don't know the specific numbers in specific countries, but we do have a rich pool of global talent.

George Gilder: I think there's been a lot of talk about the Internet of Things, but what's really critical now is to create an Internet of Facts, an Internet of Trust, and an Internet of Transactions. And My Life After Google is about how trust can be re-created by using new technical solutions such as blockchain, cryptography, and other advances. Luckily, a whole new generation of technologists are now pioneering these fields. So, many of these political problems tend to dissolve when new technical solutions are presented. And I think Huawei

can contribute vitally to the Internet of Trust, which, at the same time, will make it possible for Huawei to sell its products in the United States again.

20

Tian: You've been talking about open science and global connectivity. Everybody, use one sentence only to describe the biggest takeaway from the coffee with Ren today.

Catherine Chen: We mentioned that Huawei has no backdoors and our products are open, transparent, and trustworthy. But, but, but, this but is more important: But we'll always have our front doors open. We welcome all, including the media, to come and visit us.

George Gilder: I think Huawei is at the epicenter of future technology prospects for the world. How the United States and other countries react to this campaign against Huawei is a kind of Huawei test for people around the world. If they don't pass it, it will signify that the world is taking a very destructive turn. That's demonizing particular companies in the name of vague ideological objections. So, it's the Huawei test and I hope the world meets it.

Nicholas Negroponte: I guess I would end by saying, in going through that test, I would not focus on security and backdoors and whether you're going to interact with

the Chinese government, etc. Leave that out. I think you should focus on the 100,000 papers you published, the amount of research, and just make it known. Because I was at a dinner party and I said "Huawei is a great company" and people say "It is? It does?" The world has to know how much you're doing in science and technology.

Ren: The world relies on open collaboration for shared success.

Tian: That's simple but not simple. Thank you so much. And with that, we're wrapping up our first coffee with Ren. We hope there will be many more coffees to come in the future, during which we can talk and interact and certainly be intellectually stimulating one another.

Thank you and goodbye.



Ren Zhengfei's Interview with Le Point

June 18, 2019 Shenzhen, China

01

Etienne Gernelle: Let's start from your childhood, especially your experience in Guizhou. Today, Huawei is a beautiful, modern company. But I want to learn more about your past.

Ren: I grew up in Zhenning County, Guizhou Province, where I lived throughout my elementary school and until the second year of my middle school. This small town's population is mainly made up of minorities. Today, it has become a tourist destination and the customs of the local people are one of the reasons the town attracts so many tourists. But, back in the old days, we had experienced very impoverished conditions there.

Etienne Gernelle: So you suffered when you were a child?

Ren: Of course, we lived in poverty. But we were very happy then, because we didn't know that French bread was delicious. I never left this small town until I grew up. The area in which my entire life took place wasn't more than 15 kilometers in diameter. We had no comparisons with the outside world, and we didn't have any idea of what happiness should be, so we were quite happy then.

After the second year of my middle school, my father was transferred to Duyun, a central city in another area that mainly had a minority population. I lived there from the third year of middle school to the third year of high school. In my eyes, Duyun was a very modern city,

as it had a two-story building back then. Some older girls from my neighborhood took us to a local small department store, which was when we first saw a two-story building. We felt that it was amazing. Those girls knew more than us and taunted us for our lack of vision. How could we take Duyun as a big city? It was just a little bigger than a small town. After my graduation, I went to college and left Guizhou. I've never lived or worked there since.

Guillaume Grallet: Were there times when you didn't have enough to eat?

Ren: You should ask: Were there times when I had enough to eat? At that time, it was very normal for people not to have enough to eat. We were often starving, and it was rare for us to have a full stomach.

02 Etienne Gernelle: Did you have any idea that you would be in the middle of a geopolitical war after so many years?

Ren: Definitely not. Over all these years, we climbed upstairs step by step, without knowing what the second floor was going to look like. For this reason, I hope the Chinese education can start reforming, so that children in rural areas can envision what the second floor looks like and then climb toward this floor, step by step. We

didn't have well-known mentors to guide us. We didn't have valuable resources to help us. We just kept climbing upstairs until we reached the second floor and were able to see the grand view ourselves. Nowadays, the Internet has helped greatly broaden the horizons of children in rural areas. Looking back on my younger days, children had limited horizons.

03 Guillaume Grallet: Many are interested in your military experience. What was your job in the military?

Ren: I served as an engineer in the military. The first project I joined was in Liaoyang, Northeast China, working to build a synthetic fiber factory that introduced technology from two French companies – Technip and Speichim. It was a quite large and modernized synthetic fiber factory in China then, with a high level of automation. See, this is my photo with a French engineer.

04 Guillaume Grallet: Your daughter is still in Canada. How is this case impacting you personally and how is it impacting Huawei?

Ren: Meng Wanzhou has not committed any crime. Canada's detainment of her is inappropriate. But we believe that Canada is a country ruled by law. If

we present evidence and clarify the case, she will be released. We will wait patiently and go through the legal proceedings.

05 Etienne Gernelle: The whole issue was caused by the fears of certain European countries and the US over the expansion of China. Do you think China is seeking expansion?

Ren: I don't think China has ever sought expansion. China had remained closed-off for several thousand years. It is now reforming and opening up with the main goal of bringing in what's best from other countries. China is going global mainly in terms of commerce and trade, rather than in terms of political influence, and isn't seeking to spread its ideology around the world.

Etienne Gernelle: The ships of the Chinese explorer Zheng He were three times larger than those used by Christopher Columbus. Due to domestic political intervention, Zheng had to turn back halfway during his voyage. As China opens its door and goes out today, will it turn back halfway just like Zheng He?

Ren: The story of Zheng He is quite interesting, but the purposes of Zheng He and Christopher Columbus were not the same. At that time, China assumed itself to be the world's most powerful nation. Zheng visited many

countries along the way, bringing them many gifts. Commerce wasn't his goal. Unlike Zheng, Columbus traveled across the Atlantic Ocean in search of treasure like gold and spices. Zheng didn't have a clear goal as a driving force, so he stopped halfway. Nowadays, China has clear goals for its reform and opening-up, which are to achieve economic prosperity and integrate more into the rest of the world. So China's reform and opening-up will not stop halfway.

Columbus' goal was clear: to search for treasure. This was his ongoing driving force, and he ultimately did find treasure. About 3.5 million ships sank during their trips between Europe and Asia. That was kind of economic globalization, which started several hundred years ago. Europeans hoping to find treasure and expand commerce have spread their languages – English, French, Portuguese, and Spanish – to almost all corners of the earth. These people have also spread their culture, philosophies, and industrialization throughout the world. Also, many missionaries have traveled all over the world to preach their religions, so there are Christians and Catholics everywhere. They have done this in hopes that the locals would identify with their ideology.

I'm deeply moved by the dedicated spirit of those European businesspersons. I also have great respect for European missionaries because they built churches

in Africa's primitive forests and the Sahara Desert. Numerous missionaries crossed the oceans on small, shabby ships. When the ships finally arrived on the African coast, only several out of 100 missionaries survived. The death toll was even higher during their journey through forests. When they finally arrived at a local village, they stayed there, built a small church, and began preaching. They would never go back to their home countries because the journey back through the forest and across the ocean could mean death. If it weren't for the efforts of the missionaries spreading their culture in Africa over the past centuries, languages like English, French, and Portuguese wouldn't have been widely used to benefit this continent. Even now, developing a market in Africa is quite challenging. Yet when European businesspersons explored global markets and European missionaries carried out their missions back then, they faced even more difficulties than their successors do today.

I once visited a very remote village in China. It's called Pu'er Village, and it belongs to the Lahu ethnic minority group. About 100 to 200 years ago, missionaries brought a guitar to this village. This reshaped the local culture and turned the locals into music fans. I shot this video of the village last April. The missionaries have advanced the local culture and lifted this underdeveloped village to a new level. I can send this video to you if you want.

Etienne Gernelle: This is great. Missionaries brought a guitar to this place, while Chinese people are bringing 5G to the world.

Ren: It is what will happen next. Then, musicians all over the world can play the same song at the same time through ultra-low latency 5G networks.

06

Guillaume Grallet: Huawei is an amazing company, which has grown so rapidly in such a short time. It has a decentralized authority system but is still based on collective decision-making. If I may ask, what gets you out of bed in the morning?

Ren: I want breakfast so I can't sleep any more. We adopt a system of delegating authority level by level but with centralized oversight. It gives people who can hear the "gunfire" the authority to call for resources. We also account for the costs of these resources.

07

Etienne Gernelle: The West is now scared of China. You said China has never sought expansion, and this has been proved true in history. Do you understand the anxiety when the West is discussing China?

Ren: The US is exaggerating the geopolitical influence of China. Such exaggeration, coupled with the fact that many Westerners have never come to China, has

resulted in misunderstandings. China isn't capable of deploying warships anywhere around the world like the US does. Personally, I think China is building a defense system. China is scared of the US, not Europe.

Etienne Gernelle: Why do you think China is scared of the US?

Ren: The US wants to rule the world, whereas European countries maintain political diversity and aren't aggressive. European countries are keen on making more money while Chinese people want to buy more luxury goods from Europe. We Chinese welcome European companies to make money in our country; otherwise we have to fly to Paris to go shopping. China has been lowering tariffs on luxury goods, which is a sign of welcome for European goods. China and Europe complement each other economically. China needs Europe and vice versa.

Thanks to China's "Belt and Road" initiative, European products can come to China, and China can export products to Europe. If we run out of fuel halfway, we can refuel in the Middle East or Central Asia, which are our energy hubs. As a result, an economic block will form to connect Europe, the Middle East, Central Asia, and the Far East. If China builds a free trade zone with Japan and South Korea, then the economic block will be much larger than the US in terms of GDP. When this happens, the

US will find it hard to rule the world, and that's why they don't want to see countries in this block working together.

08 Guillaume Grallet: You mentioned at the meeting yesterday that Huawei is ready to sign "no-backdoor, no-spy" agreements with other countries. Is Huawei ready to sign such an agreement with France?

Ren: Sure, anytime.

Guillaume Grallet: Have you ever met President Trump before?

Ren: Why should I meet him? I would like to meet President Macron.

Etienne Gernelle: The Chinese government has issued the National Intelligence Law, which requires companies to cooperate in national intelligence work. Considering this law, how can you sign such an agreement with France?

Ren: We can try [if you don't believe it's possible]. We can sign such an agreement with French companies, and we can also ask the Chinese government to sign such an agreement with the French government.

09 Guillaume Grallet: Can you describe your own or Huawei's relations with the Chinese government?

Some think that Huawei has developed so rapidly because of support from the Chinese government.

Ren: We are subject to Chinese laws in China and pay taxes to the Chinese government in compliance with the law. As a company, we make independent business decisions. We haven't received even a penny of capital from the Chinese government. Our annual reports were audited by KPMG. Here is our 2018 Annual Report.

10

Etienne Gernelle: Apart from capital, if the central government requested you to submit the information you have obtained from your routers or network equipment, how could you decline such a request?

Ren: First, we are always responsible for our customers. Second, the Chinese government has never asked us to do that.

We only sell customers bare equipment, like water pipes and taps. Device products are like taps and connectivity equipment is like water pipes. The stuff flowing through them, whether water or oil, is decided by information systems. The systems are controlled by carriers themselves, not us. So we have no access to data, and we promise we have never installed backdoors. I hope you can interview US companies and ask them to sign the same "no-spy" agreements with the French

government as Huawei.

Etienne Gernelle: You don't think Google or Facebook can make that promise?

Ren: I don't know.

Etienne Gernelle: How about Cisco?

Ren: I have no idea either.

11

Guillaume Grallet: Have you ever wanted to access customer or user information for business purposes?

Ren: Why would I do that?

Guillaume Grallet: Because information is as important as oil in the 21st century.

Ren: Oil is of no use to us. What we need is petroleum, and we can buy that from gas stations. Similarly, customer information is of no use to us. What we find valuable is the information that is made public on the Internet and across society.

12

Guillaume Grallet: What is the key to Huawei's success and what is the biggest difficulty you have faced?

Ren: The key to Huawei's success is our dedication to creating value for customers. That's why our customers trust us. Even in such bad circumstances as we are seeing

today, our customers are still buying 5G equipment from us. This is an example of customer trust in Huawei. The US is the most powerful country in the world. Yet, despite its harsh attacks on Huawei, customers are still buying products from us. This is the result of our years of commitment to customers and creating value for them.

What I worry about most is that we are too successful and our employees may become too complacent to take hardship positions or go to hardship regions. Now, President Trump has energized us and helped remove this complacency from our employees.

13 Guillaume Grallet: Can you tell us about your Hongmeng OS?

Ren: We have thousands of printed circuit boards (PCBs) and each one must be supported by an operating system (OS). Huawei's Hongmeng OS ensures a fixed latency. The end-to-end latency is 5 milliseconds or less, with the possibility of being reduced to sub-milliseconds. With such a low latency, the Hongmeng OS is useful for IoT-enabled automated production. Take autonomous driving cars as an example. The gears within a car rotate with a latency of a few milliseconds. If the latency is not fixed, the gears can miss each other and will be unable to work together properly. The purpose of our OS is to enable a world where everything is connected and

intelligent.

Etienne Gernelle: Does this mean that the Hongmeng OS will be faster than Android or iOS once it is released?

Ren: We haven't done a comparison yet. It's likely.

Etienne Gernelle: Is this a business argument?

Ren: It's a technical argument rather than a business one. Compared with Apple's iOS and Google's Android, our weakness is that we have no ecosystem around our OS. It's just a technical system that operates telecommunications networks.

Etienne Gernelle: There are two parts to the US-Huawei issue. The first is about business. The US government wants to stop Huawei from exporting its technology and equipment to their country. The second part is about suppliers. It's about European and American suppliers selling semiconductors to Huawei. If both parts of this issue went wrong, which one would have a greater impact?

Ren: First, the Hongmeng OS is not designed for phones as everyone thinks. We didn't develop the OS to replace Google's OS. If Google does not open its high-end OS to Huawei, will we start building an ecosystem around Hongmeng? We don't have a clear plan yet.

Etienne Gernelle: Do you mean Plan B?

Ren: No. The operating system is essential for networks to run properly. It was originally designed for telecommunications networks.

Second, if the US or some other countries choose not to buy our products, we won't feel much of an impact. Over the past 30 years, many customers have chosen not to buy our products. After the huge amount of publicity Mr. Trump has given us, there are actually more customers buying our products. That's because this publicity has had a huge influence. Our own publicity might not work so well, because some customers might not believe what we say. However, when Trump says we are good, our customers believe this must be true.

If some countries choose not to sell components to us, both sides stand to lose. Our sales might shrink, but so will theirs. Since Huawei is not a public company, we won't be greatly affected if our business results suffer a little. But if their companies release disappointing financial statements in July, their stock prices will fall. So both sides will be affected.

14 Etienne Gernelle: Will Huawei consider forging alliances with some European semiconductor companies, because you mentioned the "Belt and Road" initiative? Is it a feasible plan?

Ren: Definitely. As you can see, we are purchasing more components from STMicroelectronics.

Etienne Gernelle: If the friction with the US continues, will you forge alliances with some European companies?

Ren: Yes. We will buy more products from European companies.

15

Guillaume Grallet: My uncle wants to buy a Huawei phone. What suggestion do you think I should give him? Should I tell him to buy one right now or wait and see how the US sanctions play out?

Ren: There's no need to wait. In terms of photography, Huawei's phones are the best in the world and we have many other exclusive functions to offer.

16

Guillaume Grallet: As you mentioned Huawei wants to build an ecosystem. How long will it take to build such an ecosystem?

Ren: It will take many years.

Guillaume Grallet: China has many powerful software companies, and Huawei can also forge alliances with them. To be frank, do you worry that Huawei's position will be weakened?

Ren: I think our company may fall a little bit from the top in the short term. But when our center of gravity becomes lower, we will be able to stand more firmly. When we climb the mountain again, we might reach an even higher point with more strengths than before.

17

Guillaume Grallet: If Orange and Bouygues sign 5G contracts with Huawei, will you have any problem with equipment supply?

Ren: Of course there won't be any problems with supply. Besides, our 5G equipment is the best in the world. No other companies will be able to catch up within two to three years. Supply won't be a problem. Our production lines are working flat out these days.

18

Etienne Gernelle: Some people might think that European carriers are not rushing to roll out 5G. It seems that the only profitable 5G application is autonomous driving cars. Other applications seem to be less profitable. Is this true?

Ren: I don't think so. Why did Europe develop earlier than China? It is because Europe developed its rail and maritime transportation systems centuries ago, while China was still mainly relying on horse-drawn carriages for transportation. This was slower than trains and

could carry far less than ships. So European countries were among the first to develop their industry. When information transmission speeds increase, we will see incredible economic growth. 5G is at least 10 times faster than 4G, and faster speeds will drive rapid economic and cultural development.

Etienne Gernelle: This seems like more of an argument that concerns governments. Carriers invest their own money, but they will not be able to see returns right away.

Ren: That's not true. If carriers charge the same rates as they do with 4G when they switch to 5G, their profitability will increase significantly.

Etienne Gernelle: Why is that?

Ren: The cost per bit of 5G is one-tenth that of 4G, as is energy consumption per bit. While consuming the same amount of energy, 5G is 10,000 times faster than 2G. Advanced products should not be costly and should provide greater value. When 5G becomes widely used, you will probably find that the US is falling behind in this area.

19

Guillaume Grallet: During my visit to Huawei's campus at Dongguan's Songshan Lake, I found you really appreciate European architecture. Do you

think Europe should speak as one voice in regards to telecommunications?

Ren: Let me start by saying that the buildings on our Songshan Lake campus were designed by a renowned Japanese architect. He got his bachelor's, master's, and PhD in the US, yet his English is not that good. But he's a genius. He's great at drawing and designed our entire campus at Songshan Lake. That's how the campus came to look the way it does today; it's not something we planned ourselves.

20

Etienne Gernelle: Former US Secretary of State Henry Kissinger asked a famous question, "Who do I call if I want to speak to Europe?" Who do you think can speak on behalf of Europe: Emmanuel Macron, Angela Merkel, or someone else?

Ren: I don't think there's anyone who should speak on behalf of Europe. Every country has its own interests and thinks from its own perspective. The EU just needs to strike a balance between all of its member states.

It makes perfect sense to locate the headquarters of the EU in Belgium. If the EU had been headquartered in Paris, then France would have come to represent Europe. If it had been headquartered in Berlin, then Germany would.

All European countries are seeking their own economic development rather than trying to dominate the world. Therefore, I believe Europe is a very valuable partner.

21

Guillaume Grallet: You just said Europe has very advanced rail and maritime transportation systems, but many people say Europe has lagged behind in these areas.

Ren: What I was saying was why Europe was able to gain global prominence more than 300 years ago. I wasn't saying that Europe has an advanced rail system today. Back then, Europe gained global prominence because of its advanced rail and maritime transportation systems, while China was backward because we still used horse-drawn carriages for transportation.

Guillaume Grallet: An AI researcher said Europe has been erased from the technological landscape. What's your view on this?

Ren: I don't agree with this. Europe was the birthplace of the Industrial Revolution and has the "pearls" necessary to make a difference. It just needs a string to put those pearls together and make them into necklaces. Africa doesn't yet have these same pearls needed to make such necklaces; their pearls are in mineral resources.

What I mean is that Europe has a very strong foundation in technology. Mathematics is the foundation of artificial intelligence, and the world's top two countries for mathematics are France and Russia.

Guillaume Grallet: France has a wealth of researchers, but no French companies have become giants over the past 40 years, like Huawei, Google, and Alibaba have. What's your view on this?

Ren: The pearls are still there, but they can't become necklaces by themselves. This is where entrepreneurs and the government come in to play. We use software from Dassault Systèmes in our production systems. Europe is still great. You can visit our production lines. After returning to France, you can interview Dassault Systèmes and ask them about their successful collaboration with Huawei.

But I do believe there is one thing that needs improvement in the business environment in France: Workers are being given too much protection. As a result, many entrepreneurs don't dare to hire anyone. That's why it's difficult to build large companies that can go global.

22

Etienne Gernelle: Is the conflict between Huawei and President Trump about technology or about business?

Ren: I don't know what's on President Trump's mind. I assume the conflict is mostly political. The US doesn't possess many communications technologies like 5G and optical switching. So there is no competition between Huawei and the US in terms of technology. In addition, no US companies sell telecom equipment similar to that provided by Huawei, which means there is no competition in products. We really have no idea why the US government is targeting Huawei. Nevertheless, what the US has done could help Ericsson and Nokia, so that means they are essentially helping Europe.

We are happy about that. Huawei's ideal is to serve humanity, but we don't necessarily have to do it ourselves. This ideal can also be realized if humanity is served by Ericsson and Nokia.

23 Guillaume Grallet: None of Huawei's major competitors, like Ericsson, Nokia, and Samsung, are US companies. What mistakes have Lucent and Nortel made over the past 15 years?

Ren: I don't know what mistakes they made, but I do know we have made a lot of mistakes ourselves. I am actually criticized every day. Our Blue Team has even published an article online listing the 10 mistakes that I have made. We are constantly working to correct our mistakes.

We are glad that Ericsson and Nokia are able to serve humanity along with Huawei in the 5G era. That means countries that exclude Huawei will still be able to use 5G. Like the appreciation I have shown to Apple, I also appreciate Ericsson and Nokia. Technically speaking, Ericsson and Nokia are our teachers. Switches were developed by Ericsson more than 100 years ago. Nokia was originally engaged in rubber and wood products, and produced the world's best mobile phones in the 20th century. They are both our teachers, and we respect them.

24 Etienne Gernelle: There are several black swans in the lake outside. Is this because you predicted that Trump would cause trouble to you?

Ren: I really don't like those black swans, and they are not kept by me. They always eat the flowers and grass on the lakeside, and destroy our garden, but I want those plants to flourish. I want the swans to eat the fish in the lake, but they always eat grass.

Etienne Gernelle: There is a book about black swans that was published before the financial crisis in 2007.

Ren: Yes, that's why some people put the black swans in the lake. The swans even lay eggs and have cygnets, and we cannot get rid of them. If I find out who put those swans in the lake, I'll ask them to feed the swans with

vegetables after lunch every day, so that the swans will stop eating our flowers and grass.

25

Etienne Gernelle: An economist once wrote a book, saying that China had been the world's largest economy until the early 19th century. Do you think the current rapid growth of the Chinese economy is only a return to its normal state?

Ren: Over the past three to four decades, China has made huge progress. However, we still need to improve the quality of our development in order to make more contributions to humanity. In this regard, we still have a lot to do, and European countries, Japan, and the US are still ahead of us. It's true that China has a huge GDP in total, but much of this is generated from low and mid-end goods and China's per-capita GDP is still low.

I know that you've visited Guizhou. You must have seen that people in many remote places there are still very poor. The central government has been emphasizing that we must lift more people out of poverty. Governments at all levels have been striving to facilitate development and alleviate poverty. Helping people rise out of poverty is the only way to make them feel reassured and live and work at ease. When people get richer, they will focus on work and development, and will not bother engaging in the color revolution that the US dreams of.

You may not have been to Tibet. I think Tibet has better traffic conditions than Shenzhen. It has great infrastructure, and its economy and people's lives have significantly improved. Under such circumstances, I do not believe there will be chaos. The Chinese government has put a lot of efforts into solving poverty problems in this country. That is the right approach. On the contrary, the US hasn't properly dealt with this issue. They used to relate poverty to race, thinking "White people were rich and black people were poor." But today, this is no longer the case. Many of the poor population in the US are now white. With the current trade war, the tariffs have actually increased the costs of daily consumer goods in the US, putting heavier burdens on the American people.

We all know that China's exports are already at the lowest possible prices. If these prices were further reduced, many companies would go bankrupt. Therefore, the prices didn't change after the US imposed tariffs. As a result, it is the American people that pay for the tariffs. If the US government cannot reduce poverty among the American people, there will be chaos. In contrast, it is absolutely correct that the Chinese government is determined to eliminate poverty.

26

Guillaume Grallet: I've noticed that Huawei has adopted a unique governance system with the separation of

powers. Which do you think can get people out of poverty: the socialist system or the capitalist system?

Ren: I think Deng Xiaoping designed the foundation of China's system when he adopted the reform and opening-up policy, and that is "socialism with a market economy". Socialism emphasizes the concept of fairness, which was mistakenly understood as equalitarianism in China in the past. In fact, fairness in a socialist society means more pay for more work. In other words, people who contribute more should receive more. For example, suppose you and I are carrying bags at the dock, and you can carry three bags every time as you are tall and strong, while I can only carry one because I'm old. In this scenario, your income should be three times as much as mine. But however strong you are, you can never carry five bags at once. Physical differences between people are not without limits. However, in a capitalist system, there are no limits for income gaps. You may have 10 billion US dollars while I only have 100,000. If our profit margins are both 10%, you will earn a profit of 1 billion US dollars, while I can only earn 10,000. So huge wealth gaps are created due to capital leverages, rather than differences in labor.

Deng Xiaoping thought that the basic principle of China's socialist society should be more rewards for more work, but we need to take the path of a market

economy to achieve that. A market economy will surely have capital leverages, so China must ensure checks and balances between capital and labor. Who should be responsible for this? The government. They should make reforms to maintain the balance. When China started its reforms, its economic foundation was extremely poor. What was the first thing to be changed? It was the value distribution system. You could try to imagine how many conflicts and struggles would explode into life when you attempted to change the value distribution system for such a large population. Therefore, China needed a strong government to take control, preventing the country from falling into chaos. So Deng Xiaoping proposed the Four Cardinal Principles, insisting on reform, opening-up, and development while preventing chaos. Only a strong government could do that and control the direction and pace of reforms. When governments at lower levels were too slow or came to impasses in reforms, Deng Xiaoping said they could "be braver and walk faster". When reforms were too fast and conflicts arose, he just guided them to go more slowly while following the Four Principles. That is how China has transformed over the last 30 years.

Where does the national capital come from? It's from the people. How can the government give the money back to the people? This can be done by building infrastructure like high-speed railways and highways.

Can the government earn money by building high-speed railways in Tibet? You can think about that. Capitalists wouldn't invest in such projects. China is building highways, high-speed railways, and other infrastructure on a large scale and at a high speed. This is being driven by the government and it's the people who benefit. These efforts have helped to balance the conflicts between different strata. Therefore, China did not experience the color revolution that the US dreamed of.

27 **Etienne Gernelle: I think politics plays an important role in Huawei's business. When I came here via Hong Kong, I saw the demonstrations. The world is gradually splitting. Trump doesn't believe in China or China's system. At the same time, the Chinese people don't believe in Western media. Will this lead to a divided world?**

Ren: I don't engage in politics, so I don't know. You can ask me technical questions instead.

28 **Guillaume Grallet: Just now you mentioned education. What do you think children should learn? General knowledge or mathematics and IT?**

Ren: There are now several systems of education. In Northern Europe, there are almost no tests, so children

can grow up with joy. Children in these countries can determine their development direction when they find out what they like. Although the Nordic countries are relatively small, many big companies, including Ericsson, Nokia, ABB, and Equinor ASA are based there. This is proof that their education system is successful. China is such a large country that it is really difficult to determine who is talented. Therefore, China has set different levels of tests. These tests can turn the children into "little nerds" and they lose their creativity. But a small number of those who make it through are geniuses.

Etienne Gernelle: What do you recommend parents teach their children? Something like programming or mathematics?

Ren: I think the most important thing is to give full play to a child's talents. We don't know in which areas children will be able to develop the best. So children should discover their own talents and set out on the right path early. In this way, children can grow effectively. Unfortunately, some parents don't know their children at all. To give you an example, this lady's husband majored in electronics, but it wasn't until he turned 50 that he realized he was a talented artist. You may go upstairs later and take a look at a painting he donated to the company. It is a copy of Napoleon's coronation at the Louvre. It was painted shortly after he started to learn painting. If

he could have leveraged this talent from an early age, he might have grown into a famous painter. Therefore, children must find their best direction of growth, and move in that direction to avoid wasting their energy.

Etienne Gernelle: It might have been quite late when you discovered your talents. You majored in architecture right? But you became successful anyway.

Ren: At that time, I lived in a remote, mountainous region. I had no idea what the wider world looked like, and no one gave me any advice on it. So I didn't have the chance to discover my talents when I was young. Now that the Internet is so developed, children have much broader horizons, and they should quickly discover their talents. Therefore, the information society has been a great catalyst for the progress of humanity.

Guillaume Grallet: Are there any writers or philosophers whose books really inspired you?

Ren: There are so many. Socrates, Plato, Confucius, Mencius, and many French philosophers.

Guillaume Grallet: Are there any inventors, scientists, or creators that you particularly admire?

Ren: I admire all of them. Their inventions, big or small, have all represented great contributions to humanity. We cannot use a scale to measure people's contribution to society. Just like rescue and disaster relief, some people

donate a lot of money, while others may donate just one dollar. It doesn't mean that those who have donated more are the greatest. Otherwise, the world would have never given Mother Teresa such amazing recognition. Therefore, when we evaluate a scientist, we should not use a scale to weigh their value. As long as a person has made a contribution to this society, then they are great. It is true that society will not always give you a medal. You could simply make one for yourself by engraving something on a radish, and then hold it to your chest. As long as you are happy, then that's enough. You have not only made a contribution to humanity, but also baptized your soul.

29

Etienne Gernelle: There are now numerous emerging technologies, such as 5G, AI, and quantum computing. Which technology interests you the most?

Ren: First, it depends on how these technologies can create value for the future of humanity. Second, Huawei has limited capabilities and cannot be interested in everything.

30

Etienne Gernelle: Huawei is playing a very important role in 5G, and there is no US rival to compete with Huawei in this regard. Do you think this moment is

similar to when the US found Russia was ahead of them?

Ren: Actually, we were aware of this issue years ago. A balanced world needs three pillars. If there were only China and Europe, the world would be unbalanced. In earlier years, we considered selling our business to Motorola. But when their new chairman took office, he dismissed this acquisition. Later on, we had plans to acquire Motorola, but this acquisition was rejected by the US government. Our aim was to create balance with three pillars. Now, there are only two pillars, which is unstable. This conflict will appear sooner or later.

Etienne Gernelle: What are the two pillars you just mentioned?

Ren: China and Europe

Etienne Gernelle: What do you mean by pillars?

Ren: Here, pillars means industries. This world needs to be shared. If the US does not take any share in this industry, it leads to imbalance, and the world becomes unstable.

Etienne Gernelle: Why does the US want to prevent the spread of Huawei's technology? Do they want to buy some time to develop their own new technology?

Ren: The wheel of time always runs forward. No one can stop it.

31

Etienne Gernelle: It has been a tradition in Silicon Valley that a new king takes the stage after each transformation. IBM, Microsoft, Google, and Facebook have all been the king. When a new king comes to power, the old king steps down. Do you think Huawei has become the new king of the world for the first time?

Ren: I'm not a lion. I'm just a rabbit trying to find a corner to hide in. I can't find a corner right now, and I don't know what to do.

Etienne Gernelle: You don't look like a rabbit.

Ren: But I am much less like a lion.

32

Guillaume Grallet: Huawei was among the first companies to enter the African market. What do you think about future development in this continent?

Ren: Africa and Latin America are the two most recently developed regions. Most natural resources in Europe and Asia have already been developed, but natural resources in Africa are yet to be developed. I think we will see a new wave of development in Africa.

33

Guillaume Grallet: Do you have any particular interest for France? Are there any French architects that you particularly like?

Ren: The building that houses our Beijing Executive Briefing Center was designed by Jean-Marie Charpentier, a French architect. This is the last building he designed.

Guillaume Grallet: You're a frequent visitor to France. Do you like French wine?

Ren: I'm not much for wine, but I do like mathematics in France. Ecole Normale Supérieure is a top university for mathematics. In the future, we will continue to increase our investment in France.

Guillaume Grallet: In what fields will you invest?

Ren: Our investments will mainly focus on R&D.

Guillaume Grallet: Huawei now has five research centers in France, right?

Ren: We will have more and larger research centers there in the future.

Guillaume Grallet: Your France Rep Office now has about 1,000 employees. What will be your total workforce in France?

Ren: I'm not sure about the figure, but I am sure about one thing: The number of scientists we have will increase significantly. As we gradually move toward AI-enabled production, we will not see a significant increase in our workforce, but we will greatly increase our exploration into future new technologies.

34 Guillaume Grallet: Some entrepreneurs in Silicon Valley say that their ambition is to change the world, but you always say that your ambition is to make your company survive. Do you think they overstate their ambition or you are being too humble?

Ren: If we were just 25 years old and we sat down for a cup of coffee, I would be as ambitious as them. Just imagine a guy was sketching a model on a napkin, and several others were talking about the structure. They were talking about starting their own business. This company later became known as Intel. Silicon Valley encourages restlessness, which fits well with young people. If they don't have passion or ambition, they wouldn't be able to succeed. I think I did the same when I was young. Now, I'm an old man. I have encountered many setbacks, and I now talk more sensibly.

Etienne Gernelle: Did you think about all this when you were back in Guizhou?

Ren: No. How could I have thought about this back then? When I was in Guizhou, all I thought about was getting out of my parents' control and studying in another province. When I heard that I could go to another province to study, I was so excited because I had never been out of our county before. I don't think it's a bad thing for young people to be restless. They could

source energy from each other. There could be one to ignite the fire, and the one who ignites the fire can hire the others. I think the restless spirit in Silicon Valley should be advocated.

35

Guillaume Grallet: You just said that in the era of AI, there may be less employment. Do you think everyone will still be able to get jobs in 10 to 20 years?

Ren: Let's take a look at an example. When we designed base stations in Africa in the past, an engineer could design at most 4 base stations a day. However, with the help of AI, an engineer is now able to design 1,200 base stations a day. I once asked an engineer why the number was specifically 1,200. He said, "The contract contains only 1,200 base stations in total." This increase in productivity will help improve the quality of our lives.

With the help of AI, less people will be needed to create wealth. At the same time, more wealth will be created to support more people. If someone considers working to be necessary, they would study hard and then get a job. This will also promote the development of society. Income differences between people who work and who don't work will also be significant. If you visit our production lines, you will find that there are barely any workers.

Guillaume Grallet: I think everybody would still like to work. But how could everyone get a job? Lifelong learning or minimum salary?

Ren: The fears we have about AI may be similar to the fears people had about textile machines in the past. When textile machines were first introduced, some people even tried to destroy them. We are facing a similar situation now. How can we adapt ourselves to new technologies in the future? I don't know. It's still an unsolved issue.

Guillaume Grallet: Could a good solution be to impose some restrictions on AI applications?

Ren: I don't know. Currently, AI is mainly used to improve productivity, and it is not used in any fields that involve emotion.

Guillaume Grallet: So you think some jobs can never be replaced by robots?

Ren: Yes, of course. There are many jobs that can't be replaced by AI. For example, AI can't taste coffee. If you were sick and felt bad, and a robot came in and gave you an injection without any emotion, wouldn't you feel cold? In such situations, humanity is needed, and the patient's experience matters.

36**Guillaume Grallet: What do you think Huawei will become in 30 years?**

Ren: I don't know whether Huawei will still exist in 30 years, so I can't predict what will happen. If possible, I hope you can visit us and have another interview in three years.

Guillaume Grallet: If President Trump wanted to visit Huawei, would you welcome him?

Ren: Of course I would. We could discuss how the world should open and collaborate for shared success. Maybe this would change his mindset.

(Video interview)

37**Guillaume Grallet: President Trump said Huawei was an enemy of the US. How would you respond to that?**

Ren: First, Huawei has been promoting happiness and prosperity for humanity. How could Huawei be an enemy? Over the past 30 years, we've been staying in the front line to serve humanity. Huawei can always be found anywhere at any time, be it in war-torn or disease-ridden regions, or during natural disasters like the nuclear leakage in Japan. How could Huawei be an enemy? President Trump's thoughts about Huawei could be wrong.

38**Guillaume Grallet: What is Huawei's goal? Satisfying employees, governments, or the world?**

Ren: We want to satisfy society and people, because our ultimate goal is to serve our customers. Who are our customers? 6.5 billion people, and possibly more in the future for more IoT connections. Therefore, we are committed to creating value for customers and ensuring we satisfy people's needs.

39**Guillaume Grallet: Does Huawei have any plans in France?**

Ren: France is a country with a great investment environment. France is one of the most advanced countries in terms of math-related science and technology. This is largely attributed to Napoleon's national policies of focusing on mathematics several hundred years ago. The foundation of AI is mathematics. We will put more effort into the development of AI, and we will continue to increase our investments in France.

We've just experienced the impact of AI. Currently, Huawei's phone cameras are the best in the world. This should be attributed to the designs of French mathematicians. They helped us use math-related technologies to combine images. AI will develop in a wider range of areas and we need to attract an increasing number of excellent mathematicians to join us.

40

Guillaume Grallet: What's your favorite proverb?

Ren: Collaboration for shared success.



Ren Zhengfei's Interview with CNBC

June 19, 2019 Shenzhen, China

01 Deirdre Bosa: Mr. Ren. Yesterday, President Trump tweeted that he had a conversation with your president, Xi Jinping. The US sees Huawei as being at the center of the trade war. How do you see it?

Ren: First, Huawei has virtually no presence in the US, so the trade relations between China and the US have nothing to do with us. Second, if we compare China and the US to two basketballs, Huawei is just like a small sesame seed stuck between them. There's no way we can buffer the relationship between these two countries. I believe the US is a country ruled by law. Ultimately, we will settle our issues with the US through the courts. We have confidence that the court will reach fair decisions.

02 Deirdre Bosa: As you said, you do not have much of a presence in the US. You don't want to be at the center of the trade war, but you have been caught in the middle. Do you have any hopes that when President Trump potentially meets with President Xi Jinping at the G20, Huawei will be a topic of conversation?

Ren: I don't think we are so important that these two great men would want to talk about us. This seems impractical to me.

Deirdre Bosa: That has been the case, though. President Trump spends a lot of time talking about

Huawei, as do other US officials.

Ren: It's because they are in good health and have energy to burn. They must have a lot to attend to. I feel grateful for their attention; they flatter us. We don't deserve such attention.

Deirdre Bosa: You may not think you deserve high attention, but the fact is that, in the US, a lot of politicians, President Trump included, spend a lot of time talking about Huawei, your company.

Ren: Maybe it's because we can't be beaten, no matter how hard they try. It is possible that we will survive for a long time. If they continue to care about us over the next few years, will they get tired out? We have been communicating with the US through different channels. The US is a country ruled by law. Legal proceedings are also a valid means of communication. Through this means, the US needs to present its evidence in court. We do as well, so that the court can decide whether we are right or wrong and to what extent we may be wrong. This is what really matters. I don't think we deserve to be treated as a bargaining chip in their negotiations, and I don't want to be a bargaining chip either.

03 Deirdre Bosa: You may not be willing, but it doesn't change the fact that President Trump has said you are

a bargaining chip and the so-called attack has already affected your business. You said earlier this week that, it would hit your revenue by 30 billion US dollars.

Ren: The 30-billion-dollar decrease in our predicted sales is just a small thing for us. Our sales will still exceed 100 billion US dollars this year. This has little impact on our business operations. We will mainly cut down on some non-core products, so the US sanctions won't have significant impact on us.

Deirdre Bosa: I think many people would call 30 billion US dollars a material impact. It's nearly third of your revenue last year. This affects your employees who are shareholders, does it not?

Ren: No. According to this year's plan, our revenue was expected to reach 135 billion US dollars. Even if our revenue does drop by 30 billion US dollars, we will still have 100 billion US dollars left. Our sales revenue is still growing. By May, we had grown a bit over 20%. We are just predicting a decrease in revenue over the next few months. We haven't actually seen any hard signs of such a decrease yet. As of yesterday, our financial report showed that our revenue was still growing. We are still not sure how things will turn out by the end of year. I think a revenue drop of 30 billion US dollars doesn't mean much to us. We can afford it. We are not a public company, so we don't care that much about revenue.

We care more about the actual quality of our own operations.

04 Deirdre Bosa: Okay, let's talk about the quality of the performance in your fastest growing business unit, your consumer business, your smartphone business. You said earlier this week that smartphone shipments had declined by 40%. How can your business continue to grow if your fastest growing unit is taking a hit from what's happening between China and the US, with the US putting an equipment ban on Huawei?

Ren: Our consumer business in China is not declining, though we previously saw a record decline of 40% in overseas markets. But it is now bouncing back, and its decline outside China is less than 20%. It is recovering rapidly. Throughout this year, our overall consumer business won't experience a huge decline like what we previously saw overseas.

For Huawei as a whole, our estimated revenue for 2019 may decrease from 135 billion US dollars to 100 billion US dollars, a figure equal to that seen in 2018. But our profits are higher than before, and they are growing faster than we could have imagined. This means we must increase our strategic investment. A recent financial briefing was finished within minutes. Now that our financial performance is better than I had

expected, what's the point of listening to these briefings?

05 Deirdre Bosa: You said profit isn't the most important thing to you. But what about your employees who are shareholders and are paid dividends based on profits that Huawei makes? How are they feeling? Are you talking to them?

Ren: Our employees are becoming more energetic and working harder than ever before. We will make every effort to win this "battle" of sanctions, and we know we have what it takes to win. So we are full of confidence. If you get a chance, you can talk to our employees about this.

Deirdre Bosa: Are you saying that your employees don't mind if profit decreases and their pay decreases?

Ren: Their salaries won't decrease. Huawei is completely able to pay all our employees, and we are refining our compensation structure. We have even fast-tracked the promotions of many employees who are performing well in these critical times, and given them pay rises. When it comes to long-term earnings, we need to look at our financial reports at the end of the year. They may be slightly lower than what we planned at the beginning of the year, but I think they will be better than I expected, because our profits are still very high. This

gives me assurance. Therefore, I have asked our finance team not to report to me, so that I can spend more time on our technology.

06 Deirdre Bosa: How would you characterize your relationship with Google? What happens if you lose access to Google's Android operating system?

Ren: I believe Google is a great company. We have great respect for them. Huawei and Google have always shared common interests. If our products don't use their Android operating system, Google could lose 700 million to 800 million existing users. Their losses may be significant if the 200 million to 300 million new users that we are predicted to acquire each year cannot access the Android system. Our sales revenue will also drop by a certain degree in the short term, and we will have to bear these losses. This concerns our common interests. We will not replace the Android system without good reason. But if we have to take that step one day, we can still use our own operating system. Then our growth will recover.

Deirdre Bosa: Will your customers accept that? Already, in the Philippines, Huawei has said they would offer a full refund if their devices cannot run Google and Facebook apps. What if more customers demand this?

Ren: There have been impacts in global markets, but these are not as significant as many imagined. Many of our new phone functions, such as photography, are independent of Google's operating system. The most important thing that Google offers us is its ecosystem, which is excellent.

Deirdre Bosa: How can you be certain if customers are already saying they don't want to use Huawei phones if they will not have the Android operating system? How can you be so certain of this?

Ren: The US is now the strongest country in the world. Though the US is launching a global campaign against Huawei, the number of our customers is still on the rise. This means our customers have stronger confidence in Huawei than the US government does. This campaign has not had much impact on us, which can be clearly seen in the statistical reports coming from various business lines. We are not feeling much pressure.

Deirdre Bosa: I'm sorry, Mr. Ren, my question was, how can you be certain that consumers will want to choose the Huawei operating system over the Android operating system? What makes you confident that this will not hurt your business more than it already has?

Ren: Things are already at their worst, so they cannot get any worse over time. We have over 80,000 R&D staff and invest 15 to 20 billion US dollars in R&D every year.

Can't we solve our problems in regards to survival and development? This is where our confidence comes from.

Deirdre Bosa: Mr. Ren, I'm sorry, but I'm going to ask you one more time. What makes you confident, though, that customers will be willing to use your operating system? Is it ready to roll out and what happens if, in mid-August, Google is no longer able to supply Huawei with the Android operating system?

Ren: I do not think anything will happen. The only thing that may happen is that while a certain number of customers may not choose Huawei, others will.

07

Deirdre Bosa: Okay, one strategy that you are pursuing in the US is stepping up licensing patents. Even that, though, is threatened now. Senator Marco Rubio is filing legislation that will prevent that. What do you think? What is going on in terms of your patenting business and your ability to make that for some of the shortfall distinguished now through that means?

Ren: The US is a country ruled by law and has the most patents in the world. Will its image be affected if the Senator's recommendation is approved by US Congress? That depends on how the world's 7.7 billion people view this matter. I have no say on that.

08

Deirdre Bosa: I know that you have a lot of admiration for the US. You have talked about it in the past, yet you are also a student of history. You know that empires and countries, they can decline over time. What makes you have so much trust in the US right now and so much conviction that they will treat you fairly?

Ren: The US was an uncivilized country over two centuries ago. So how has it grown into the most powerful country within 200 years? The answer is openness. Talented people from around the world are willing to go to the US, where the legal, innovation, and property protection systems are mature. This has made the US what it is today. We have to learn from the US, so that we can grow stronger.

The US has a long history, and one little incident does not represent its entire history. Our respect for the US won't change just because of the setback we have met. Just like we won't hate our parents because they spanked us when we were young. This is because we have lived with our parents for decades, and they spanked us only for a couple of seconds. We won't break our ties with them over those few seconds. Similarly, the incumbent US government's attack against us will play a minor role in its long history. And we have no idea how the next US president will treat Huawei.

09 Deirdre Bosa: You said in the past, though, that number one breeds complacency. The US has been the number one economy in the world. Does it risk becoming complacent? Is it complacent?

Ren: Perhaps. If it were not complacent, why is it falling behind others?

10 Deirdre Bosa: The metaphor that you just used, that Huawei is similar to a child being spanked by their parents in terms of their relationship with the United States. Is there a worry that the child could be hit too hard? Are you worried about Huawei's survival?

Ren: No. Adding Huawei to the US's Entity List will affect only our non-core products. What the US has done may lead us to cut some non-core businesses, but our globally leading products will not be impacted.

11 Deirdre Bosa: You said that Huawei will see a new life in 2021, when the pain from the US attacks will be over. How do you get there? Does that assume that the US export ban will be lifted?

Ren: We compare ourselves to a bullet-riddled Il-2 plane. As serious as the damage may be, the plane's engine and fuel tank are still functioning. We can mend the holes as we fly. When they are all fixed, the plane

will be working as well as a normal one. We don't expect the US to lift their ban on us. Instead, we are repairing our plane so that it can continue to fly.

Deirdre Bosa: How are you preparing? Are you now developing your own chips as the ultimate goal to not rely on the US suppliers? How are you preparing to repair that airplane that you talked about?

Ren: We are always making preparations. If we don't want to die, we need to fix our problems and weaknesses. We must first find the biggest hole in the plane and fix it. After that, we will mend the smaller holes. After they are all fixed, we will be able to fly high in the sky.

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Deirdre Bosa: Two years from now, are you still buying the same amount of components from the US?

Ren: We may be buying even more. US suppliers have contributed to Huawei's growth over the past years. If they're allowed to sell to us, we would have no conscience not to buy from them. We definitely want to buy from them. If the US doesn't allow them to sell to us, it won't be our fault. It is our hope that we can continue to buy from them. Now we are continuing to place orders to them. It is just that they need to get approval from Washington. If they can get approval, we will still buy from them; otherwise, we will have to find

other ways.

Deirdre Bosa: Are you able to find those other ways? Have you already put preparations in place? What are those?

Ren: Yes. We have to repair each of the hundreds of holes, so that the plane can return safely. See, this is the bullet-riddled plane I mentioned. Huawei is like this plane, as we are also seriously damaged. It is impossible for me to explain every detail of how we are doing it. If you are interested, you can interview some of our ground-level employees, and they will tell you how we do it. I myself am not a repairer. I welcome you to visit us in two years to see whether we are having a better time than we are today.

Deirdre Bosa: I would love to see that, but I'm very curious, and I still haven't received an answer or any strategy that really explains how you will get there. Will you depend on other overseas suppliers or start making the components yourself, which I know you already are, but to a greater degree?

Ren: These two approaches are both possible. But we will mainly rely on ourselves and focus on improving our own capabilities.

13 Deirdre Bosa: Are you hopeful that the trade talks between China and the US will be resolved?

Ren: We have nothing to do with the trade between China and the US, because we barely have any sales in the US. Trade between the two countries is a huge subject, and we don't know what they are negotiating. We only care about our own business. We hope that they don't mention us. We are not worth mentioning in their dialogues.

Deirdre Bosa: Have you spoken to President Trump or any US officials?

Ren: We've been communicating with the US government through the District Court for the Eastern District of New York and the Texas court. We think we'd better solve problems through the courts.

Deirdre Bosa: Let's imagine that it really was President Trump. Would you be willing to take a phone call from him?

Ren: Of course I would be willing to take the call. We could discuss potential collaboration for shared success. The information society will be huge, and we should work together to build that society. Everyone should contribute their own efforts. Huawei has only made some accomplishments within a very narrow scope. The US is still the most powerful country in many of the remaining areas. We should work together to build the information society. That's what I would like to say.

Deirdre Bosa: What would you tell him about national

security concerns regarding Huawei?

Ren: I would tell him that the atmosphere is only about 1,000 kilometers thick, but the cloud of the information society will be several thousand kilometers thick. That will mean a huge market and numerous opportunities. It won't be a zero-sum game, and everyone will need to work together to build such a huge information society. Huawei is just a step ahead of others in the field of connectivity. The US has a wide range of strong capabilities, and can secure a large share in this huge cloud.

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Deirdre Bosa: Have you spoken to the Chinese president or any other senior Chinese officials about Huawei's role in the trade war and these sorts of attacks that the business is facing?

Ren: How could I set up a meeting with them to discuss such specific issues? Huawei's issues are small issues to China as a whole. They are as small as a sesame seed to the US. I don't think they are worth discussing. We can solve these issues on our own. We believe in US law, and we can solve the issues between the US and ourselves through the law.

Deirdre Bosa: You have 180,000 employees. You are one of the biggest companies not only in China but also in

the world. Why would it be strange to talk to Chinese government officials when you are such an important company to China and the world?

Ren: We are capable of solving our own issues, and we are fully confident of this. Why should we ask others for help? The US released its sanctions list against Huawei a while ago now. However, nothing has changed in our company. If you tour around our company, you can see how our employees are doing, and that everything has been business as usual. You should visit our production lines, which are operating as usual. Therefore, we don't need help from anyone.

Deirdre Bosa: I didn't ask if you would ask for help. I asked if you would speak to Chinese officials. What happens to Huawei will affect the Chinese economy, will it not? Maybe not now, but it will if your business continues to decline. Your revenue is more than that of Alibaba and Tencent combined.

Ren: We are not under any pressure. We believe the attacks by the US government are a test for Huawei. If we can survive this, we will become stronger. In China, we say "rise from the ashes like a phoenix" and "from the ashes the phoenix is reborn". If we manage to survive the fire, we will become stronger. During this process, we will be able to identify outstanding employees and promote them faster. Those employees

who lag behind can choose to leave Huawei. In this way, our team will become stronger in three to five years. By then, we may have already put the difficulties we are facing behind us, laying a solid foundation for rapid development in the future.

Deirdre Bosa: You are saying that you do not talk to Chinese officials about Huawei's business?

Ren: That's correct. When a couple has two children and prefers one to the other, the child who is loved more often turns out to be mediocre, and the other, who gets less attention, usually ends up becoming outstanding. Why is that? The spoiled child is usually unmotivated to become better.

Huawei is like the other child. Throughout our 30-year history, we have relied on ourselves to grow. We have become very tough and are able to stand any pressure or attacks. In the current situation, we must continue relying on ourselves, get up off the ground, and forge ahead. I believe we will survive this. That's why we have compared Huawei to an aircraft riddled with bullet holes. We want our employees to fix those holes. We have no idea which exact hole each employee can fix, because all of our 180,000 employees are busy fixing holes.

Deirdre Bosa: If Huawei is a child though, and the Chinese government is the parent, the child would be talking to the parent, would it not? I find it hard to

believe that you don't discuss business with (Chinese government) officials. In the US, companies regularly talk to lawmakers.

Ren: US companies must abide by the law. It's perfectly normal for them to talk to the government. Regarding our relationships with the US, we can overcome the difficulties we are facing, and we don't need help from anyone to do this.

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Deirdre Bosa: The export ban against Huawei is already having an effect on American companies that sell to you. We are seeing it in their forecasts for revenue and profits in the year ahead. Are they talking to US officials on Huawei's behalf? Are they trying to lift the export ban or at least get some exemptions?

Ren: I don't know whether US companies will be able to lift the ban or not. The US attacks on Huawei are hurting both Huawei and US companies. Our revenue will drop, and so will theirs. In fact, many of these US companies are public companies, and drops in revenue will have a bigger impact on them. Huawei is not a public company, and we don't have to take responsibility for drops in revenue. That's also one benefit of not going public.

Deirdre Bosa: Do you or your executives talk to executives at American companies, your suppliers?

Ren: I think all our senior executives have reached a consensus on this. The attacks against us by the US government did not divide our senior management team. We are actively communicating with US suppliers, and continuing to request deliveries and place orders. We will not stop placing orders with US suppliers due to US restrictions. If the ban is lifted one day, how will they be able to ship products to us if we haven't placed orders with them? So we are still sending delivery requests. It's another issue that our US suppliers currently cannot deliver to us. We are trying to find a solution for that.

We still respect US companies, and we feel sorry for them. They have helped us in the past. Now they are also suffering, because of their partnerships with us. But what can I do? It was the US president who made this decision. There is nothing I can do to change the situation.

Deirdre Bosa: Are they advocating on Huawei's behalf?

Ren: I don't know about that.

**16 Deirdre Bosa: Who has more to lose in the trade war:
China or the US?**

Ren: The trade war has nothing to do with me. How could I know whether the US or China has more to lose? We have virtually no sales in the US, so the tariffs

imposed by the US government have nothing to do with Huawei. We are not engaged in these affairs at all, and I don't care about the trade war between China and the US.

Deirdre Bosa: Mr. Ren, you are the CEO of a global company. You have business all over the world. Are you saying that you don't care about the outcome of the trade war?

Ren: No, I don't care.

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Deirdre Bosa: Do you care about your ability to do business in the United States? Do you think that it's appropriate for US companies like Google, Facebook, and Twitter to be banned in China while you advocate access to the US market?

Ren: No, I don't care. I would guess we will not be able to do business in the US for a long period of time, so I don't care whether the US will let us into their market or not. Even if they open their market to us, we may not be able to do business there, because it takes a long time to build a system.

Whether it's the US banning Huawei or China banning other companies, these are actions taken by sovereign states. This has nothing to do with our company.

Deirdre Bosa: You are not advocating for access to the US market?

Ren: No. It would only be a waste of resources.

Deirdre Bosa: Would it be a waste of your resources? Because you are putting a lot of resources into it. Again, you are sitting here with me. You have hired lobbyists. You employed executives to speak to American media on a regular basis. Why bother if you don't want access?

Ren: We have been investing resources to engage with the media not because we want to enter the US market, but because we want to dispel the many misunderstandings the US has about us. The US government is not just going against us within the US, it has been lobbying against us around the world. Pompeo has been flying worldwide for all kinds of meetings. And Huawei is one of the top three items on Trump's meeting agendas during his visits to other countries. So we also need some publicity in the US to exert some influence.

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Deirdre Bosa: Do you care about your access to other markets like Europe and Australia that are now considering their relationships with you?

Ren: We have been engaging with European customers for 20 years and our customers there have great trust in

us. Europe has not rejected us up until now, so we will continue to provide better services to European people. This is a commitment we are not going to change.

Deirdre Bosa: How important is it for you to keep that access, and doesn't that depend on what the US does, as they put pressure on their allies to stop doing business with Huawei?

Ren: It hasn't affected us much, because our customers still trust us. If they still trust us under such high pressure, their trust in us will only increase when such pressure is relieved. What if we can't meet their demand then? I'm actually more concerned about this right now.

Deirdre Bosa: Mr. Ren, you are already losing customers across the world. Australia has banned Huawei equipment.

Ren: Australia has the right to make its own decisions. Why would I worry about this so much?

Deirdre Bosa: Europe is a big market and one of your most important markets. They are considering the same measures?

Ren: Not that I'm aware of. Europe still welcomes us.

19

Deirdre Bosa: Mr. Ren, for many years you didn't speak to the media. In the last six months, you have spoken to many media outlets. Why are you here sitting down

with me, a journalist from an American organization, if you don't care about the trade war, and you don't care about doing business in the US?

Ren: First, since last December, over 90% of the global media coverage on Huawei has been relatively negative, because the media didn't know the real situation. Our public relations department believes that we need to show the real Huawei to the world. Since I rarely spoke to the media, our PR people thought that the media might be a bit curious about me. So I started meeting and talking more with the media. Positive coverage now accounts for around 27%, and is slowly increasing to 30%. This is helping people worldwide learn more about Huawei. I've spoken a lot over the past six months, and will probably speak more in the next six months. I hope these efforts can help the world understand us better.

Besides, I have enjoyed today's interview, because your questions are sharp. You don't dance around things, and I'm very sincere. I haven't avoided any of your questions. This way, we want to show the real Huawei to the American people. After all, they still don't know much about us. Many Americans have never been to China, and many of them have probably only seen films showing China as it was 100 years ago. They may think Chinese people are still very conservative, wearing their hair in long queues, like they did during the dynastic

period. Many American people don't know that China has made huge progress in the Internet age. The more I talk, the better people will know about the real Huawei.

Deirdre Bosa: You said you haven't avoided any of my questions. With all due respect, I disagree. You have avoided some of my questions, such as what is your strategy for the export ban that is already hurting your business?

Ren: I think I have answered your questions. We don't rely on chips from the US. We have developed our own chips and our own operating system, and we will continue to mature as time goes on.

Deirdre Bosa: You didn't tell me what makes you optimistic that your customers around the world will accept your operating system, not the Android operating system.

Ren: In reality, we haven't seen a drop in our total orders worldwide. Most of our orders are for networking equipment, and that's our major product. We have barely seen a drop there. There has been a lot news about countries saying they are launching their 5G networks. Many of them are using Huawei's equipment.

I think only our consumer business has felt some of the impact. But our consumer business is a peripheral business; it's not our major business. Because of this,

I don't think it's a big deal that this business has been affected a little bit.

Deirdre Bosa: The consumer business is not the most major business of Huawei? I've seen your financial results. It's the fastest growing and the biggest part of Huawei. And you said earlier this week that smartphone shipments have declined 40% in the last month.

Ren: Then why is the US attacking our 5G, rather than our consumer business? Because we are a leader in 5G, and 5G is networking equipment, not devices. I think what really matters is our position in the international market for networking equipment. Our consumer business outside China has been affected a little bit, but our consumer business in China is actually growing. Overall, there is not a big drop, and I don't think it's a big deal.

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Deirdre Bosa: Mr. Ren, I know that transparency is very important to you. That's why you are sitting down with me and other members of the media. Why does Huawei continue to be a private company? Have you considered becoming a public company?

Ren: Would Huawei survive if it were a public company today? Our share price would have fluctuated or even plummeted, causing the company to collapse. As we are a private company, we will not see a big impact even if

our revenue drops by tens of billions of US dollars. We will still be able to pursue our ideals.

In this way, I think being a private company works better for us than being a public company. Public companies mainly focus on short-term interests and their current financial results, and they dare not make long-term investments. But we are different. We can invest in things that are 10 or even 20 years away. This will enable us to stay far ahead of others, rather than just take the narrow lead that we have today in 5G. These are the benefits we enjoy as a private company.

Deirdre Bosa: Mr. Ren, companies much bigger than yours have not only survived hard times but survived as public companies. And Huawei has a transparency issue in the US. So, I'm not sure I understand your argument as to why you wouldn't become a public company. And talking about R&D, there are also companies bigger than yours that are public and they spend just as much, if not more, on R&D.

Ren: Then they should have done better than us, right? But why does the US attack our 5G?

Deirdre Bosa: Let me give an example. Facebook in the United States is under attack, but their share price has continued to grow as they adjust their business. So why would being a public company prevent Huawei's survival?

Ren: First, I want to say we fight for our ideals. If we were a public company, many employees would sell their shares and leave the company under today's circumstances. But now, our employees are more united and work even harder. This is how we are overcoming these difficulties. I think this is the benefit for not going public.

Second, public companies are very rich. We are the poorest tech company. Despite that, we are the world's fifth largest investor in scientific research. We will further increase our investment in this regard, despite some financial difficulties that we are facing today. Our business might shrink a little bit, but we will not reduce our investment in scientific research during hard times. We will continue to invest 15 to 20 billion US dollars into scientific research each year.

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Deirdre Bosa: A lot of Huawei's current problems stem from issues with trust and transparency, and skepticism that Huawei operates separately from the Chinese government. Have you considered creating an autonomous subsidiary outside of China that would be beyond the reach of Chinese law?

Ren: No.

Deirdre Bosa: If not, how can you change the

perception that Huawei is an extension of the Chinese state?

Ren: Who can unify the thinking of 7.7 billion people around the world? People think differently. As long as our customers understand us, then that's enough. We don't need to take additional measures to make everyone understand us. It doesn't matter if some people don't. History will prove what kind of company we are. It has already done so over the past 30 years. If we can survive in the next 30 years, history will further support us. Why do we have to prove ourselves by going public?

Deirdre Bosa: I'm not asking about being listed. I'm talking about creating an autonomous subsidiary outside of China if that would help your business if it continued to suffer around the world, and if that prevented the 30-billion-dollar hit to revenue. Would you consider creating an autonomous subsidiary outside of China if it would help your business and ensure Huawei's survival?

Ren: 30 billion US dollars is not a big deal. We don't have to change our overall operating mechanism. We will prove to people around the world that Huawei is a good company. We want customers to find this out through their own experiences. We don't need politicians who know little about technology to understand us.

Deirdre Bosa: So, under no circumstances would you consider creating an autonomous subsidiary outside of China, under no circumstance whatsoever?

Ren: We have subsidiaries in more than 100 countries. They are independent. They were not set up to prove ourselves to politicians, but to ensure compliance. We are committed to abiding by the laws of the countries where we operate, as well as UN resolutions and international laws.

22

Deirdre Bosa: I want to ask you about your daughter, Meng Wangzhou, being held in her own home in Canada, awaiting her extradition trial. While this is certainly an undesirable position, she does have access to her home, to visitors, and to her lawyers. The Canadians detained in China are not getting the same treatment and from Canada's point of view, they are being treated unfairly. Do you think that's appropriate?

Ren: First of all, my daughter is not guilty. She didn't commit a crime. The Skycom business in Iran was clearly understood by the bank throughout the entire process. We exchanged emails, and each email included the bank's logo. They knew about the company and the transaction settlement. My daughter just said something over a cup of coffee with them in a café. This has somehow now become significant evidence of a crime.

My daughter's issue can be clarified and resolved, as long as the court discloses the evidence. The District Court for the Eastern District of New York can ask the prosecutors any questions they need to, and our lawyers can also ask them questions, then both sides can present their evidence. The truth will then be revealed. As I said, the bank knew about the transactions from beginning to end. How can something my daughter said over a cup of coffee become evidence of a crime? But we believe that the US and Canadian judicial systems are open and transparent, and we believe that this issue will be solved eventually. So we are waiting patiently for a resolution, and I don't feel too aggrieved.

Deirdre Bosa: You believe the system is open and transparent in Canada. But do you think it's appropriate that she is in her own home with access to visitors and lawyers, while those Canadians detained in China are not receiving the same treatment? Do you think that's appropriate?

Ren: That's an issue between countries. I'm focusing all my attention on repairing our aircraft, and checking which parts are riddled with bullets and might need patches. Currently, I don't even have time to worry about my daughter, so how could I possibly care about other things? The issue you brought up will be settled through negotiations between governments.

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Deirdre Bosa: Mr. Ren, thank you very much for being candid and taking this interview.

Ren: I believe we will have the opportunity to meet again. And I hope that when we meet next time, our aircraft has been repaired and it is still flying. Then you will be welcome to visit us again.



Ren Zhengfei's Interview with the Financial Times

June 24, 2019 Shenzhen, China

01 James Kynge: We have all seen a very famous photo recently, an Il-2 aircraft from World War II. I heard that you like this photo very much. Could you share with us why you like it? Do you think the aircraft is akin to your situation? Is Huawei facing many challenges today, just like this aircraft?

Ren: I stumbled upon this photo when I surfed on wukong.com one night. The website said that this aircraft managed to make its way home. I felt that it was quite like us – we are riddled with bullets from the US. We had prepared a bit for this, but we didn't expect the US government would be so committed to attacking Huawei from so many fronts. The US government has launched precise and systematic "strikes" against us. We didn't anticipate they would be so strong and all their industries would be so united. They even leveraged the media, academic institutions, and standards organizations to push us into a corner. Their "strikes" have hit more than a little software or a few chips, and have left us with several thousand "holes".

That aircraft is quite a bit like us. It has unshakable resolve to fly home. So I downloaded it from the website. I was trying to find a clearer photo of it, but I failed.

02 James Kynge: I heard you said last week that you protect your core parts only, like your engine and fuel

tank, and aren't prepared to protect non-core parts.

Which businesses do you want to give up on?

Ren: First of all, Huawei does not have enough energy to defend from all sides at once. This is impossible. To lead the world, we need to develop some cutting-edge parts, and build systems based on these core competencies. We compare these core parts to the engine and fuel tank of the bullet-riddled aircraft. We have worked hard for over 10 years, so we can make it. We won't collapse. We wouldn't be able to make it home if the fuel tank were hit, because the engine couldn't run without fuel. We couldn't fly back if the engine were struck either, even with a full fuel tank. But if the wings were struck with several "holes", we could make our way back, though we may need to slow down.

We believe the US is cracking down on our network connectivity business and 5G is just a small part of that business. This business is fully prepared, so impact on this business will be minimal. We didn't expect that our consumer business would suffer more. Though there is more impact on it than we see in connectivity, we are gradually regaining customer trust. Some of our non-core product lines have been shut down in recent years and their employees have been transferred to our core businesses.

03 James Kynge: The US has added Huawei to its Entity List recently. How will Huawei address this difficulty and challenge?

Ren: I don't think we will collapse because of this. I am sure of this. We are repairing the aircraft while continuing to fly on. Of course, some of the "holes" that we are fixing are quite large, while some others are small. Ultimately, we will get all of them fixed over time. After that, we will be able to survive and thrive.

James Kynge: Which big holes should be fixed?

Ren: Holes are everywhere.

James Kynge: Is it chips?

Ren: We don't have too many problems with chips, as we can create most of what we need. But we haven't got prepared as much for some other components as we didn't think they had much technical content. But a machine won't work if a component is missing.

We don't have big problems with our hardware. But there is some impact on our software systems. I think the world has an extremely rich reserve of software talent. The software business is booming in every country, including China. We at Huawei also have strong software capabilities, mainly in embedded operating systems for hardware. We are the strongest in the world in this regard. But we may not be that strong

in software-defined networks, which require a macro architecture for networking. Even if they continue to cut off our supply of these things, we will be able to get the "holes" fixed and catch up.

04 **James Kynge: Do you think you can buy US chips from Chinese companies that have imported them from the US?**

Ren: This goes against the spirit of the Entity List, which, in essence, bars any sale of US components to Huawei.

James Kynge: How could they possibly find out?

Ren: For the past one or two decades, the US has often run unannounced inspections on our equipment. They could enter a few lines of code, and the results would show whether the equipment contained US components and whether it was installed where Huawei promised it would be. If some equipment ever went missing and wasn't installed where we promised it would be, they would beat us to death. There is no way we could buy US components from other channels. If they sold to us, other companies would be under US investigation, too.

James Kynge: As a result of the US Entity List, when will you experience the biggest adjustment? Is it in three months, six months, or something else?

Ren: We've been making adjustments for years. Our

overall business hasn't been affected much because we have already developed capabilities in chips, which are the most advanced and important part of our business. For smaller components, we can research and develop them rapidly. We can also use Chinese components as alternatives.

If the US opens up to us, we can use their hardware and software to make extremely cutting-edge systems. But if we aren't allowed to use US components, we are very confident in our ability to use components made in China and other countries to make industry-leading integrated systems, because we have world-class capabilities in this regard.

James Kynge: Do you mean that Huawei will not stop the production of any products despite the US Entity List?

Ren: We will stop making some non-core products. But we won't do that in our core businesses because our world-class, major products don't rely on US suppliers.

Yuan Yang: Which products will be ceased?

Ren: In 5G, optical transmission, core networks, and access networks, we are immune to US impact. Our optical systems are well ahead of others in the global market, and we don't need any help from the US in this respect. In 5G, we are at least two to three years ahead

of others in the global market, and we also don't need any US components in this respect.

In terms of core networks, there might be some impact on our servers, but other parts of the business will not be affected. Our TaiShan servers boast quite powerful performance, and they will soon be mass-produced to support our core network business. According to the Entity List, we cannot use the US's x86 servers, so we are facing temporary challenges in the public cloud market.

05

James Kynge: It's said that you have developed a new operating system called Hongmeng. Do you think Huawei is able to roll out an operating system that can replace Google's Android system?

Ren: First, the Hongmeng OS was not made for mobile phones, but for IoT applications such as autonomous driving and industrial automation. The OS ensures precise low latency, down to 5 milliseconds or even sub-milliseconds.

Second, we hope to continue using the globally accessible, open operating system and ecosystem for our mobile phones. But if the US restricts our access, we will develop our own operating system. What's most critical to an OS is its ecosystem. It takes two to three years to

build a robust ecosystem.

We are confident that we can rely on the Chinese market to build a global ecosystem. First, China has a huge market of apps. Compared to all other types of Internet software, our OS delivers extremely low latency. If some people can effectively develop low-latency applications with our OS, they will choose Huawei for some of their business. Second, many Chinese content service providers who are eager to go overseas have failed. Embedded in our OS, they will be able to expand overseas.

James Kynge: What production apps are included?

Ren: Just now I was talking about our system for phones. We have another system for production. Our production system is, if I may say, leading the world.

While our phones may have weaknesses in the ecosystem and apps, they are strong in many other areas. For example, our smartphones are the world's leader in photography, all-scenario services, and AI, thanks to our mathematical capabilities. Huawei has several hundred mathematicians and several hundred physicists. They shouldn't be likened to Leonhard Euler, though we indeed have an Euler Lab. We do not call them "Eulers" or "Turings"; we call them mathematicians. There isn't just one mathematician. There are tens of millions of mathematicians in the world. Huawei needs

a huge number of mathematicians, physicists, chemists, and neurologists. Their achievements will come out on top, and there will be demand for them.

After Huawei was added to the Entity List, our consumer business saw a huge decline outside China. But it has gradually recovered and is now close to its original numbers. Sales in China have soared. Some Chinese people are even buying Huawei phones because they feel bad for us. I once said, "Buying Huawei phones is not a patriotic act." People can buy our product if they like it, but if they don't like it, then they'd better not buy.

Young ladies in China are fond of taking photos of themselves. Huawei has the world's best photography technology because we have put a huge team of mathematicians into this area. Good photography does not rely on camera lenses. A human eye is composed of several hundred million "camera lenses" and thus sees images pretty crisply. Cameras are nowhere near the human eye. Our mathematicians use mathematical methods to convert incoming light rays through tens of thousands, or even hundreds of thousands, of camera lenses into electrical signals that make up an image. This mathematically calculated image looks pretty real.

Huawei is a world leader in these domains. As of May 30, we had sold more than 100 million phones. That means we reached our goal of 100 million

units 50 days earlier than we did last year. Of course, good performance in the first half of the year doesn't guarantee good results in the second half, because our growth was fast before the US added Huawei to its Entity List. When the blow came in May, we continued growing over the next two months due to the momentum we'd built up previously. We will scale down some of our businesses for the rest of the year and there will be a moderate decline in our phone sales.

James Kynge: Do you mean that because of the Entity List, China, especially Huawei's business, has to be localized? Will your imports decrease in the next two to three years?

Ren: Our imports will remain diversified, and we will still buy from the US if they allow us to do so. US component suppliers are also seeking approval from Washington to sell components to us. Once this approval is granted, we will continue buying components from them in large quantities. But we are also looking for alternatives at the same time. We are developing our own components and we have strong expertise in doing so, which will enable us to survive.

06

James Kynge: What are Huawei's advantages over Nokia and Ericsson in the 5G market, especially in the international 5G market? Are Huawei's advantages in

price or technology? If your prices are cheaper than theirs, could you tell us how much cheaper?

Ren: Our 5G equipment is much more expensive than that of Ericsson and Nokia. For the same type of equipment, ours can deliver far more value to our customers and is thus more expensive. If our products were too cheap, we may have pushed some other vendors out of the market. So we insist on selling products at higher prices, like Apple, so that we can make more money. If we distribute this money to our employees and shareholders, they may become complacent. So we choose to spend a large portion of this money on research and development, and donate a portion of this to universities to support the research of professors. In this regard, we adopt principles similar to how investment works according to the US *Bayh-Dole Act*, where universities own research results that they have achieved using federal funding.

Likewise, we fund university research and don't seek to own the research results of universities. This helps us stay far ahead of others in terms of theory. Even during our hardest times, our annual R&D spending will not fall below 15 to 20 billion US dollars.

We have the aspiration and motivation to move forward, and we will surely achieve our expected results.

07 James Kynge: I heard that you have won 46 5G contracts from countries other than China and shipped 150,000 base stations. Is that true?

Ren: Actually we have won 50 5G contracts and shipped 150,000 base stations.

James Kynge: How many 5G contracts do you expect to win from markets outside China for this whole year?

Ren: Most customers outside China will choose Huawei's 5G, because we provide the most advanced 5G equipment with the highest practical value. We've worked with our customers for over 20 years, and they won't abandon Huawei just because of a few things others say about us.

James Kynge: How many out of the 140-plus countries in the world will use Huawei's 5G system?

Ren: About 135 or 136 countries. The US and Australia certainly won't choose us. Most European customers will, however.

James Kynge: How about the UK?

Ren: The UK will, too.

08 James Kynge: I heard that the UK is now reviewing the source code of Huawei's systems.

Ren: The UK is reviewing our source code out of their

concern for us, because no system is perfect. The UK has simply pointed out our problems and vulnerabilities concerning security during their reviews. We are both working to ensure security. The UK is not rejecting us; it's telling us that our systems have vulnerabilities. They just don't use fancy words to solve problems. Huawei has been subject to the most stringent reviews in the UK, and is thus deemed the most trustworthy by them.

James Kynge: Will this cost Huawei a lot? What is the estimated cost?

Ren: It will, of course, cost a lot of money, but I don't know the exact figure. There must be a consistent standard for cyber security to avoid discrepancies between countries and companies. Europe has proposed to develop a consistent cyber security standard, and has released its privacy protection standards – the GDPR, which we strictly abide by.

This will require us to re-architect and re-develop networks, and make changes to network architecture and code. It will take about five years to re-architect all products, which means a lot of effort across the company. However, the new network and product architecture will be the most simplified, the most secure, and the cheapest for future networks, and comply with the GDPR at least.

Before Huawei was added to the Entity List, we had

planned to increase our revenue to 250–300 billion US dollars in 2023. However, due to the impact of the Entity List, our projected revenue for the next two years may decrease. But this revenue may then leapfrog in the following three years, or even hit the target we previously set.

09

James Kynge: Do you think Huawei will get the largest share of the Chinese 5G market?

Ren: We will certainly have a larger share in the Chinese market, because all of the Chinese carriers know us well. During recent bidding for the core network launched by China Mobile, about 44% of the market share went to Ericsson and Nokia, while we got a little over 50%. The West is most concerned about the core network when it comes to cyber security. China is open in this area, so it allows Western companies to have such a large market share in the core network. This also shows that China trusts them.

The UK has made the right decision to allow Huawei equipment to be used in its networks, except for the core networks. 5G base stations are truly transparent. Information packages are not opened while being transmitted, and they are not opened on the access network. They aren't opened and processed until they arrive at the core network. Therefore, it is

understandable that the UK proposes not to use Huawei equipment for its core network because they think this ensures better security. However, not using Huawei's core network equipment could also mean being left behind, because Huawei's core network equipment is the best in the world. There will be more foreign customers willing to buy our core network equipment in order to stay competitive.

China has not allowed a monopoly in the core network market. It has allowed 44% of the market share to go to Nokia and Ericsson. We won't attempt to snatch up too much of the 5G market share. Otherwise, we will be squeezing other companies into a very limited space.

James Kynge: People think that China will be a huge 5G market. Can you predict how large it will be in around two or five years?

Ren: It's hard for me to make a prediction about the Chinese market alone. I have never thought about sizing up the Chinese market alone. I think the whole world will need at least 12 million 5G base stations, which means the market potential is huge. I'm very optimistic about the future 5G market.

James Kynge: Does Huawei receive any preferential treatment in the domestic 5G market?

Ren: No.

James Kynge: Huawei is a leading company not only in China, but also worldwide, so does it deserve to be treated preferentially in China?

Ren: China is a market economy. How can there be any preferential treatment in a market economy? The Middle East is rich, so it makes sense to sell at higher prices there. In Europe, prices are quite high as well, which also makes sense. Our phones sell at higher prices in countries outside of China.

Yang Yuan: The 50% of market share you mentioned was for the core network. What if we also consider base stations and other equipment?

Ren: China has just started the 5G bidding process, and I'm not sure about our market share in base stations. It is likely that this is also higher than that of other companies.

10 James Kynge: Let's talk a bit about President Trump. If he gave you a call, would you pick up the phone?

Ren: He is very busy. Would he be able to make the time to call me? I don't think this is realistic.

James Kynge: If he was willing to do so, would you answer the phone?

Ren: I don't understand English anyway.

James Kynge: Interpretation could solve that.

Ren: Interpreters don't know much about politics, while I specialize in electronics. We might speak different languages. So there may be some difficulties communicating with each other.

James Kynge: If Trump called and you answered, what would you say to him? How do you think the dispute between the US and China, particularly the dispute regarding Huawei, could be resolved?

Ren: First, he is somebody, and I am nobody really. How could I possibly meet him? Second, I am busy patching holes and may not have time to meet him. Third, the trade issue is a national issue that is related to the livelihoods of hundreds of millions of people. Why should we get involved and ask people to sacrifice their interests to save Huawei? If China negotiated in Huawei's favor, it would have to make concessions in other areas to benefit the US. I don't think our country should do this. It's fine if we are attacked. We get less money and work harder, which will toughen us up.

11

James Kynge: We all know that the US government has caused a lot of trouble for Huawei. Do you think the Chinese government will continue to restrict US companies that do business in China?

Ren: In fact, the US is helping us in a great way by

giving us these difficulties. Under the external pressure, we have become more united than ever. The greater the pressure we face, the more resilient we will become. That's how steel is made, through thousands of strikes. We are currently a little bit "fat" as a company because we have been expanding without being tested by many hardships over the past 30 years. These attacks against us will force our organization to become more solid, and our people to become tougher and stronger-willed. This is good for our future development. We are not afraid of such attacks.

However, I don't think China will retaliate against US companies because only by staying open will China have a future. The current situation is that the US is not selling its advanced products to China, not that China is not buying American products.

If China refused to buy from advanced US companies, wouldn't China cause itself to be left behind? Strategically speaking, China will only become more open, not more closed. This is how I understand it from the speeches delivered by China's leaders on television. China will only become increasingly open, especially in the manufacturing sector. In the past, joint ventures were mandatory in the manufacturing sector. Now we can see more and more solely-foreign-owned companies in this sector. They use their own technology, make their own

products, and sell these products on their own. During this process, China is acting as a platform.

The 200-year history of the US shows why being open is the right way forward. More than 200 years ago, the US was an untamed land of wilderness. Over the past 200 years, it kept opening up, attracting talent in great numbers, and extensively optimizing its systems. These factors are what made the US the most powerful country in the world. China needs to learn from the openness of the US.

12 James Kynge: Let's discuss the trade war between the US and China. Are you willing to see Huawei included in the trade agreement? Is that possible?

Ren: There is no benefit to us if we are included in the trade negotiations. We barely have any sales in the US. If these two countries were two large balls, Huawei is just a sesame seed smashed between them. Oil can be squeezed from a sesame seed, but where would the oil flow to? We don't benefit from the US, so why should we participate in the discussions between the two countries? We are still focusing on patching our "holes". We don't have enough time or energy to study global trade relations.

James Kynge: Is it possible that the US will remove

Huawei from the Entity List and allow US companies to continue to export to Huawei?

Ren: Of course I hope the US will do this. There is no reason to add Huawei to the Entity List. If we are guilty of something, we should be put on trial. However, they have never provided any evidence, and passed judgment without any debates or trials. What the US government did is unfair. In this case, how could the world believe that the US is a country ruled by law? I think they should remove Huawei from the Entity List. But even if they don't, we are not afraid of what we may face. This will only make us stronger.

13 James Kynge: It is said that HSBC is cooperating with the US government, which may be causing many difficulties for Huawei. What do you think about Huawei's partnership with HSBC in the future?

Ren: First, HSBC ended its partnership with Huawei quite a long time ago.

Second, there isn't any proof that Meng Wanzhou committed any crime. The bank knew about Skycom's business in Iran from the beginning and also understood Skycom's relationship with Huawei. This can be proven by emails between the bank and Huawei, which have the bank's logo on them. From a legal perspective, they

can't claim they were deceived or knew nothing, because we have evidence.

Meng Wanzhou just casually said something over a cup of coffee, which can't be evidence of a crime. Throughout years of business dealings with Iran, Meng Wanzhou was simply part of one discussion in a café. This cannot be the basis for accusations of a crime. The US court should investigate the reporters. They have accused Meng Wanzhou of crimes, but what are these charges based on?

Under the current circumstance, we need to clarify the facts related to this case and present all the evidence. In addition, Meng Wanzhou hasn't committed any crimes in Canada, so Canada has violated its own law enforcement procedures. Canada is a country ruled by law. They should stop infringing on an individual's constitutional rights by taking the US's side. The country's image could be severely damaged if people stop believing that Canada is a country ruled by law.

We trust the Western rule of law, which is based on facts and evidence. Only with facts and evidence can we judge whether someone is guilty. This issue won't impact our partnerships with other banks. When this issue is clarified, we still need to seek further collaborations in the future. Finance is already a globalized system.

Sue-Lin Wong: Has HSBC provided any explanation

regarding the end of their partnership with you?

Ren: HSBC ended its partnership with us and stopped all transactions. It's HSBC that called a stop to this, not us. They didn't explain and simply stopped providing services to us. We will partner with other banks.

Sue-Lin Wong: Do you think you have been treated fairly? If these issues are properly addressed, will you continue to partner with HSBC?

Ren: The world is never fair. It's all about whether you are strong enough or not. We have the strength to resolve these issues, so we don't care about how we are treated. Now is not the appropriate time to discuss partnerships. The most important thing to do right now is to complete these legal proceedings.

James Kynge: Ms. Meng's case has been going on for a long time. What do you think the next step will be? Should the US speed up to resolve this issue?

Ren: Meng Wanzhou is innocent from all legal perspectives. She shouldn't be extradited to the US. First, this case is based on groundless charges. Second, Canada detained Meng Wanzhou based on the direction of the FBI. They severely infringed upon her basic rights multiple times. Third, the arrest of Meng Wanzhou is an affront to double criminality, a foundational principle of Canadian extradition law, because Canada does not

impose financial sanctions on Iran. Fourth, the political factors affecting the extradition procedures will impair the fairness of this case and also infringe on the legal rights of Meng Wanzhou.

Saying we haven't communicated with the US government is just not true. We have sued the US government in several US district courts. This is how we communicate with them, through courts and with evidence. Decisions cannot be made over a cup of coffee. If that was the case, you couldn't say the country is ruled by law.

James Kynge: As the father of Ms. Meng, do you have the opportunity to speak with her over the phone? What do you say to comfort her?

Ren: She's studying every day, and I frequently talk to her about various topics. She doesn't need me to comfort her because she's a very strong woman. The US is wrongfully holding her. They thought they would easily get the evidence they needed by arresting her.

Sue-Lin Wong: What is Ms. Meng studying?

Ren: She is studying many things, but I don't know what subjects she is studying in particular.

14 James Kynge: It is reported that the US attacked Huawei in 2013, and Mr. Guo Ping also said the US

hacked Huawei's system and stole emails and source code. Did you ever analyze that issue or how much harm was caused to your company?

Ren: Back then, when developing our own IT systems, we decided to use American bricks to build our own Great Wall. This Great Wall was not built to defend against the US government, the Chinese government, or any other government in the world. If they just have a look at our systems, that would not do any harm. We only use our Great Wall to prevent malicious competitors from stealing our trade secrets. If we had wanted this wall to defend against every government, it would have been extremely thick and very costly.

We don't have anything that is worth the US government hacking. Our company doesn't do bad things. If they find any issues and let us know, we will make corrections so that our systems become stronger. So we are not worried that the US government may get anything from our servers.

15 James Kynge: Some people from the White House have claimed that Huawei has ties to the People's Liberation Army and China's Ministry of State Security. Some even said that Madam Sun used to work in the Ministry of State Security. What's your response to these allegations?

Ren: In the US, many people who worked in the military later worked in companies and even held very senior positions in them. Such things are more common in the US than in China. It's true that I was once a soldier, but that does not mean that Huawei has ties to the military. Madam Sun worked as a technician in China's Ministry of State Security, responsible for installing 200-line switches, but she has no other background. Otherwise, she would not have quit her job. After China implemented the reform and opening-up policy, many people left their public service jobs and started their own businesses.

Huawei has no relationship with China's military or Ministry of State Security. Our relationship with the Chinese government is very simple: We abide by the law and pay taxes in accordance with the law. We have no other relationship beyond that.

Huawei is a completely independent company. If our success was due to ties we had to the Chinese government, China would be much more prosperous, because there are numerous other companies that have ties to the Chinese government. We have become what we are today because we are able to make our own decisions, including our decision to become an industry leader.

16 James Kynge: Regarding Huawei's revenue and profits, you said last week that Huawei's revenue in 2019 will be about 30 billion US dollars lower than forecasted. Would you please share with us your forecast on profits?

Ren: Our original revenue forecast for this year, made at the beginning of 2019, was 135 billion US dollars, which we have now reduced to around 100 billion US dollars. Our net profits are expected to be around 8 billion US dollars. Actually, I stopped listening to a financial briefing our finance personnel were delivering, because their conclusion regarding our business results was much better than I thought. So I told them to go back to work and not to waste time on reporting. I am a bit pessimistic, you see.

James Kynge: So Huawei's addition to the Entity List will not have a large impact on your business results?

Ren: Our original revenue forecast for next year was more than 150 billion US dollars, which has now been changed to around 100 billion US dollars. This year, our workforce will expand from 188,000 people to 194,000. Why the large increase? We are going to need a lot of manpower for R&D, supply, sales, services, and other domains in order to phase out many old versions of our products and release new versions. We will bring in more than 10,000 fresh graduates in July and August. We will

continue to grow despite the difficulties we are facing.

James Kynge: I've heard that Huawei is such a popular employer that there are up to 20,000 people applying for one job position at Huawei. Is this true? Or maybe this number is wrong.

Ren: This has been exaggerated. We welcome people who want to join Huawei, but we also have requirements. Huawei University has developed a system that consists of many different exams. One must pass all relevant exams before being given an interview. For example, if you won a gold medal in an international computer competition, you may get a salary 5 or 6 times higher than the average starting salary. There are just 40 gold medal winners around the world every year, and we recruited many of them this year, because we offered higher salaries than Google. We have recruited several young geniuses this year, and more will join Huawei next year. Talent, rather than land, helped the US develop into the world's most powerful country. We can learn from the US to attract more outstanding talent. We believe more such talent will join Huawei in the future.

James Kynge: Are these young geniuses from China or other countries? How many of them are from abroad?

Ren: Both. Of course, these dozens of young geniuses are not all gold medal winners; some are silver and bronze medal winners. There are maybe 50,000

contestants in the world's computer competitions every year. After rounds of screening, only 4,000 will be left, which will then become 400. In the end, only 40 will be winners. There are nowhere near enough Chinese contestants in these competitions. China should encourage more university students to participate in these international competitions. These competitions have established rules and very strict coaches, which can help assess the participants' abilities and improve our education approaches. After these geniuses join Huawei, they will activate our organization and inspire our team.

Yuan Yang: You just mentioned that the world's software market is very flexible. Have you recruited more people from your American carrier customers or partners?

Ren: In principle, we don't hire Americans in this domain. As long as a person has an American passport, green card, or permanent residency, they may be considered to have American elements. Hiring them will make us subject to the US government's long-arm jurisdiction.

Yuan Yang: You don't recruit their employees?

Ren: No. Because the US government has long-arm jurisdiction. If we hire people who have a fixed presence in the US, their work results may be subject to the US export control laws.

17 Yuan Yang: Many governments now require tech companies to hand over data. For example, the US government required Apple to hand over user data in order to unlock their phones. If the Chinese government raised some lawful requests which might go against user interests, what would you do?

Ren: Apple is our model.

Yuan Yang: Will you stand against the government like Apple?

Ren: No. Actually, Apple is not a mobile phone company, but an Internet company, a kind of carrier. Only carriers can control user data. Apple has established a platform on which a full ecosystem has developed, so Apple owns that data. After we sell pipes (network equipment) to customers, everything transmitted through them, be it water or oil, is controlled by carriers. We don't own any data. Sovereign states have the right to manage the data of carriers within their territory, but no sovereign state can manage data across borders.

Yuan Yang: What if the government requires Huawei to unlock a phone?

Ren: Users control their own data, not us, so how could we unlock their phones? Data is owned by our customers, not us. Carriers have to track every user; otherwise no phone calls could be made. It's a carrier's

duty to track user data. We, as an equipment provider, don't track any data. So this issue doesn't apply to us.

Yuan Yang: But you know the operating system, so you could help unlock a phone. If the Chinese government raised a lawful request, could you reject it? Would you be put in prison for rejecting such requests?

Ren: Why would I agree to that? We will never do such a thing. If I had done it even once, the US would have evidence to spread around the world. Then the 170 countries and regions in which we currently operate would stop buying our products, and our company would collapse. After that, who would pay the debts we owe? Our employees are all very competent, so they would resign and start their own companies, leaving me alone to pay off our debts. I would rather die.

At the Munich Security Conference, Yang Jiechi, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and Director of the Office of the Foreign Affairs Commission of the CPC Central Committee, made it very clear that the Chinese government never requires companies to install backdoors. Premier Li Keqiang then reiterated that position at the press conference held after a recent session of the National People's Congress. Recently, when Premier Li Keqiang visited our booth at this year's 16+1 Summit in Croatia, he told our staff not to install

backdoors. The Chinese government cannot make it any clearer that it will never ask any company to do that.

Now the EU is preparing to set a unified standard which will require all equipment vendors and carriers to guarantee there are no backdoors in their equipment and networks. We strongly support this initiative and are willing to take the lead to sign an agreement based on this standard. Unfortunately, such an agreement cannot be signed for now, because we need to wait for other equipment vendors and carriers to agree and for the EU to establish the system. But overall, this is a great initiative from the EU.

Yuan Yang: I am a little bit surprised to hear your answer about user data. Both Tencent and Alibaba have said publicly that, if requested, they would hand over some user data to the Chinese government. They have also said that these are lawful requests so they have to accept them. Is Huawei different in this regard?

Ren: We are a company that sells water taps and pipes. Why would they request water from us? Tencent and Alibaba are the sources of information, so they have the water. But we don't. How can anyone ask for water from a hardware store like us? We only sell the equipment. The data is stored in your mobile phones, not in our systems.

18 Yuan Yang: Regarding the Entity List, it's difficult to localize some components of core servers. What are the most difficult holes to patch? How long do you think this will take? 4 years, 5 years, or 10 years?

Ren: It's impossible to take that long. If we are not allowed to use the x86 server, we can use our own server, TaiShan, instead. Our server is probably more advanced.

Yuan Yang: What are the most difficult holes to patch?

Ren: We are working to patch these holes. I don't think there are any problems in this regard. Otherwise, how would I be able to smile and talk with you about this issue today? I would be very nervous.

Sue-Lin Wong: How long will it take you to break free from reliance on the existing supply chain?

Ren: I don't think it will take long. Most of the issues have already been solved.

Yuan Yang: How will you patch these holes? Will you hire more people?

Ren: Not necessarily. We already have a large workforce. After we cut some of our peripheral businesses, people from these businesses will be transferred to our core businesses.

Yuan Yang: The US has a monopoly over the world's

chip designs and the software market. Could you patch these holes in high-end software like this?

Ren: We have obtained a permanent license for these tools and software. This will not be a problem. But it's hard to say whether there will be issues with upgrades.

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Yuan Yang: You'll never accept the US's requests, right?

Ren: Unless they release Meng Wanzhou and remove Huawei from the Entity List with no strings attached, I don't think we would have anything to discuss. Other issues should be handled by the court.

20

Yuan Yang: The US sees 5G as one of the most important "battlefields". Just now you also mentioned IoT. Do you hope for Huawei to set the global standard for IoT in the future?

Ren: Certainly, IoT will be even more powerful than 5G.

Yuan Yang: If Huawei becomes the global "king" of IoT, what do you think the US will do?

Ren: They will also attack our IoT.

Sue-Lin Wong: How will they attack?

Ren: They eat a lot of beef, which makes them strong. And they don't get tired easily, so we can't beat them on the football field. To stay healthy, they need to burn a

lot of calories. So they spar a lot and don't need to go to the gym.

Sue-Lin Wong: But they are not good at playing table tennis.

Ren: Table tennis does not consume as much energy as football does.

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Yuan Yang: Huawei has some friends in the US, though they have a smaller voice. For example, many semiconductor companies and carriers in the US do support Huawei. Are they talking to the White House on Huawei's behalf? Do you think they can speak for Huawei in the US?

Ren: We don't know what they are doing. We are now focusing on patching the holes on our aircraft, and we don't have the time to think about the rest of the world. Now we have switched from seeking development to fighting for survival. We're trying to gather together scientists to make the most advanced future technologies, so that we can fight back. These people are very competent. It's very easy for them to solve key challenges and difficult problems. They can solve many problems within a short period of time.

Yuan Yang: Will you work with them to make some plans and strategies?

Ren: Our procurement team should be talking with them. After all, we have to sign contracts and place orders. When Washington allows them to do business with us someday, how can they ship goods if we haven't placed any orders? So we should keep discussing supply chain matters with them.

Yuan Yang: Considering the Entity List, Huawei is facing a lot of uncertainty. If some foreign carriers wanted to buy a lot of Huawei's 5G base stations, but now they become more cautious and hesitant, how can you convince them to buy your products?

Ren: We don't need to convince any of them. Actually, there are many carriers rushing to buy from us.

Yuan Yang: They are not affected by the uncertainty?

Ren: We have worked with them for two to three decades, and they trust Huawei. So we should have no supply issues.

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Sue-Lin Wong: What do you think is the biggest difference between the relationship between the US government and US tech companies and the relationship between the Chinese government and Chinese tech companies?

Ren: The Chinese government manages private companies through legal frameworks and taxation.

They don't intervene in their business operations. I don't know why the US government micromanages its tech companies as much as they do. They act like a mother-in-law, and if they get too involved, their daughters-in-law might run off.



Ren Zhengfei's Interview with The Globe and Mail

June 27, 2019 Shenzhen, China

01 **Nathan VanderKlippe:** Thank you very much for your time today. I'd like to start by asking a few questions, just about recent news. Can you help me understand what is happening with FedEx and the Huawei packages? Is there anything special in these packages? They said that this was an operational error. Do you believe that?

Ren: Each year, we ship over 100 billion US dollars in goods to different destinations across the world through logistics service providers such as DHL and FedEx. All of these goods are normal goods. There's nothing to hide about them. As for why FedEx delivered packages destined for another country to the US, we have no idea. Only FedEx can tell us what really happened.

02 **Nathan VanderKlippe:** Can you explain what you're doing with Futurewei in the US? You've said many times that you have no intention of splitting off part of the company, but isn't that in fact what you're doing with Futurewei? Can we expect to see more of this sort of thing in the future?

Ren: According to the US sanctions rules, as long as a component or technology contains US elements, it will be subject to US sanctions. Work involving Americans may also be considered to contain US elements. So, Futurewei is a special case that was designed to meet

the US's legal requirements.

Nathan VanderKlippe: Is that one way for you to solve other problems for Huawei in the future? To divide up parts of the company and locate them in different places around the world?

Ren: No. I don't think there is any other country in the world that would adopt this Entity List practice that the US does. So we won't duplicate the Futurewei model in other countries.

03 Nathan VanderKlippe: You've said that Huawei does not cooperate with the military on research, but we learned today that a series of people have co-authored research papers with the Chinese military, and identified themselves as working for Huawei. Does this not prove that Huawei cooperates with the military in China on research?

Ren: Huawei has no research partnerships with the military at an organizational level. These few people must have acted on their own, in their own interests. We are not aware of why they chose to do this. You can speak to them directly and ask them why they did this.

Nathan VanderKlippe: Do they still work at Huawei? Will they be fired?

Ren: As far as I know, there is only one person who is

still working at Huawei. All the other people had left Huawei some time ago.

Nathan VanderKlippe: And will that one person be fired?

Ren: I don't know. I don't know anything about this person at all. He is too many ranks below me.

Nathan VanderKlippe: What would be your message to other employees? Would you say, "Don't do this"? Would you warn other employees to say, "This is not allowed for Huawei employees"?

Ren: Our products are only for civilian use. If someone works on anything for other purposes, it may affect their performance appraisals. At Huawei, we require every employee to contribute to our core businesses. If someone has made contributions elsewhere, how can they receive recognition from their departments?

Nathan VanderKlippe: Is military research cooperation allowed for a Huawei employee or not allowed?

Ren: It's not allowed.

04 Nathan VanderKlippe: You have a number of your most important suppliers, such as Google, Arm, and others, who have been lobbying very hard for exceptions from the US entity listing so they can continue supplying

you. What is your expectation for that process? Do you still plan on a sort of complete ban for the US cooperation with Huawei? Or do you expect some of your key suppliers to be given exceptions?

Ren: It's understandable that our US suppliers are actively lobbying the US government in the hopes of being exempted from this ban. Such lobbying efforts are in their own best interests. Likewise, Huawei needs to buy huge quantities of products and technologies from these companies.

Unfortunately, I don't think the US will remove us from the Entity List. They have added Huawei to the list not because we have done something wrong and need to be punished, but because they want to destroy us. If someone wants to condemn you, they can always trump up a charge. That's why I think the US won't let up in the short term.

Nathan VanderKlippe: So you don't expect any of your key suppliers to gain exceptions as they've been asking for? That's not what you're planning for at this moment?

Ren: I'm not saying that they won't be successful. I just said that their efforts are completely understandable. We're not worried about the impact of the Entity List, and there are three major reasons why I feel this way:

First, our team is more united than ever. Before Trump launched his attacks against Huawei, our team was getting sloppy. But because of the attacks, our team has become more united in working towards our goal to survive and thrive. We're becoming stronger-willed, and we are working with increased drive and passion.

Second, we are creating a united front with our partners. We aren't angry with any of those US suppliers who can't continue to supply us. We understand, and we want to cooperate with them whenever it's possible. We will open our arms to embrace cooperation with more companies, no matter if they're Chinese or non-Chinese. We will enhance cooperation with any company that is willing to support us. As the Chinese saying goes, "A just cause attracts much support, an unjust cause finds little." This is how we are building a united front.

Third, we are still moving in the right general direction. The US has been attacking our 5G, but 5G is only part of our network connectivity business. Huawei is a global 5G leader. We are also well ahead of others in the optical transmission, optical switching, access network, and core network domains. In this industry, we can continue to develop by relying on our own chips and software, so we aren't affected by the US move at all.

The impact on our consumer business is relatively larger. By adjusting to the new environment over the

next one or two years, our consumer business will be able to continue growing.

Despite the impact of the Entity List, we sold 10 million of our new P30 series of smartphones within 85 days of the launch. This shows our customers' trust hasn't declined. As of May 30, we had sold 100 million mobile phones. I believe we can gradually resolve the difficulties our consumer business is facing in the second half of this year or sometime next year.

05

Nathan VanderKlippe: You said "adjusting ourselves to the new environment", you figure that in one or two years you will have fully adjusted to the new environment. Can you help me understand what "fully adjusted" means? Does that mean at that point you will have the ability to produce all of your products without relying on American technology or American patents, et cetera?

Ren: We have many patents and so does the US. We have signed cross-licensing agreements with US companies for many patents, and there are no issues with cross-licensing. We would never want to live without the support of US technologies, components, and products. With US technologies and components, Huawei products will be more advanced and better serve humanity.

By saying that we will adjust ourselves to the new environment in the next one or two years, I mean that we won't be struggling to survive after that period.

Nathan VanderKlippe: Can you help me understand why that is? What will have changed between what you do now and two years down the road?

Ren: Through our own efforts and those of our partners, we will have no problems with our supply.

06 Nathan VanderKlippe: Earlier this year, you said Huawei would be fine without chips from the US. In mid-May, you said that given some of the issues with the US, it's expected that Huawei's growth may slow, but only slightly. More recently, you've said you expect Huawei's revenue to decline this year by 30 billion US dollars, that's a very significant impact. What's changed? What has become worse than you expected?

Ren: First, we can make all cutting-edge core chips by ourselves, and ensure our products continue to stay far ahead of the industry.

Second, a few components will need to be updated to newer versions. During this transition period, we may find it hard to ensure sufficient capacity. This may have some impact on our development.

Third, people outside Huawei may think 30 billion

US dollars is a big number, but it is not to us. We had forecasted that our revenue would reach 135 billion US dollars this year, and if that figure decreases by 30 billion, we will still have about 100 billion US dollars in revenue. This was our initial projection, but the actual numbers in our financial statements were a little higher than expected.

Nathan VanderKlippe: So, 30 billion is no longer the forecast in terms of the impact on revenue this year?

Ren: Yes, maybe less than that.

Nathan VanderKlippe: 20 billion? Can you give us a sense? Everybody's caring about numbers.

Ren: I don't know the exact number. I usually exaggerate a bit when I speak, so that we have a bit of a buffer when things change. We have to wait and see the financial statements for the second half of the year. The numbers in the first half of the year can't represent our business performance for the whole year, because we experienced rapid growth in the first four months. The Entity List had some impact on us in May and June, but the impact was not big because the momentum of production continued for some time. Starting from the second half of the year, the impact is expected to become bigger. But I'm not sure how big that impact will be.

07 Nathan VanderKlippe: You've got a 90-day reprieve. You're in a temporary reprieve position from the Entity List. But, I mean, presumably you are planning on that reprieve ending when that 90-day period ends. Can you help me understand what happens on that day when this temporary period ends? You said there could be shortages. Where would you see shortages? I mean, what changes? Do we see products no longer available for people to buy? What happens at Huawei on the day of its sort of full entry into this entity list?

Ren: I think the 90-day reprieve was unnecessary in the first place. When Huawei was added to the list, we'd already been well prepared, so we didn't need this 90-day reprieve. As a matter of fact, the 90-day reprieve meant that the scope of the attack against Huawei became larger, not smaller. After Huawei was added to the Entity List, we only faced restricted access to American components and technologies, but with the 90-day reprieve, our engagement with standards organizations, which didn't need permission before, had been restricted. This caused much trouble for many standards organizations. So from our standpoint, this 90-day reprieve was not softening the fall but rather hardening the blow.

I think the US government should remove Huawei from the Entity List instead of postponing its implementation.

It's the American companies, not us, that have suffered the most. Huawei's production lines are working flat out. Our workforce has expanded from 188,000 to 194,000 because we need more engineers to work on new versions of our products.

If you have time, you can take a look at our production lines. They are up and running, and the people working on them are staying busy. If US companies can't sell their components to Huawei, their financial reports will reflect it and they'll feel the sting more than we do. We feel sorry for them because we've been working together very closely, in good times and bad, for the past 20 to 30 years. So the 90-day reprieve means nothing to us; we've been prepared for a long time.

08 **Nathan VanderKlippe:** Can you help me understand, the addition of 6,000 people, I mean, that's bigger than most companies. Are those people involved in sort of software development and chip development? What are the specific areas you've been doing the most hiring in?

Ren: They work in many different areas.

09 **Nathan VanderKlippe:** I know a lot of journalists have asked you to identify the specific holes. I don't really

want to go there. What are your primary concerns? Is it getting your chip technology free of any US influence?

Ren: People outside Huawei are most concerned about chips, but they're not my number one priority. This is because our chips are already more advanced than American ones. Those less important and less technically sophisticated components that we used to ignore are now becoming increasingly important to us. If one small component is missing from a circuit board, you might have to redesign the entire board and that involves quite a lot of work.

So I don't see the US's Entity List as a threat to our survival. You asked me how many holes there are. I think there are hundreds or even thousands of them. We have to send lots of people to check each and every hole to patch them up.

Nathan VanderKlippe: I know some of this is very technical stuff you probably would not concern yourself, but has any specific, small, unexpected thing reached your desk that has proven to be particularly difficult to resolve from a technology perspective?

Ren: Technically, these holes are easy to fix, but it takes time. Some simple components are actually having a big impact. Say for instance, that the US cut off the supply of three components that we used to ignore, because technically they were easy to make. Every

circuit board may need these components though. If they are unavailable to us, we have to redesign all our boards. This would involve a lot of work. Now if these components become available to us, but we have already made one ourselves over the past two months, then we just need to buy two. We have the ability to fix all those holes. We have more than 80,000 people in R&D, and we spend 15 to 20 billion US dollars in R&D every year. We can send our best people, who are conducting research that is critical to our future development, to work on these simple, urgent problems first. That way, we can solve all of our problems.

Nathan VanderKlippe: What have you told people? What deadline have you given to your people in terms of the time when you want Huawei to be able to operate in all areas, like hardware, software, and components, without any reliance on the US?

Ren: I won't set a timeline for them. Different teams have different tasks and workloads. I will let them solve the problems they face themselves. We need to try our best to resolve the issues on our own.

Nathan VanderKlippe: By issues be resolved, you mean that everyone and every component of this company needs to find a way to operate without reliance on the US, am I understanding that correctly?

Ren: Yes.

10 Nathan VanderKlippe: There are reports that Huawei is seeking a billion dollars in patent licensing fees from Verizon, is that figure accurate? And what is your view on the total amount of unpaid patent licensing fees that Huawei believes it can collect from US companies?

Ren: We have nearly 90,000 patents, among which over 11,500 patents were registered and granted in the US. The US has granted us the legal rights to these patents. The US is a country ruled by law, and every US company that is using our patents should pay licensing fees to us. We are negotiating licensing fees with Verizon, and the fees we ask from them are reasonable. They should understand that. We are less aggressive than Qualcomm when it comes to similar negotiations. I think they will pay us the money. I believe the US is a country ruled by law, so US companies will pay the licensing fees. The one billion US dollars is the total fees for using Huawei's patents over the past five years. The fees don't include those for 5G patents. We will also negotiate licensing fees for using our 5G patents in the future.

Nathan VanderKlippe: But one billion is a large number. Given that your company has taken about one and a half billion dollars over the last several years in total in patent licensing fees, one billion is a big increase on that. Do you think that's only a small amount of how much you think you can collect in

future years, from unpaid royalty fees of American companies?

Ren: I would say one billion is just a small number. We didn't collect many patent licensing fees from others, because for some organizations we engaged with, they also owned patents that we were using, and we needed to pay them as well. Therefore, the net licensing fees we collected were not that much. But for companies without any patents that we were using, they had to pay more. In general, we are not aggressive when asking for licensing fees, and the fees we ask for are reasonable.

Nathan VanderKlippe: When we look at what you're asking for from Verizon, do we expect to see Huawei's demands from other companies in the US alone, or everywhere, such as in Europe, Canada, and Australia?

Ren: It should be from all markets.

Nathan VanderKlippe: Do you have a sense of how much in total Huawei can collect through that process?

Ren: It would definitely be much less than what Qualcomm asks for.

Nathan VanderKlippe: That's still a very big number.

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Nathan VanderKlippe: Now onto your daughter. Part of the reason I'm here, as a Canadian, I think is probably

because Canada and China have entered into a very different phase in their relationship, in part because of the role of your daughter. She's in Vancouver at the moment. How many times have you traveled to Canada over the years? You've been there at least twice, I think. I don't know how many times in total.

Ren: I've been to Canada many times, but I can't recall the exact number. The most important visit I've paid to Canada was in 2017. During that trip, I travelled from coast to coast and spent more than 10 days there. The primary purpose of that visit was to survey Canada's investment environment and I also visited a handful of universities. I think Canadian universities are really outstanding. The three founding fathers of artificial intelligence (AI) are all from Canada. During that visit, we found that there was a remarkable investment environment and planned to place our theoretical research center for North America, or even the entire world, in Canada.

As the US is becoming increasingly closed off from the world, many talented individuals cannot get US visas. I think they may have to work, invest, and attend conferences in Canada instead. We believe the living environment and standards of living in Canada are pretty similar to those of the US. So we plan to significantly expand our research presence and build

large R&D centers in Canada, like what we previously did in the US. I've already told the head of our research team in Canada that we will buy land in cities like Toronto, Ottawa, Montreal, and Vancouver, and build our new R&D centers there.

I think the collaboration between Huawei and Canada is in the interests of both sides. Scientists work on theories, but sometimes they don't know how to apply their theories to real-world scenarios. As a company, Huawei clearly understands how theories can be applied commercially, but we are not as good as scientists in terms of theoretical research. So it stands to reason that together, we can create synergy and drive the industry forward.

Through these partnerships with Huawei, professors will be able to teach students knowledge that can be applied in real-world scenarios. These students will not necessarily work for Huawei after graduation. Those who work for other companies can drive innovation in society. Some of our employees may leave Huawei and continue bringing innovation to society. I believe Canada will have its own "Silicon Valley" one day.

Recently, there has been enormous hype about 5G around the world, but to some people in the US, it has been more concerning than an atomic bomb. Actually, the 5G standard originated from a mathematical paper

published by a Turkish professor back in 2007. Huawei assigned thousands of our in-house scientists and experts to carry out in-depth studies and analyses of that paper, while other companies in the world also put tens of thousands of scientists and experts. Together, we've turned that paper into a standard for 5G. The Turkish professor didn't realize how his paper could be applied and was amazed to see it developed into a 5G standard.

5G will be a tool for AI in the future. As I just said, all of the three founding fathers of AI are from Canada. They are already prominent leaders in their field. We see no reason why Canada as a country couldn't become the future leader of AI.

If Canada builds strong capabilities in AI, and an AI-powered robot can do the work of 10 people, then the country will become an industrial power with a workforce equivalent to 300 million people. What's Canada's biggest disadvantage? Though its people are brilliant, there aren't a lot of them. This means Canada has no advantages in traditional manufacturing. But with the wide adoption of AI, Canada's strength can be fully leveraged, enabling it to become a big industrial power.

I would like to invite you to take a tour of our production lines. Though we only have a little more than 6,000 technicians in our manufacturing facilities,

they support us in generating revenue of more than 100 billion US dollars.

During my 2017 visit to Canada, I met two of the three founding fathers of AI; the other one was not in Canada at that time. Now, both China and the US are making extensive efforts trying to catch up in the area of AI. Given its first-mover advantage, Canada must seize this strategic opportunity. So far, we haven't changed our strategy of making heavy investments in Canada.

Nathan VanderKlippe: I wonder if you can help me understand a little bit more. You've talked about four cities. Has the land already been purchased? Like, how much land? How many people do you envision working in some of these centers?

Ren: We have purchased 500 acres of land in the UK so that we can build an optical chip factory. Our optical chips are produced in the UK and have leading edges worldwide. We plan to build a beautiful campus there, just like the one in Dongguan, in order to attract more talent from across the world.

Canada also has a beautiful environment. Currently, while the US tightens its visa policies for scientists, I think Canada should relax its policies to attract more scientists from other parts of the world. This way, more scientists from the Middle East, Eastern Europe, and other countries and regions will be willing to move to

Canada. We will try to recruit such scientists to work on theoretical research in Canada. That's why I stayed in Canada for more than 10 days in 2017.

Nathan VanderKlippe: Can you help me understand the scale of that project? Because you've talked about a big investment. Is that investment worth 100 billion dollars, or 10 billion dollars? You may not have an exact figure, but what scale of investment are you looking at?

Ren: I can only say that these will be large-scale investments. If the current conflicts between Huawei and the US, as well as between Huawei and Canada, had not happened, Canada would have probably become Huawei's global center for theoretical research. Canada has an advantage: It is very close to the US and has similar social and legal systems, as well as a similar living environment to the US. So a lot of talent who cannot go to the US or don't want to stay in the US can go to Canada.

Over the next several decades, I think that the biggest technology evolution will come from AI and bioscience.

Nathan VanderKlippe: Regarding this idea of Canada becoming the global center for Huawei on theoretical research, are you still pursuing that, or has everything that's happened in the last seven months changed that plan?

Ren: The direction remains unchanged, but the pace of implementation of this plan has changed. Still, we will not change our strategy to invest and develop in Canada.

Nathan VanderKlippe: I just want to explain to readers, I mean, what scale? Presumably this is an idea of billions of dollars; is that fair to say?

Ren: At least several billion US dollars. I am quite sure of that.

12 Nathan VanderKlippe: There's one thing I want to ask you about your daughter. The first question is for you. Meng Wanzhou obviously had personal ties to Canada. She had property in Canada. Do you have personal ties to Canada? Do you have property or other personal investments in Canada?

Ren: No. My English is not good, so I cannot live in Canada. If I lived there, I wouldn't even be able to go shopping or would get lost when I went out for a drive. So I will continue living in China in the future.

Nathan VanderKlippe: But Meng Wanzhou was obviously a frequent visitor to Canada. Did she go to Canada in October of last year?

Ren: She often traveled. I don't know where she went exactly.

Nathan VanderKlippe: When did Huawei become aware of the US' arrest warrant against Meng Wanzhou?

Ren: She was detained on December 1, and I became aware of this two days later on December 3. She was supposed to go to Argentina to chair an internal meeting. After learning that she was arrested, I flew to Argentina to chair that meeting myself on December 4.

Nathan VanderKlippe: So you're saying no one at Huawei had any idea there was an arrest warrant out for Meng Wanzhou?

Ren: No one knew about this. Otherwise, why would she have gone there just to be put up against the wall like this?

Nathan VanderKlippe: This is my question as well, because every country on that trip that she planned to go to, Argentina, Mexico, Costa Rica, France, has an extradition treaty with the US. Also Australia.

Ren: Some countries were smart and rejected the US request.

Nathan VanderKlippe: What was the smart move back then?

Ren: Canada should not have become involved in this matter. It's the business of the US, and should be taken care of by the US itself. Since Canada has gotten

involved, it has suffered and so have we. I feel sorry for what's going on, on both sides.

13 Nathan VanderKlippe: I think you've used the term "victim" in the past. Both Huawei and Canada are victims in this matter. But if the Canadians are victims in this matter, there are now two Canadians who have been imprisoned in China: Michael Kovrig and Michael Spavor. If they are also victims in this matter, why has Huawei not lobbied on their behalf? Why has Huawei not demanded the Chinese government release them as well, if they're also victims?

Ren: I understand these are legal actions taken by the Chinese government. We are only a company, and there is not much that we can do. We believe in the legal systems of Canada and the US. Meng Wanzhou has committed no crime, and we believe this case will be resolved through legal means. So we are resorting to legal means, rather than seeking help from the government.

Meng Wanzhou has committed no crime in Canada or anywhere else in the world. Meng Wanzhou's case does not satisfy the double criminality principle, so if the extradition request of the US were approved, it would violate Canadian law.

If Canada releases Meng Wanzhou, this will show Canada is truly a country ruled by law. If Canada only does so after getting permission from the US, I think Canada's image might be harmed. We hope that Canada can independently enforce their own laws and regulations. Meng has not committed any crime in Canada, and the case does not satisfy the double criminality principle of Canada's Extradition Act. Therefore, the extradition proceedings should be called off. Otherwise, this goes against Canada's Extradition Act.

Nathan VanderKlippe: There is a debate in Canada now. In Canada, the Minister of Justice has the power to intervene, at any time, to call off extradition proceedings. And there is a debate in Canada about whether the Canadian Minister of Justice should do that. The former Canadian Prime Minister has said Canada should do this. What is your view?

Ren: I think public opinion on this is correct. Based on judicial investigations, there has been proof that Canadian law enforcement authorities have violated the law while they detained Meng Wanzhou at the airport. I think it would be a proactive, wise, and legitimate move if the Minister called off the extradition proceedings. We don't want Meng Wanzhou's case to affect the relations between our two countries, the relations between our two peoples, or any future opportunities

for development.

For me personally, I'm quite open-minded. I don't have any negative views about Canada, despite what has happened to my family. We, as a company, have continued to recruit many more researchers in Canada this year. We are continuing to invest in Canada. We didn't change the normal business plan of our local office there.

I think Meng's case should be addressed through Canadian legal proceedings. I believe right now is probably the best time to settle this issue. Both sides should try to untie this knot. There might be different ways to possibly do this, but I think it may be worthwhile to have the Minister of Justice intervene.

Nathan VanderKlippe: You said again and again that you trust the judicial process, you trust the court to resolve this. Why are you now asking for a political solution here?

Ren: The Minister of Justice can intervene and exercise this power. That's part of Canada's legal system and it's also consistent with Canada's Extradition Act.

14 Nathan VanderKlippe: At this point, how do you rate the chances of Canada installing Huawei's 5G technology? What would you put on that?

Ren: I think that's a matter for the Canadian government and Canadian carriers to decide on. It's not up to Huawei. Just like selling clothes at the mall, whether customers buy your clothes depends on their willingness to spend money. We cannot decide for customers. That's beyond our capabilities.

Let me share a story with you. Why did Europe develop faster than China? Several hundred years ago, there were trains and ships in Europe, while China still relied on horse-drawn carriages for transportation. In China, those carriages were definitely slower and carried less cargo, while in Europe, trains ran much faster, and ships could carry even more cargo. Europe had realized industrialized society earlier. So speed is very important to the development of a society. Now, what we are seeing is the transport of information, not of physical goods. The countries that move faster in deploying information technologies will be faster in terms of economic development.

China was very underdeveloped 20 to 30 years ago. Eventually though, it stepped up its efforts to build information systems. This is one of the reasons why China's economy has caught up. 5G is a very high-speed system. When full-fledged 5G networks are in place, per-bit cost for using data traffic will drop dramatically. That will play a very important role in boosting the

development of culture, education, and economy, among other things. Certainly, the US cannot set up advanced information systems on its own. That's because we'll not sell any of our 5G products in the US. If Canada can put in place a high-speed information infrastructure, it's very likely investors from other parts of the world will swim to Canada.

If you are interested, you can look at the correlation between changes to data traffic and economic growth over the last 30 years across different countries. Through this comparison, you'll find that countries whose information infrastructure grows faster will also have economies that grow faster.

If you have time in the future, I will get someone to give you detailed information on the example of South Korea. South Korea has taken quite an aggressive approach to ICT development, and their economy has been growing very fast as well. In the future, the US may not have very high-speed networks. If Canada could put in place high-speed ICT infrastructure, I think Canada will have better chances of attracting investors from other parts of the world.

15

Nathan VanderKlippe: Three of the people that have been among your most senior employees in Ottawa in recent years used to work at Nortel, as did a number

of the people that work under them today. Did Huawei steal Nortel's technology, and then build up its own business, particularly in Canada, by taking the remaining employees?

Ren: After Nortel collapsed, we recruited those people you just mentioned. Back then, Nortel didn't have the technology we are talking about today; they only had talented people. When such talented people were out of work, it was just natural that they would find other jobs. When Nortel collapsed, 3G had just started developing in the world. As the industry evolved from 3G to 4G, and then to 5G, those people also improved themselves during the process. What they have contributed to Huawei is what they had in their minds. It's definitely not about intellectual property theft.

One of Nortel's greatest contributions was to improve the capacity of optical transmission networks to 10G. Unfortunately, Nortel collapsed because the IT bubble burst. Today our optical transmission networks boast a capacity of 800G. Of course, we need to build on our predecessors' contributions to achieve greater success. However, there's no intellectual property involved in this, and it is essentially our own invention.

I did once want to acquire Nortel, but the deal never happened because of commercial reasons.

Nathan VanderKlippe: How much were you going to

pay for Nortel?

Ren: We never got that far. We only talked about the method of acquisition. In 2003, we planned to sell Huawei to Motorola for 10 billion US dollars. But during the very week the deal was supposed to be approved, there was a change in Motorola's board and the new chairman rejected the deal, so the acquisition failed. Several years later, Motorola collapsed. We thought about acquiring Motorola, but was not able to make it happen. It's just one of those missed opportunities in history.

16 Nathan VanderKlippe: Do you believe that a technological Cold War is inevitable and that there is a divide between the American influenced world in terms of technology and the Chinese influenced world in terms of technology? Is there no going back from that path at this point in time?

Ren: I don't think this assumption holds. The world must head towards interconnectivity. If an American has to get a new phone in order to make a phone call in China, or if a Chinese person has to get a new phone to make a phone call in the United States, it would move human society backwards.

Moving forward, the information society will only

become more interdependent. In particular, as software-defined everything and cloud become more prevalent, things would get rather complicated if the world were divided.

It's neither wise nor realistic for certain politicians to look to divide technology into different camps. For example, if US companies cannot sell components to other countries, those companies will shrink. As a result, the cost of their production will increase and consumers will have to pay more.

The goal of globalization is to allocate resources in an optimal way. The cost of services that people enjoy today is relatively low. If the technology community were divided into two camps, economies would suffer. And I don't think Wall Street would be fond of this idea. People in the US say Wall Street has a very big voice, right?

17 Nathan VanderKlippe: I want to ask you a very specific question. You said repeatedly that Meng Wanzhou was not guilty, but one of the pieces of evidence against her in America is a PowerPoint presentation. What is your understanding of how the US received that PowerPoint presentation? Did they receive it through legitimate means? Do you believe that the presentation is a piece of evidence that can be admitted into court?

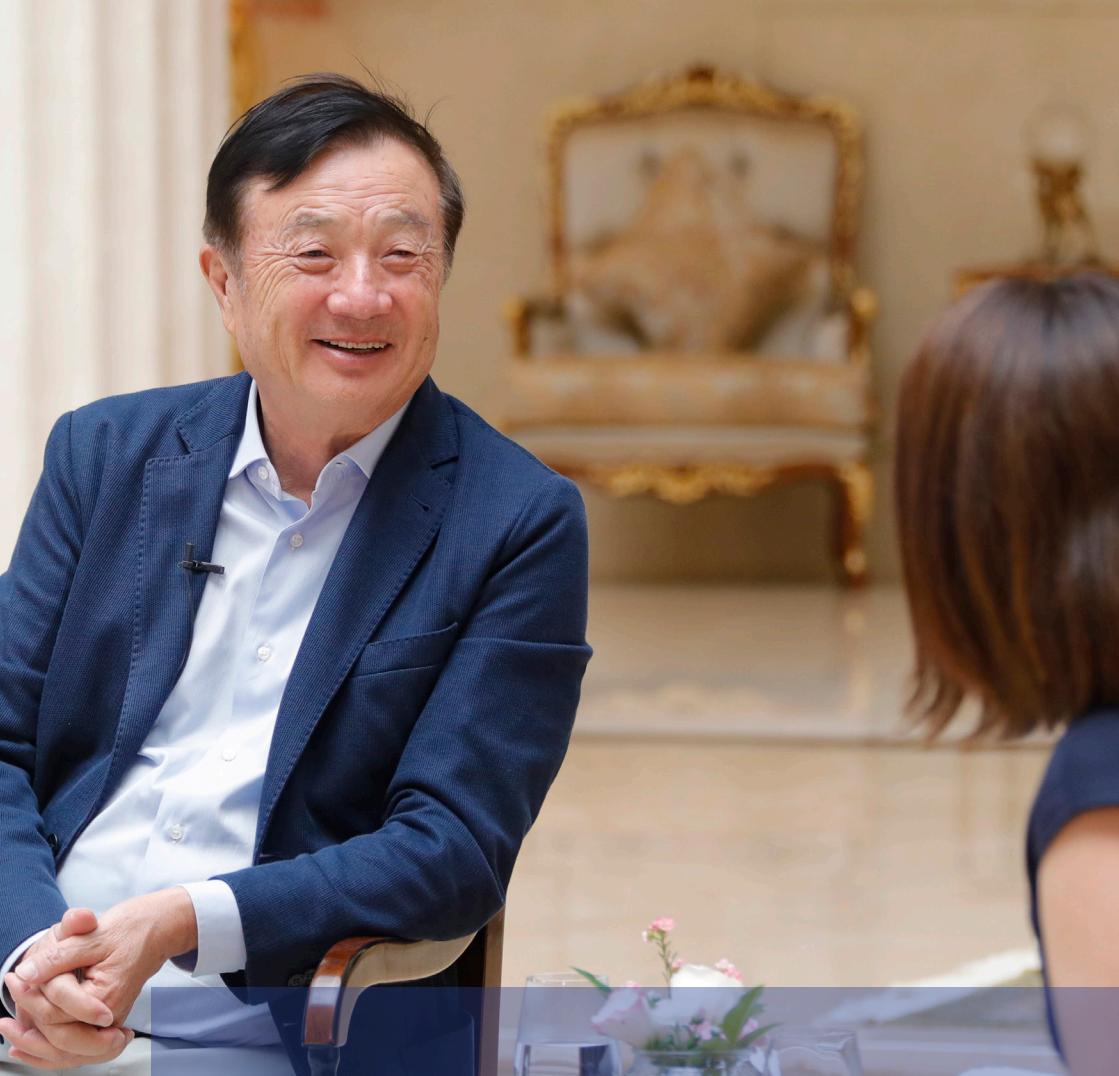
Ren: The bank was in contact with Huawei from the beginning to the end of the period Skycom was dealing with Iran. They knew about Skycom's business in Iran as well as its relationship with Huawei. That went on for several years. Then the bank invited Meng Wanzhou to a café where she presented several slides and her presentation was not misleading. Why did the bank ask her for the slides? We don't know. We hope that things will be made clear after the trial proceedings have been completed at the US District Court for the Eastern District of New York.

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Nathan VanderKlippe: Huawei has been, in some ways, a pioneer for the Chinese corporate sector in terms of a company, a Chinese headquartered company, a Chinese-origin company that has succeeded internationally. Half of your revenues are from international markets. As you know, there are rules, some of them quite recent in China, that mandate sort of intelligence sharing in China. I don't want to ask about those specific rules because I've read your legal opinions on them. But does the existence of those rules in China make it difficult for any other company, any other Chinese company, to succeed overseas? If there are requirements for intelligence sharing among Chinese companies in China, are they obstacles to the

internationalization of the broader Chinese corporate sector? And if so, have you sort of pushed for those rules to be relaxed in China? Should those rules be changed too?

Ren: We don't have the ability to ask for laws to be changed. However, at the Munich Security Conference, Yang Jiechi, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and Director of the Office of the Foreign Affairs Commission of the CPC Central Committee, made it very clear that the Chinese government never requires companies to install backdoors. Premier Li Keqiang then reiterated this position at a press conference following a recent session of the National People's Congress. Recently, when Premier Li visited our booth at this year's 16+1 Summit in Croatia, he even directly told our staff not to install backdoors. This is testament to their support for us when it comes to never stealing intelligence from other countries or companies. Therefore, we can sign "no-backdoor, no-spy" agreements with any country.



Ren Zhengfei's Interview with Yahoo Finance

July 17, 2019 Shenzhen, China

01 Akiko Fujita: Thank you very much for joining us today.
I want to start with the base that we are in, quite a grand thing. We had a chance yesterday to go to the Dongguan campus and saw all the European villages. I'm just curious. You are one of the biggest tech companies here in China. You're a national champion. Why do the European aesthetic?

Ren: All our buildings were designed by the people who won the bids for the projects. Many world-renowned construction companies have participated in the bidding process. It was Nikken Sekkei, a company from Japan, that won the bid for the design of our Dongguan campus. Its chief designer envisioned a museum of the world's most beautiful buildings, so he designed the campus this way and won the bid. Nikken Sekkei also won the bid for constructing our Ji Jia Center. Many Greek, Russian, and Chinese companies also participated in the bidding for the interior design and decoration of our Dongguan campus. Their joint efforts have made the campus what it is today. So this was a decision made by these designers, not by Huawei.

Akiko Fujita: Could this be seen as symbolism about how Europe has dominated history and how China can be the dominant force moving forward?

Ren: No, it's all about beauty and magnificence. The architect proposed this design and our Shanghai

consultants decided to accept it. They invited some experts to vote on it. So Huawei actually had no vote on the architectural design. They thought the design was beautiful, and we accepted that. When the construction was completed, everyone felt it was beautiful and so we also felt we had achieved our goal of building a beautiful campus. All in all, the designer was the major decision-maker. There's no particular symbolism behind it.

02 Akiko Fujita: Let's talk about what played out between the US and China a few weeks ago at the G20 Summit, where President Trump and President Xi met. One of the points of discussion between them was to allow for some licenses so American suppliers could begin selling to Huawei again. What shipments have resumed since then?

Ren: I don't think we were fully prepared for being added to the Entity List. So we faced some pressure at the beginning. However, after we tried to sort out our internal problems, we found that we are fully capable of shaking off our reliance on the US for our core products and depending on ourselves to survive. But we also have some non-core products that cannot do without US components. So we cut some of these non-core products to reduce the pressure. Over 80,000 members of our technical staff are working hard to fix other

"holes" in this "bullet-riddled aircraft". We have seen very good results already.

The remarks made by Trump at the G20 Summit have had no substantial impact on Huawei yet. His remarks indicated the US is no longer trying to strike blindly at Huawei. When they added us to the Entity List, even McDonald's in Mexico stopped selling to us. This suggested that the US had no idea which products were actually not important and whether their supply to Huawei could be continued at that time. Trump's remarks have helped many small and medium-sized enterprises (SMEs) in the US. Resuming supply to us has boosted their sales. Of course, his remarks also allowed us to resume the production of a small proportion of our products. Overall, as long as the US is being friendly, we will continue to buy components from this country. We believe the world will ultimately collaborate for shared success.

Akiko Fujita: You mentioned some SMEs have resumed shipments, can you tell us which specific companies?

Ren: I am not that clear about the details. To my knowledge, the supply of the vast majority of less critical components has resumed. This is a good thing. It can help some US companies change their business performance. But the US has not made any decisions on the supply of critical components yet. I estimate that

they need around two more weeks to make a decision. If they don't make a decision, we will.

03 Akiko Fujita: What the US Commerce Department has said is if these are components that are readily available, they will grant licenses to supply Huawei, but those that have national security will not. I'm wondering if there's a lot of confusion in the US. What is your understanding? What constitutes national security in terms of the components that you take in? Which component is considered a national security risk, therefore not being able to be sold to Huawei?

Ren: There's not one individual component that can threaten the national security of the US.

5G is just a tool that helps networks operate faster. It's good for the world. 5G is not an atomic bomb. How has it become a "threat"?

We basically don't have any networks in the US, nor do we intend to sell our 5G products there anyway, so there's no way we can pose a threat to the US. I think the US is too apprehensive. At the end of the day, collaborating for shared success is the only way forward. The US is the most powerful and the most technologically capable nation in the world. It should have more confidence in its ability to address cyber security issues.

04 Akiko Fujita: I recently heard you say, "The US has helped us in a great way by giving us these difficulties", the implication being that you have been able to accelerate your efforts for increasing self-reliance. I'm wondering if that's the case. What do you see is your future with some of these partners that you have, like Intel, Qualcomm, and Micron in the US?

Ren: If the US government allows US companies to supply to us, we will continue to buy from them, even in areas where we have developed our own alternatives. We adopted this approach in the past. Last year, we bought 50 million chipsets from Qualcomm even though we have our own complete chipset portfolio. We can live without Qualcomm, but we are still committed to working with them.

Intel is a provider of x86 servers. We also have our TaiShan servers powered by our Kunpeng CPUs. We will redouble our efforts to make our products even better over time. If Intel can continue supplying Huawei to help us maintain our leading position, then we will still buy in huge volumes from them. We hope that Intel's x86 servers will be able to secure a huge market share in the data communications area. We're only looking to obtain a tiny slice of the market, so that we will not squeeze Intel out. As long as the US is open to Huawei, we will keep purchasing huge amounts of US components, even

in areas where we have developed our own alternatives.

Our procurement department adheres to the principle of not sourcing from only one supplier but from two or three at the same time. If there is only one supplier for a certain component, we will research and develop our own product as a backup. The fact that we have capabilities in certain areas doesn't mean we will back off from our US partners. We will continue to welcome US tech companies with open arms. We won't change our stance on this.

05 Akiko Fujita: And as it stands right now, you are still in the wait-and-see mode because some of these American companies are still waiting for licenses before being able to sell to you. How long can you last without anything from the US?

Ren: I don't think we are in a wait-and-see mode. Instead, we are making every effort to ensure supply continuity. Since the US ban was announced, we have not experienced any shipment discontinuity for a single day. If US companies were to stop supplying to us altogether, our production would not stop for a single day. Rather, we would ramp up production. We will face some difficulties because we need to switch product versions. To do that, we need more staff. This year, we have recruited over 6,000 new employees thus far to optimize

or replace existing versions. During a version switch, all teams – including R&D, marketing and sales, and delivery – need to deliver products to customers in new ways. This means a bigger workforce and more costs.

There's no lethal risk that threatens Huawei's survival. The more advanced a product is, the fewer risks we face. We have our own "Plan B". For example, in 5G, Huawei is the sole provider of many cutting-edge chips. Our optical chips are the most advanced in the world. We can live without US suppliers in many areas, but this is not what we want. We want to work with US partners to jointly fulfill the responsibilities we have of building an information society. Huawei is not ambitious. We don't want to dominate the world. We only want to work with our partners to build an information society.

If Huawei were ambitious, we would have already dominated the most profitable markets. Why are we working in Africa, in remote regions in the Himalayas, and in deserts? We are doing this to serve humanity. Commercial interest is not our sole objective.

06 Akiko Fujita: So, when you say you have hired additional staff to work hard so that you can continue to move forward, is this to do with the idea of becoming increasingly self-reliant? What is your goal you have in terms of how much of products and

components that you want to produce in-house in the future?

Ren: We still have to depend on the rest of the world, because no one will succeed on their own in the information society. We have to depend on the world, including the US, so we hope the US will become more open. US government officials don't know much about Huawei, and if they come and visit our company, they may change their perceptions of us. There are rumors that we are struggling to survive, but you can see how many people eating in our canteens every day. That means our business is going on as usual.

We advocate for openness, and have no intention of working alone or isolating ourselves from others. Even if we do develop all the components we need on our own, we will continue buying components from others. That means half of our components will come from ourselves and the other half from others. We absolutely won't allow ourselves to become the sole supplier of certain components by squeezing others out of the market. When others stop supplying to us, we will use more of our own components. When others resume their supply, we will buy more from them. We maintain some supply flexibility, and we will never take the path of working alone or isolating ourselves from others.

We hope the world will be more open. But first we

ourselves must be strong enough so that we will be able to survive if others don't open to us. Otherwise, we wouldn't be having this interview here today. The fact that I'm giving this interview means we are strong enough to survive and we will continue to be so. If you come by three years later, you will see us still alive and you may see more new buildings on our campus.

Akiko Fujita: I want to pick up on that point that you just made. You said that if the US could come closer and see your company, they would realize what this company is all about. Why not just invite administration in?

Ren: We always welcome US authorities to visit us. Some US politicians drove by but didn't come in, and some would rather wait outside while others are meeting us. We can do nothing about that. I suggest they change the color of their glasses, so that they may accept the reality.

People in US industry and academia know more about us than these politicians. They should listen more to these people, so that they may change their misperceptions of us.

Akiko Fujita: Have you extended an invitation to the administration? If there are senators and administrative officials coming into China, have you extended a hand to say, "Come take a look at our

company and we can show you that we're not exactly as you perceive it to be"?

Ren: Many US senators and members from the House of Representatives have visited us, including Rick Perry, the Governor of Texas. He once led a delegation consisting of a dozen of Republican senators to our company, with whom I met and exchanged views. Many people from the US have visited us, but it seemed that no one was willing to speak for us. I hope more people would understand us and speak for us.

Akiko Fujita: Which lawmakers have you met with? Just to clarify?

Ren: I can't remember their names, but many senators and members from the House of Representatives have visited us.

07 Akiko Fujita: Okay. I want to talk about what is at the heart of this. Why has the US said it targeted Huawei due to concerns over national security? You look at American companies, Cisco, Nortel, T-Mobile, and Motorola, they have all accused your company of stealing trade secrets and gone to court with documentation to back up the accusations. Why should those companies or the US government trust you now?

Ren: New technologies are highly complicated. Although

the US is very strong, it hasn't developed all these technologies yet, so they have decided to pick on us by focusing on some insignificant issues. We still trust the US courts for their rulings. They have made rulings on some of our lawsuits and made the right decision on behalf of the US government.

We are far ahead of US companies in terms of new technologies. Huawei has over 11,500 patents granted by the US government, and has over 90,000 patents that support the foundation of the information society. The US should look more at Huawei's contributions to society, instead of finding faults with our weaknesses. If that happened, our collaboration with the US would become much better.

Akiko Fujita: I guess what I'm trying to get at is, if you look at from the US side, there's been a lot of litigation against Huawei and there have been multiple companies that have come forward with these accusations. Can you understand where the distrust on the American side is coming from? Whether you agree with it or not, given what has transpired over the past 10 years, can you understand why there's so much distrust in the US?

Ren: This is because Huawei is far ahead of the competition. The US has been used to being the world's No. 1. They will never believe that anyone is better than

them. That's why they have this mindset.

Akiko Fujita: And this is my last point on this, but the accusation is not based on where you are right now, which is the leader in 5G, yes, but that you got here by stealing from American companies.

Ren: From the very first day Huawei was founded, we have valued intellectual property (IP) and opposed the theft of IP. This is because Huawei is a victim of IP theft and many individuals in China have stolen our IP. None of our litigation related to the US has found that Huawei has maliciously stolen anyone else's IP.

Our past success was created by our own hard work. Our R&D investment ranks No. 5 around the world and we are a non-public company. We don't have the problem that the US is imagining.

08 Akiko Fujita: There are reports that have come out over the last few days that suggest you are planning significant layoffs over Futurewei R&D in the US. What is the future of Huawei's presence in the US?

Ren: First, Futurewei is a US company. According to the US Entity List regulations, they cannot send any of their R&D results to Huawei and no employees of Futurewei are allowed to have any contact with Huawei employees. This makes it difficult for us to manage this

company and collaborate with them. We'd better wait for the US's interpretation of the Entity List, or the US's removal of Huawei from the list.

The US is home to the world's most advanced science and technology. If they are willing to work with us, we will increase our investment in technical partnerships. Before Huawei was added to the Entity List, we invested 500 million US dollars into Futurewei in 2018 and planned to invest 600 million US dollars in 2019. Now we cannot make further investment because we are not allowed to engage with Futurewei employees. What is our next step? This depends on the US government's direction.

Akiko Fujita: Just to confirm, there are layoffs now at Futurewei and your R&D center in the US is essentially on hold right now because of Huawei being on the Entity List?

Ren: Yes. This is all because we cannot engage with Futurewei employees. If we cannot even discuss their work arrangements, how can they do their work?

09

Akiko Fujita: Let me ask you about something that has been a consistent part of your narrative. I know you've heard this over and over, but let's talk about your military past as an engineer in the PLA. I know

historically you talked about how insignificant that was when you think about when this all played out. But the US administration, which has put you on the Entity List, has continuously raised this. How far do you think you need to go to convince the administration, you know, that there's no tie there right now? I'm wondering if you've thought about what more you can do and what more Huawei needs to do to get that message out.

Ren: First, I've never considered needing to convince the US administration of my identity. I believe survival is success. In the future, I also won't attempt to clarify who I am to the US government. I am a clean man, and I don't think it's necessary to ask people to check whether I am clean or not.

There are also many veterans working in US companies. But do we say that these companies are all backed by the US military? I think the US should put themselves in our shoes. China has had over 50 million veterans since 1970s, and these veterans need to work and make a living. The employment of a veteran does not suggest a company's relationship with the military. What's more, I was just a low-ranking member of the army.

I've never considered trying to convince the US of who I am and will not in the future. I don't care what they think about me. What matters is that we win

markets. No one can rely on others to fight their battles and win markets. I don't believe in any gods. I believe that we can only rely on ourselves, not anyone else.

10

Akiko Fujita: I know you've gone back and forth. You've been asked this question on whether in fact you would be willing to take a call from President Trump. I've heard you say before that, you know, "Why would he call me?", "He has other things to do", and "We don't speak the same language". But I've also heard you say recently in an interview that yes, you are willing to take that call. Where do you stand on that right now? If he calls tomorrow, would you have a conversation with the president? In addition to that, I think you would get along with the president.

Ren: I think it could be possible. My family has said that we seem to have similar personalities, and we both sometimes act a little bit high-handed.

We have been communicating with the US government, for example, through its District Courts in New York and Texas. The US government can communicate with us through our lawyers. Is it really necessary to ask their big president to make a phone call to me? In addition, communication over the phone may not be clear enough. They can communicate with us through the lawyers.

11 Akiko Fujita: Huawei is part of the trade conversation.
Whether you like it or not, President Trump has made it a part of that. Since the G20 Summit, there has been a back and forth, with the reports suggesting that the Chinese government is really pushing the US to reduce its pressure, back off on your company as part of the concessions from the US side. Are you willing to take that role? If the Chinese government asked you to be involved in the discussions, would you be willing to take part?

Ren: First, the US has filed criminal charges against us, instead of attempting to negotiate. The US is a country ruled by law, and issues related to law should be solved in the courts. I hope the relevant lawsuits will reach their conclusions quickly. The procedures are too long and slow. I hope our problems with the US will be solved quickly through the law. If they need to talk, talk through the lawyers with evidence.

Second, we barely sell anything in the US, so the trade between China and the US has nothing to do with us, and we won't ask the Chinese government to negotiate for us.

Trump wants to use Huawei as a bargaining chip in his negotiations. If we got involved, the Chinese government would have to make concessions for us. Why should China make concessions for Huawei? Some

people comment that the Chinese government could trade off something for Huawei. But Huawei didn't commit any crimes, so why should they have to save us? In addition, negotiations won't help. The US House of Representatives has passed a proposal that says Huawei may not be removed from the Entity List for at least five years. Should we just wait five years? Impossible.

12

Akiko Fujita: I want to talk about where Huawei's business is going. You have a presence in 170 countries. I know outside China, Europe has been a big growth area. But as a result of the pressure that comes from Washington, you faced a lot of headwinds in some of the markets. The US is, as you point out, virtually zero. Australia has banned Huawei, Japan is now onboard, and Europe is still a bit of a mixed picture. Where do you see your growth coming from in the next few years?

Ren: First of all, Huawei has stayed customer-centric over the past 30-plus years. Our priority has been to create value for our customers, and we always put their interests first. During this period, we won the trust of the majority of our customers. They have been continuing to sign contracts with us despite all of the pressure from the US, which means they place a great deal of trust in us. Huawei is continuing to grow. This just goes to show that our customers are not breaking ties with us.

Second, Huawei is leading the world in 5G and also in many other areas, so we have full confidence that our customers will continue buying from us. The direction we are moving in and the pace of our development have not changed. We will need to make some temporary adjustments over the next two years though, as we switch the versions being used for many of our components, and it will take time to adjust and replace the existing versions. During this transition period, our growth may slow down, but from what we've seen, it won't be very much. We are continuing to move in the direction we have set, and this direction will not change.

Akiko Fujita: What do you mean when you say it takes time to switch versions?

Ren: For example, if a company refuses to sell a certain component to Huawei, we will have to replace it with one of our own. This means that its version must be replaced, which will take time. During this transition period, we will face some pressure in terms of production capacity and volume. All that to say, while our growth may decrease over the next two years, it will rebound in two or three years.

13

Akiko Fujita: The operating system is one of the big challenges that you see. You recently made some comments about the internal, the alternate operating

system that you've been developing not necessarily being made to run on smartphones. If you can't use Android, do you have a plan B?

Ren: First of all, I'd like to say a few words about our in-house OS Hongmeng. This operating system is developed to adapt to future scenarios like the Internet of Things, artificial intelligence, industrial control, and autonomous driving. The latency of this system is no more than 5 milliseconds and sometimes even less than one millisecond.

We plan to apply this operating system to IoT applications like smart watches, smart TVs, and connected vehicles, but for right now, we really don't have plans to apply it to smartphones. Huawei has an agreement with Google, and we respect their work and the achievements they have made. We will only look into developing our own smartphone OS when Android is no longer an option, but as for now, we don't plan on it. IoT is actually a part of the AI industry, which will be a huge industry in the near future. 5G will simply provide support for it.

Akiko Fujita: It sounds like you are operating under the assumption that Google will get the waiver and be granted a license to be able to supply Android to Huawei. Are you in touch with Google executives at all?

Ren: No, I have not met with executives from Google,

but I believe both of our companies are working hard to resolve this issue. We are working to develop a backup operating system while they are working on communicating with the US government. I hope our efforts will pay off.

14 Akiko Fujita: What about your 5G ambitions? Do you have to change the expectation a bit as a result of these very headwinds that you've talked about?

Ren: No, we have not adjusted our goals for 5G. This year, we are expected to ship 600,000 5G base stations, which will grow to around 1.5 million next year. Our 5G business will not be affected by the US ban in any way. None of our 5G components will be affected, either. We have already developed all of the high-end components we need.

Akiko Fujita: So the base stations, the routers, you can continue to make those without any US components?

Ren: That's correct. According to our estimations, revenue from our network connection business will drop by 2% as a result of the ban, and our consumer business will be affected a bit more severely. Of course, the drop is the result of comparisons with our goals for this year set at the beginning of 2019; our sales revenue will still be higher than last year.

Akiko Fujita: Just to clarify, the 2% decline is on the 5G equipment? The smartphones? What specifically were you referring to?

Ren: This decline will be from the impact of cutting out some minor parts of our business. The 5G part of our business will not be negatively affected. In fact, it will see substantial growth.

Akiko Fujita: Do you see other areas when you look at your business and the portfolio Huawei has right now? Will you think that you may need to cut? I've heard you say on many occasions that maybe some of the minor businesses, you need to shed the fat a little?

Ren: First of all, we have not considered any specific areas we will cut. We have just considered the specific products we will cut in each area.

In Huawei's early years, we had many products. Now we have combined our products and have used new products to replace and remove many older ones. In general, the US ban has had no impact on our business continuity or on how advanced the products we use to serve our customers are. If the US becomes more open and collaborative, Huawei will develop faster and be able to contribute more to humanity.

Akiko Fujita: When you say some of the products that you may not need, what are you referring to?

Ren: I was referring to low-end and outdated products. We have many such products. We have reviewed these products. Now one new product can replace dozens of outdated products. After these older products are replaced, we will only provide spare parts for these products to our customers.

15

Akiko Fujita: I want to ask you about something that I think is quite personal for you, which is your daughter, arrested back in December. You are a father. You've seen your daughter going through this legal ordeal for several months now. She's in Canada. 24-hour surveillance and ankle bracelet. What do you think as a father, as you see what has been playing out over in Canada?

Ren: First of all, we have faith in the law. Under the law, we believe the case will be addressed based on facts and evidence. Emotions cannot resolve anything. The case must be addressed by law. As the legal procedure takes a relatively long time, we have to wait. There is no better alternative.

Akiko Fujita: Do you talk to her often?

Ren: When I call her, she sometimes says they are eating hotpot, or making dumplings or noodles. She said she was busy with work for decades, and rarely had the

chance to relax that she has had in recent months.

Akiko Fujita: What did you tell her about, amid all those uncertainties, how she approaches all these? What advice did you give to your daughter as a father?

Ren: The only solution is to resolve the case through legal procedures. Such a big international issue cannot be solved through individual efforts. We believe the law is fair, just, open, and transparent, and our defense is based on facts and evidence.

Akiko Fujita: How hopeful are you that it will be resolved and your daughter will not be extradited to the US?

Ren: It's not just that my daughter should not be extradited to the US, but that she should be freed and acquitted of all charges. She is completely innocent and it was a mistake to arrest her. But we need to wait for the court's verdict.

16 Akiko Fujita: I want to go back a bit from talking about Huawei to what has been playing out in China. Over the last several years, we have seen big growth in tech here in China. You know all the big names, Alibaba, Baidu, obviously Huawei in the mix. Despite that success, though, there are all those skeptics who say that those companies grew because they had no

competition, and that Western companies could not operate here without a joint venture in place. Is it time to open up the markets for the likes of Google or Facebook, so that you can actually come forward and say, "Look, we competed against the best and became the best"?

Ren: We have very good partnerships with Google, Facebook, and many other tech companies, and we are growing together in the world. Personally, I would like to see a more open market, but this is decided by the governments. For example, the US government has the sovereign right to close its doors to Huawei. We will try to persuade them to be more open and less conservative, but the decision is still made by the government. It's the same here. You can also try to persuade the Chinese government.

Akiko Fujita: Do you think that this cloud will still hover over these companies until the Chinese government opens its doors to some of these companies? Yes, these companies have grown in their own ways and yet you continue to face skeptics who say you are only this great because the market is not open. Is it time for the Chinese government to change its stance, and open up the market more to Western companies, especially tech companies?

Ren: The premise behind these questions is wrong.

Huawei has been facing fierce global competition ever since it was founded. In the 1980s, 100% of China's communications equipment was supplied by foreign vendors, mainly eight vendors from seven countries. These included NEC and Fujitsu from Japan, Lucent from the US, Alcatel from France, Nortel from Canada, BTM from Belgium, Siemens from Germany, and Ericsson from Sweden. We grew up in the small crevices between these Western giants. How could you say we didn't experience full competition? The story is similar in the enterprise communications market, where Cisco used to dominate the world and we started from scratch. But this year, we surpassed Cisco. This is not because Cisco yielded to us, but because we have grown strong by ourselves, tempered through full competition. No one has ever protected us, and we don't expect anyone to protect us in the future.

17 Akiko Fujita: Can I get two more questions? What time is it? Can I just ask one more question though? Yesterday, we had a chance to walk around the campus and talk to some of your employees, and one of the conversations really struck me because there was a researcher who said, "Look, I came to Huawei because it is committed to cutting-edge technology, but I worry that the technology that I'm developing

here could be misconstrued as a national security concern", that essentially, he feels the weight of the pressure that's coming from the US. What do you say to your employees who are wondering what this means for the future of the company and how they should push forward under all this pressure?

Ren: In fact, our employees have become more confident. I think this employee said that because he feels his work results are too advanced and too good. He may be proud of himself, and is indicating he has made great achievements in an understated way. I think this employee should be praised, as he is proud of himself. He believes that the US sees us as a threat only because we are too advanced. Of course, this is my personal interpretation. I don't know him.

We are very open at Huawei, and allow all kinds of ideas and voices. Huawei has an online forum called Xinsheng Community, where many people criticize me. Huawei's Blue Team, an adversarial wargame team within the company, once published an article called The Ten Sins of Ren Zhengfei; ten sins, not ten mistakes. And we responded by asking the whole company to study this article. We are not afraid of mistakes. We just correct them and make progress. We are open and free at Huawei.

It's the same for you here. You can interview anyone

on our campus. If you have doubts, you can randomly pull someone aside in the canteens and ask them to take you to the Huawei employee apartment buildings. If their key can open the door, it will prove they are a Huawei employee, not pretending. By interviewing them, you will get a lot of genuine information.

I would like you to talk with all our employees. Our company allows employees to make some mistakes when communicating with the media. It's fine as long as 60% of what they say is right, and by "right", I mean what they really think. Currently, 70% of the international media coverage towards Huawei is negative, and the remaining 30% seems to be neutral. These media outlets do not view us positively, but at least they are friendly to us. Even if 40% of what our employees say is wrong, as long as they keep communicating, they will help turn these negative media reports into neutral ones. So it's a good thing. It doesn't matter if they make some mistakes. We encourage them to speak out about their real experiences and thoughts.

18 Krystal Hu: It seems like Huawei has been making preparations for the crackdown from the US government and to some extent, you have foreseen the tension between the two largest economies in the world. Do you think you will stay in this condition for a

while? What's your judgment of the situation?

Ren: Actually, we are not making preparations for the pressures coming from the US. Instead, we need to push for continuity and stability across the entire industry. We want to ensure that none of our products come from a single supplier; otherwise, a fire or some other disaster could cause us to collapse. That's why we have backups. These backups are not intended to cope with the US pressure.

Despite the attacks from the US, we are not hostile towards them. Instead, we think we should learn from US tech companies, and remain on friendly terms. Right now the US is not acting friendly towards us, but we are putting up with it. The US has a strong mechanism for self-correction, and they will soon get back on track. We will continue to remain friendly towards the US.

We have nothing to do with the trade frictions between the US and China. I haven't personally looked into these frictions. I only pay attention to advanced technologies from the US, not politics or anything else like that. Nor do I care much about what conflicts they have. What I do care about is focusing our efforts on researching and resolving customer issues. That's why now we have won great recognition from our customers. Sometimes, the US puts a great deal of pressure on us, but our customers have stuck with us and continued

buying our products. That means they understand and trust us.

As for how long the conflict between the US and China will last, I think that all depends on the level of mutual understanding between the two countries. If the two countries could understand each other and come to a compromise, this problem might be easily resolved. If either of them tries to put the other at a disadvantage, this situation that we're in will just continue to exist for a long time.

We can tolerate the unfriendly international environment. So big changes to the external environment will have no impact on our internal operations. Over the past 30-plus years, we have gone through wars, epidemics, economic collapses, financial crises, and many other difficulties. We have been through many ups and downs. The world is unbalanced, and I think these challenges were tests for us. This time, it is the biggest test we have undertaken yet. Will we survive? Definitely.

We will remain friendly to the US. We will not hate the US just because several of its politicians are attacking us. The US is a great country. It has transformed from largely wilderness into such a developed country within just 200 years. This is really a great accomplishment.

I hope that China will also contribute to the world. The progress of humanity won't be a zero-sum game.

If we run out of food, we don't have to catch all the fish in the sea, and we just have to learn to farm them sustainably.

AI will help increase, not reduce, the wealth of human beings. No countries will be plunged into war just because of lack of food or uneven distribution of wealth. The possibility of war will be slimmer. People will become increasingly reluctant to fight over a lunch box. Or at least I don't want to have a lunch box.

19

Akiko Fujita: We're trying to get to the material impact to the company as a result of Huawei being added to the Entity List. You said before that 30 billion US dollars is the number you've put on the company in terms of the impact from this designation. Does that number still hold?

Ren: I think the Entity List is actually a good thing for our company. It's not a bad thing. In the past, our employees turned a deaf ear to our training. Many employees enjoyed their life in their comfort zone. They earned a lot, and often spent extravagantly. More and more employees were not fully committed to their work.

The Entity List has injected a sense of crisis in our employees, and inspired passion across the company. This has provided an opportunity for us to reposition

underperforming managers and replace them with outstanding young employees. This has helped increase our vitality. In this sense, the Entity List is not a negative, but a positive thing. It has motivated our team.

Of course, it would be better if Huawei were removed from the Entity List. But even if that doesn't happen, we will not face too much pressure. Some say that removal may not happen for five years, but will we even need the removal by that point? I don't think so. The US delayed the ban on Huawei by 90 days, but this has done nothing good for us. Originally, the Entity List stated that many spare parts and components are not allowed to be sold to Huawei. After the 90-day delay, the Entity List covers a wider scope, and it even intends to include academic organizations, standards bodies, and universities. We must get mentally prepared. If the ban were delayed by five years, there might be even greater attacks against us.

Despite their attacks, we will not hate the US. If we keep chomping away at the grass like sheep, we will just get fat. The US is now chasing us like a wolf, so we have to start running. This will help us get fit again and become more effective.

Akiko Fujita: I want to try to put a number on this though. The material impact, is it still 30 billion US dollars?

Ren: In Q1 of next year, we will release our 2019 financial report. At the end of July, we will announce our H1 business results. But they do not represent our annual financial report. In H1 of this year, we enjoyed high-speed growth for about four months. Following the May 16 ban, we continued growing due to the momentum we'd built up previously. Our H1 business results should be very good, but we will see real material impact in the second half of the year.

We will release our new financial report in Q1 next year. I believe the results will be quite good.

20 Krystal Hu: We have seen many US technology companies like Amazon and Microsoft working directly with the US government and the military. They sign contracts with the US military. Why is Huawei so sensitive and unwilling to work with the Chinese government and the military?

Ren: First of all, the nature of our work is totally different from that of the military. We develop communications products for civilian use, not for military use. So we don't work with the military. The military tends to invest in R&D regardless of costs. They can put all their money in a single thing. Reaching targets is their top priority. We cannot spend money recklessly on something unwanted by the market; otherwise, our mobile phones

will sell poorly. We value totally different things from the military, so we don't need to work with them. Some US companies can work with the military, because the US is so powerful. They can cooperate with each other as long as they want.

Second, there is a big gap between military and civilian industries. Military components are generally developed regardless of costs. Who can afford to install these components? Mobile phone technologies are actually very complex, but they are still cheap. The ways the military and civilian industries work are totally different. The military will spare no expense to develop a product, even if they just need a couple of them. At a country level, they may need only a few hundred or a few thousand of the product. Taking the atomic bomb for example. The US just has a few thousand of them. Generally speaking, civilian and military industries are totally different in terms of R&D, operating methods, and objectives. Military research is not suitable for civilian products.

21 Akiko Fujita: Given the environment that we're in right now, I've heard a lot of people refer to this as a new Cold War, saying that there's a digital iron curtain going up as a result of what the US has done moving forward on pressuring the Chinese in trying to sort of

constrain the technology. Is that where we're headed right now?

Ren: We've never wanted to curb the development of foreign companies. We communicate with companies, universities, and competitors in a friendly and transparent manner. We even keep open lines of communication with companies like Ericsson and Nokia.

We prefer to collaborate with the rest of the world in an open and friendly manner. Although the US is giving us a hard time now, if they stop doing so, we can still be friends. We will continue to buy components from US companies. However, we have to be more cautious. In the past, we were comfortable with signing 10-year contracts with US companies, buying large quantities of goods from them. But now, we have to sign smaller contracts on a rolling basis. In case they no longer sell us certain components, all the other components will become useless. By signing smaller contracts on a rolling basis, we will be able to more easily bear the losses caused by a supply problem.

22

Akiko Fujita: One of the legal cases that I didn't ask you about is the one involving our parent company, Verizon. I know that you filed a lawsuit or sent some letter demanding one billion US dollars in licensing for your patents. I'm wondering why you decided to do

that now. Can you help us understand the timing of it?

Ren: The timing wasn't taken into account when we made that move. Charging IP royalties is a standard international practice. We aren't even charging Verizon that much in licensing. People are saying the rates we chose are quite low. Verizon has never bought anything from us, but they are using many of our patents, so they should pay us royalties. Paying royalties could even galvanize them to solve some of their own development problems, so why are they choosing to delay the payment? Moreover, the US is a country governed by the rule of law. If a US company refuses to pay IP royalties, the US's reputation around the world will be negatively affected. Moreover, many non-US companies use US patents. If other countries follow suit and start to refuse to pay royalties, then it will be the US that will suffer the most, not China.

23 Akiko Fujita: One of the things that I have noticed walking around campus was the image of the aircraft. You've talked a lot about this aircraft being able to fly despite having holes in it. Why have you chosen that aircraft to represent Huawei? Why this symbolism?

Ren: I stumbled upon this image on wukong.com. I saw it on the Internet shortly after the US put us on the Entity List. I had the feeling that it resembled us so

much, seriously injured with wounds all over our bodies and with only our hearts beating. The aircraft was able to fly home. I believe we will also be able to fly home and land safe and sound. That's why I picked this photo. When I posted it on Xinsheng Community, many people had the same feeling, and it began circulating widely.

24 Akiko Fujita: I know from conversations this morning that you had identified US-China tensions as a risk more than 10 years ago. I'm wondering what the catalyst was.

Ren: This narrative was made up by some employees trying to explain what we did in the past based on what is happening today. When we decided to make our own chips, we didn't do it to address possible conflicts between China and the US or between Huawei and the US. Huawei has always been learning from US companies and personally I am a fan of the US. I admire US culture, management practices, and technologies. When we started to make chips, our purpose was not to guard against the US.

It was because we believed it was essential to engage in some research if we wanted to develop and stay at the forefront of society. We invest heavily in basic research and we have many scientists. People may wonder why Huawei needs so many scientists and why

Huawei spends so much money funding university research.

This is because the world is developing so fast, and it takes less time to translate theories into products. By staying ahead, we can earn more money. With this extra money, we can continue to invest. That's how we have developed into what we are today. Our technologies are a lot more advanced than the rest. In fact, they are too advanced for customers to resist even if our prices are higher.

25 **Akiko Fujita: Is there a particular company or a business leader that you really admire in the US?**

Ren: I admire a lot of them. There are many great business leaders in the US. I admire the leaders of Google, Amazon, and the like. I'm also a big fan of Bill Gates and Steve Jobs. My younger daughter is a huge fan of Mr. Jobs. On the day he passed away, she was still a little girl and proposed that we have a moment of silence to mourn him, and we did.

Why do we have so much admiration for the US? Just think about how the US has become so powerful. All the US giants used to be small companies. They became what they are today by adjusting their structures and changing managers along the way, step by step. When

I first heard about Microsoft and Apple, they were still very small. Huawei was of course even smaller, maybe smaller than half a sesame seed.

When a company is small, it must ensure that its internal structure is extremely fine-grained and stable. By doing so, it can remain stable as it grows bigger. We also started out as a small company, and became what we are today by optimizing and overlaying our structure time and time again. Today it may seem that Huawei is a "fortress" that cannot be demolished. This is because the path we took as we grew from a small company is similar to the way small companies in the US grow. We are able to fight huge battles. We can get used to the pressure even if the sanctions become the norm for us. In this sense, we are similar to US companies.

Second, I was once an army man. From watching movies about D-Day, I learned that 78,000 soldiers from the Allied forces died during their attempt to seize the beach. I once went to Normandy to visit the American cemetery. I have also visited the American cemetery in Manila of the Philippines. I learned how the US treated soldiers who had made contributions. These are both good examples to follow. We should also learn from US companies. Based on what we've learned, we can reinvent ourselves. We adopt a completely open model.

When you are here, you might notice that Huawei

is not like a Chinese company at all. Except for our canteens and all the Chinese faces, it's more like a Western company. We have absorbed the good, advanced elements of the Western culture. Isn't our corporate culture like Protestant culture? We have actually learned a lot from US companies, so the US is our teacher and we should thank it.

Nevertheless, American IT companies have made several major mistakes during their development.

First, during the 1990s, after digital circuits and wireless technology emerged, the US thought it was very powerful and tried to force the adoption of CDMA. Qualcomm was a leader in CDMA and raised the threshold too much, so the world didn't support it. The US also tried to force the adoption of WiMAX (Worldwide Interoperability of Microwave Access), aiming to turn computer technology into communications technology. They didn't realize that computers are about local area networks and communications are about global networks. The development of the standards for the global communications system is attributable to dozens of years of efforts made by tens of thousands of engineers who worked together in the ITU (International Telecommunication Union). When trying to challenge the world, American communications vendors took the wrong path. That gave rise to 3GPP, which resulted

in the collective decline of these US companies. Their decline was not because of Huawei's rise, but because they were moving in the opposite direction of the world's development.

Second, the x86 CPU developed by the US was originally in a dominant position. However, due to Arm's breakthroughs in architecture, a new competitive environment formed for CPUs.

Third, the Internet developed too fast, and the US has established the world's largest and most competitive ecosystem. However, this doesn't mean ecosystems in other countries and regions cannot grow.

Following the emergence of these three "tracks", humanity started moving toward AI. The Internet of Things is a part of AI, which needs low latency. Today, in edge computing, people may object to the Von Neumann architecture. However, in AI and the big clouds of the future, this architecture will continue to be used. It involves supercomputers, including super-large-scale storage and super-fast connections. The US is abandoning 5G. Even if they have supercomputers and super-large-scale storage, the US might still fall behind because they don't have super-fast connections. All three of these things are indispensable. For that reason, a new breaking point will appear. These breaking points will leave the US behind. 5G boasts high bandwidth

and high uplink speeds. Previous generations like 4G mainly connect individual users, so that is B2C business. In contrast, 5G connects enterprise operations, so that is B2C and B2B. The high uplink speed of 5G is conducive to the realization of industrial automation, AI, and connected vehicles.



Ren Zhengfei's Italian Media Roundtable

July 18, 2019 Shenzhen, China

Welcome to our company, everyone. I am very glad to be here with all of you today. I have always found Italy to be a beautiful country. I like Italy very much. Feel free to throw your hardest questions over to me, I will be honest in my responses. Thank you!

01 Before last December, you seldom talked to the media, including the Chinese media. You had taken only two or three interviews in the previous 10 or more years. But after your daughter Meng Wanzhou was detained by Canada, you communicated with the media more often. Could you please tell us the reason? In addition, from your perspective, how will your daughter's case end?

Ren: First of all, I am not a man who doesn't like to talk. I give a lot of speeches internally at our company. How could I lead the company as a leader? I give a lot of speeches. I just didn't talk with the media that much in the past.

Following the Vancouver incident, the US filed a lawsuit against us in the United States District Court for the Eastern District of New York and then added us to its Entity List. After that, almost all international coverage about Huawei was negative. We felt like we were facing quite a bit of prejudice.

So I feel that I had the responsibility to stand up and talk more to the public during times of crisis, to remove

some of the dark clouds hovering over the company and bring back some light and hope. Today, our skies are brighter and things don't seem as dark as they did. 30% of media reports on us are now positive even if the remaining 70% are still relatively negative.

Second, the US is very powerful and its voice resonates around the world. People tend to believe whatever it says. Because of this, we have faced a lot of pressure. I have the responsibility to stand up and speak out. By doing so, I can:

First, boost customer confidence in us, helping reassure them that we won't collapse and we will be able to continue serving them.

Second, strengthen supplier confidence, letting them know we can survive and will be able to pay them back if they sell components to us.

Third, strengthen employee confidence, so that they will continue working hard, knowing the company will survive. Even though the US is cracking down hard on us, we are still quite strong.

Last but not least, by speaking out, I help convey the truth about Huawei so that the world as a whole can better understand us. In the past, no one made accusations this severe against us, so we didn't have an opportunity to spread our message as widely. Today, the

US's sharp accusations are giving us this opportunity to explain ourselves and show the public who Huawei really is.

In terms of public opinion, we can see that about 30% of people understand us while the remaining 70% still don't. So we must keep on talking.

Everything I have done over the past few months has not simply aimed to save my daughter, but also to save my company. That's why I feel the need to stand up.

02 Are you still the CEO and leader when your company is in a critical situation now? Regarding 5G rollout and network infrastructure in Europe, Huawei has not supplied much equipment for core networks there. Do you think this will change in the next several months or even years? If Huawei is still excluded from core networks, will this delay 5G rollout in Europe?

Ren: First, in such a critical situation, I am still the most fit to serve as CEO. I have the ability to lead our company out of darkness and move towards a bright future. Huawei will keep growing even without the support of the US. We have what it takes to stand on our own and thrive as a global leader.

Second, in Europe, which 5G vendors to choose is up to the individual countries and carriers in the region,

based on their own interests. We can't make that decision for them.

Let me explain a little bit about 5G first. Then I will talk about how 5G will benefit Europe.

5G is not simply an extension of 4G. 2G, 3G, and 4G are, in essence, B2C businesses that connect people to networks. At present, network upload speeds are quite low, even though download speeds are high. On existing networks, uploading images is very slow. In autonomous driving, for example, the only way to ensure people's safety is if the network can transmit tons of images every second. Existing networks simply cannot support this type of industrial automated control.

5G bandwidth is 10 to 100 times larger than that of 4G, so uplink bandwidths can be ultra-high. 5G is also different from 4G in terms of data transmission architecture. 5G will support both B2C and B2B. The second B in B2B refers to high-speed trains, cars, aircrafts, and the automated production of Industry 4.0.

There are two types of architecture for 5G.

The first is the non-standalone (NSA) architecture, where 5G coexists with 4G. For example, a 4G smartphone can run on this kind of 5G network. The NSA architecture only provides higher bandwidth than 4G, but it cannot support industrial automated control.

A 5G core network supporting both 4G and 5G systems can continue using 4G architecture.

The other architecture is the standalone (SA) architecture, where only 5G exists. This model doesn't have to support many 4G systems, so its terminals and system equipment are very simple. This means uplink speeds will be superfast, with a millisecond-level latency. Equipped with this kind of 5G network, a doctor in Italy can remotely guide a heart surgery in a rural hospital in China. What the Italian doctor sees, for example, how fast the scalpel is moving, must be in sync with what's really happening on site. The Italian doctor wouldn't be able to operate if the network failed to transmit images in real time.

All of you work in the media sector, so you must have seen the trails left behind fast-moving objects on your screen before. This is caused by high network latency, and it can be solved by the 5G SA model. 5G SA networks require our new type of core network equipment.

In a 5G network, information packages that are transmitted through base stations or transport networks will not be opened, so these two layers do not cause any information security issues. Information packages aren't opened until they reach the core layer of the network.

The UK's Prime Minister Theresa May has said that

the UK can buy Huawei products for non-core parts of their networks. This makes sense. After recent debate though, some members of UK Parliament concluded that the UK may only be able to stay far ahead if the country chooses to deploy Huawei's core technology. Ultimately, the decision is in the hands of individual European countries and carriers.

In China, the 5G licenses that have been issued as well as the 5G networks that are being built by carriers use the NSA model, where 4G and 5G coexist. Huawei is right now the only company in the world that can provide 5G SA solutions. According to China's Bidding Law, bidding for these kinds of products can only begin when there are three qualified vendors who can compete, so China won't start deploying 5G SA networks until next year. We are still waiting for Qualcomm to catch up.

03 The US may stop its supply of key components to Huawei anytime, including chips, servers, and software. That is like sentencing a tech company to death. Is Huawei strong enough to be independent from these US suppliers? How can you achieve independence? And how long will it take?

Ren: We can stand on our own right now. We don't need to depend on the US to continue serving our

customers. The more advanced a system is, the more capable we are of standing on our own. Of course, we haven't continued developing components for some of our old, outdated products. There might be some impact on them. But we can use new products and new technologies to replace these old products and continue serving our customers.

04 We visited Huawei's Exhibition Hall for Virtual Restricted Shares today, and got to know that you have veto power. If the Communist Party of China or the Chinese government requests Huawei to implant backdoors in your network equipment or devices, can you exercise that power?

Ren: Of course I can, and I will certainly veto against this. As you might have seen, at the Munich Security Conference, Yang Jiechi, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and Director of the Office of the Foreign Affairs Commission of the CPC Central Committee, made it very clear that the Chinese government never requires companies to implant backdoors. Premier Li Keqiang then reiterated this position at a press conference following a recent session of the National People's Congress. Recently, when Premier Li visited our booth at this year's 16+1 Summit in Croatia, he even directly told

our staff not to implant backdoors. This is testament to their support for us when it comes to never implanting backdoors in our equipment. We have confidence in this, and please be assured that we can sign "no-backdoor" agreements with any country.

Second, if we implanted backdoors, then no one around the world would buy our equipment. If that happened, our company would go bankrupt and who would pay our debts? Our employees could leave Huawei to start their own businesses, and I would have to stay to pay the debts by myself. Do you think that is what I want? No!

05 My first question is about your daughter Meng Wanzhou. Are you still worried about her? How do you think this case will end? The second question is about information security. There are many allegations around the world that relate Huawei to information security, security issues, and backdoors. What's your response to these allegations?

Ren: First, my daughter's case should be handled by courts, because courts make rulings based on facts and evidence. I believe the courts will make fair, just, open, and transparent rulings on her case.

Second, Italy and Germany have proposed establishing

unified cyber security standards across Europe. I think every vendor should receive the same kind of security checks. Huawei has been subject to the most stringent checks in the world, but not a single security problem has been found so far. I think other vendors should be subject to the same checks. That is the only way to ensure security in Europe.

06 In a recent interview, I heard you mentioned that due to US export controls, Huawei's revenue may decrease by 30 billion US dollars. How do you think Huawei should adjust itself under this circumstance? Do you have a Plan B?

Ren: We won't have any problem surviving due to the US attacks against us. But we have to replace some versions of our products, and it will take some time for the new versions to fit in. I once said our expected revenue may decrease by 30 billion US dollars from 135 billion to around 100 billion, but this is the worst case scenario. Our revenue may decrease less than that because of the efforts of our staff. You have come and seen in person that our company is very healthy, and all departments at Huawei are functioning properly.

07 Thank you for receiving our interview. I don't know whether you have heard about Ursula von der

Leyen, the newly elected president of the European Commission. What's your view on the future of relations between the EU and China?

Ren: I'm not very familiar with the newly elected president of the European Commission, but I have seen her on TV. She has a strong presence. And I believe Europe will make strong strides as well.

Europe must simplify its trading process. China is a huge market. Starting last year, China has begun to cut tariffs on many commodities like luxuries and clothing. Europe, including Italy, needs to seize this market more rapidly. Consider automobiles, for example. China is a large consumer of automobiles and the tariffs on them are dropping. To seize more of the Chinese automobile market, Europe should not simply bind themselves with the US.

As we all know, the world's best cars are European cars and the most affordable cars are Japanese cars. US cars don't have any advantages in either quality or cost. If you can hold the Chinese market for the next few years, US automobiles will find it more difficult to enter the Chinese market.

China has applied technologies from Germany, France, and Japan, as well as some of its own when building its high-speed railways. This means huge opportunities. China also has a huge demand for

aircrafts. Europe should invest more in aircrafts to enter the Chinese market.

Chinese and European economies are complementary in many aspects. We can leverage this short window of opportunity to drive the rapid development of trade between the two sides. After the fight between the US and China is over, the US will find that the Chinese market is fully occupied by its allies. Europe should not follow in the footsteps of the US; instead, it should impose fewer economic sanctions and strive to expand room for its economic and trade development. Social stability depends on whether people's living standards are improved. Europe doesn't need an ideology; what it needs is to improve people's lives, especially those at the lowest rungs of society. This will help prevent social unrest and revolts. With a solid foundation for growth, Europe will surely continue to prosper.

08 European telecom carriers are being pressured by the US government to ban the use of Huawei equipment, but according to the information available so far, the Italian government is still willing to continue working with Huawei. In your view, is the European market, including the Italian market, important to Huawei's business? Do you think that you will ultimately succeed in the European market?

Ren: First, Europe is very important to us. That's why we have invested heavily in this market. We view Europe as our second home market. Second, many carriers have been working with Huawei for more than 20 years. Despite huge pressure from the US, many carriers still choose to buy our equipment. This shows that they place great trust in Huawei. We are confident that we can build excellent networks for Europe.

09 **Many people say that Huawei is not transparent in its ownership structure or management. We didn't know that you hold only 1.14% of Huawei's shares until you voluntarily disclosed the figure. To improve this situation, will you consider going public in Hong Kong? My second question is: From a management perspective, have you planned for succession?**

Ren: We remain fully transparent. Our financial reports are audited by KPMG, an independent third party. This means we are actually as transparent as listed companies. I really don't know what else is needed to prove our transparency. I think it is unnecessary to go public in Hong Kong just to appear more transparent.

Huawei has been moving forward in an iterative manner. Later I can share with you my speech to the Representatives' Commission, where I explained our corporate governance structure and succession. I believe

that Huawei will continue to grow steadily. We welcome you to visit us regularly so you can see how we grow. We will not collapse; we will grow even stronger.

10 You recently met with Prime Minister Conte at the Second Belt and Road Forum for International Cooperation in Beijing. How did that meeting go? How do you view the skeptics of Huawei's 5G products in the Italian government? Does Prime Minister Conte believe that Italy should keep Italian data in its own hands?

Ren: I had a very friendly meeting with Prime Minister Conte, and he places great trust in Huawei. A small group of people in Italy may be skeptical of Huawei. We totally understand that. Actually, there are people in China who also have their doubts about Huawei. It's perfectly normal that people have different opinions. For Huawei, what matters most is that we do our own job well.

11 First, don't you think you should negotiate with the US government regarding its attacks against Huawei, such as the arrest of your daughter and the Entity List? Or can you make your source code more transparent? My second question is, will you withdraw your investment from Italy if the Italian government exercises its veto

power given by the Golden Power Law or imposes more political restrictions on Huawei's business in Italy?

Ren: First of all, we do communicate with the US government. The US government already sued Huawei at its District Court for the Eastern District of New York, and we also sued the US government in a district court in Texas. These lawsuits are how we are communicating with each other using legal means. The US is a country ruled by law. I believe the best form of communication with the US is through legal channels.

Second, the adoption of the Golden Power Law will make doing business in Italy complex. Huawei doesn't have any of this kind of problems, so it's unlikely that we would be found problematic when the Golden Power Law is adopted. We have full confidence that the Italian government will not exercise its veto power against Huawei.

12 According to Italy's Golden Power Law, only non-EU telecom equipment vendors will be subject to stricter reviews. Nokia and Ericsson can be exempted. Do you think Huawei is a victim of discrimination?

Ren: No, I don't think this is discrimination against Huawei. We don't have any problems, so we actually

look forward to more reviews of our equipment; it will only show that we don't have any problems. Huawei is already subject to the strictest reviews in the world. We are not afraid of one more.

13 **First, Huawei has been operating in the telecom market for many years. Nobody talked about security when 4G appeared. Why has 5G caused so many concerns about cyber security? Second, personally, I believe in addition to the technology itself, the discussion around 5G should be about trusting Huawei. President Trump has portrayed Huawei or you as the "Prince of the Devils". Why should we trust Huawei?**

Ren: Why has 5G caused so many concerns? The US is a global leader in 3G and 4G. However, Huawei is leading in 5G; this is hard to accept for some people.

The Chinese government has made it very clear that it does not require Chinese companies to install backdoors. Huawei equipment does not contain any backdoors and can pass strict reviews by governments. We basically don't have any networks in the US, nor do we intend to sell our 5G products there anyway. How could we possibly threaten its national security? We don't understand why they are so concerned.

As for the "Prince of the Devils" you talked about, you can clearly see me now. Do you think I'm like the

devil? You can see for yourself.

I don't think you look like a devil, but I still feel a little scared of you.

Ren: Not all countries in the world will exclude Huawei. The countries that embrace Huawei will achieve great success. History will show that Huawei will make great contributions to the countries that trust us. Therefore, I don't think we should be worried that Huawei has been called a devil. I've always believed that President Trump is a great leader. He is not a devil. Neither am I.

14 Wang Weijing, a former Huawei employee in Poland, was accused of conducting espionage and detained last December. He has not gone on trial yet. Do you think he will get a fair trial?

Ren: We don't know what he did. We require our employees to stick to business-related activities. If this employee engaged in other activities in this country, and if there's evidence to prove it, the country can exercise its sovereignty. We will only know what really happened after the trial, then we can go from there.

We don't know much about this, so we are not in a position to comment on it. You're better off interviewing someone from the Polish judicial system if you want to know what really happened.

15 We visited your campus at Dongguan's Songshan Lake, and I found that the buildings are of European style. Among them, there are two buildings resembling Verona and Bologna in Italy. So what is your personal relationship with Italy? Have you ever visited Italy?

Ren: I have been to Italy many times, and my wife and daughters also visit there frequently. Much of the art and furniture at the company is from Italy.

The buildings at our Songshan Lake campus were designed by a Japanese architect. He chose a European style and won the bid. This was all totally orchestrated by the architect. The building that we are now in was designed by a French architect.

16 You often compare Huawei to an Il-2 aircraft that has many holes to patch. How is it going with the hole patching? Which holes do you patch first? Will you transfer your investment in certain areas to other areas? My second question is about your new operating system - Hongmeng. In what domains will the Hongmeng OS be applied? We thought it would be used for mobile phones. But you said it was designed for the Internet of Things (IoT). Do you have an alternative for the Android operating system?

Ren: First of all, I came across a picture of this airplane

online, and I felt that it was a lot like us – we are riddled with bullets, but our hearts are still beating. At that time, we didn't know how many holes we had in us, nor did we know which were the most important. All we knew was that we needed to patch the holes in 5G, optical transmission, core networks, and other related systems. Now, we have patched all the major ones.

After making some calculations, we now know that there were about 4,300 to 4,400 holes in total, and we have patched 70 to 80% of them. By the end of this year, we may be able to patch 93%. We keep patching holes while replacing our old, outdated products. All this will have some impact on our business results this year.

Next year, we will continue to patch the rest of the holes, which might be more difficult. Our business results may also be affected next year, but we estimate that our growth will recover by 2021.

For your second question, what's unique about our Hongmeng OS is its low latency. It's a different operating system from Android and iOS. Hongmeng OS was designed for IoT, such as industrial control, autonomous driving, and other related scenarios. Now we are mainly using it in smartwatches, 8K smart screens, and connected cars.

As for the Android OS, we will wait for Google to get approval from the US government. We still respect

and advocate Google's rights to its ecosystem and technologies.

17 I have two questions. First, you mentioned that the UK was aware that if they wanted a 5G network, they would need to use Huawei's equipment in the core network as well. Does it mean that if Europe wants a pure 5G network, they must use Huawei to deploy both the core and the edge networks? Personally, I'm doubtful about the idea of putting all our eggs in one basket, that is, Huawei. Second, you also mentioned that when it comes to 5G technology, Huawei and China have pulled ahead of the US. Do you think China will surpass the US in more technologies? And are US actions aimed at containing China's growth?

Ren: First, I can't speak for China. I don't know whether China will pull ahead. I don't have the energy to pay attention to society as a whole. I can only represent Huawei and I only know Huawei.

Second, the core network is essentially software. I believe Nokia, Ericsson, and Cisco can do well in this area too. If you have concerns, you can wait and they will also provide such software eventually. The two baskets will not exist in parallel. You can put your eggs in these two baskets, but they will still be linked. If eggs in one basket are broken, the other basket will be affected.

Are US current attacks against Huawei aimed at preventing Chinese technologies from outshining the US?

Ren: I have no idea. You should ask the US. Maybe the US has some misunderstandings about Huawei. That's why they are placing sanctions and restrictions on us. US government officials are welcome to come and see Huawei, and then the misunderstandings will probably be dispelled. I think the US will remain the largest technology power for decades to come.

18 **Two questions: First, we know that Facebook recently announced plans to launch a digital currency called Libra. The technology behind it is blockchain. Do you think this signals that US tech giants and the US government are working to maintain their dominant position in the world? Second, do you think they will consider Chinese companies when launching digital currencies, and put RMB into their currency basket?**

Ren: China can also launch its own digital currency. Why wait for others to launch such a currency? Anyway, a country would be more powerful than an Internet company.

19 **If we look around the world, inequality and polarized distribution of wealth are still prevalent in many**

countries. Freedom of speech cannot be guaranteed in some countries as well. In this context, what's the biggest technological challenge we might face as we move forward? Or what role will technology play?

Ren: I think technology will create more wealth for humanity. With technology, everyone will be able to share in and benefit from social developments. Society needs to eliminate poverty through development and avoid social instability. When society is stable, it will develop faster, which will in turn bring more stability. The tendency for the rich to get richer and the poor to get poorer needs to change. Investments in new technologies will increase the total wealth of society.



Ren Zhengfei's Interview with BBC StoryWorks

July 23, 2019 Shenzhen, China

01

Nicola Eliot: The BBC is here today not to just find out about what's going on with Huawei in this present moment, but to really understand who is Huawei, where does Huawei come from, and what are the things that made Huawei what it is today, so we're gonna start all the way back into your period of history. I would like to start by asking about your time in the Liao Yang factory as an engineer for the PLA, can you tell me about some of the working conditions and experiences you had there?

Ren: The Liao Yang Chemical Fiber Factory was a key national construction project during the Cultural Revolution. The factory introduced a whole set of synthetic fiber equipment for processing crude oil and derived chemicals from French companies named Technip and Speichim. The Chinese economy was really rough back then. The government built this factory in the hopes that every Chinese could have a set of synthetic fiber clothes. Leaders from the central government paid a lot of attention to the project.

It was a chaotic time in China, and no local engineering team wanted to run the project in such a tough environment. So the central government had no choice but to assign the army to run the project. At that time, the army didn't really have enough talent trained in the required techniques. Fresh graduates like me were

treated like this kind of talent because we knew a little bit more than others.

We lived in tough conditions. First, we didn't have enough to eat in Northeast China at the time. We basically only ate cheap cereal crops throughout the year and pickled cabbage and radishes during winters that would last six months. The biggest problem was that we rarely had any meat to eat or enough oil to cook with. Each month, people normally would be rationed 150 grams of oil. Since we were in the military though, we could get 500 grams.

Second, our unit was part of the tens of thousands of troops that were sent into the northern wilderness with very little preparation, so there weren't any houses for us to live in. We built our simple houses on our own. It wasn't as easy to do back then as it is now. It was way harder. The houses were built during the winter, so the foundations weren't solid. The walls sank and cracked, so cold winds would blow through. Despite these difficult living conditions, our engineering work was actually pretty advanced and highly automated. It threw everything into very sharp contrast.

China didn't really value culture or education at that time. During the Cultural Revolution, the education system was a mess. Leaders from central and municipal governments only pushed those of us in the factory to

read and learn. And that was only because if we didn't keep learning, we wouldn't be able to figure out how to install the advanced equipment and how to test and adjust the instruments. We also wouldn't be able to manage actual production.

During those times, we had a rare opportunity to learn. So despite the difficult living conditions, we were very happy. The factory was like an oasis in the desert. It was really difficult to find a place in China at the time where reading technical books wouldn't be treated as a political mistake.

02 Nicola Eliot: So you got all your knowledge to create the pressure balance that you invented from the books you read while in Liao Yang or did you get the knowledge from somewhere else?

Ren: There were actually already devices like this in France at that time. A Chinese expert saw it there and he was able to roughly describe what it looked like to me. I used my knowledge of mathematics, like partial differential equations, to figure out the overall structure of the device. I also consulted Li Shijiu, a math professor from China's Northeastern University, asking him whether my inferences were correct and whether he believed I could actually achieve what I was attempting. He assured me that I could do it. So I came back and

continued designing this system. The device was made mainly to test instruments imported from France. China didn't have this kind of test equipment at that time, so I succeeded in inventing one.

I succeeded around the time the Gang of Four was overthrown. After that, China started to care a lot more about science, technology, and production. To me, my invention was just a little thing and it didn't matter that much. But since no one invented anything at that time, the country was very proud and touted my little gizmo as a big invention and called me a big hero.

03 **Nicola Eliot: And was it this experience in Liao Yang that inspired you to start Huawei at the age of 44?**

Ren: I had no experience when I started Huawei at the age of 44, and I took the plunge blindly. After leaving the military, retired soldiers like us had quite a hard time adapting to the market economy, much harder than Western soldiers did. Though Western militaries at that time were not market-oriented, their countries were. So their soldiers knew what the market economy was, and were more adaptive to working in companies after retiring from the military. But we were not adaptive at all. We had got so used to a planned economy, under which we couldn't even think of making a penny.

We couldn't understand why people were selling things they bought with 10 yuan for 12 yuan under the market economy. That must be cheating because they were asking for two extra yuan. We didn't realize there were other expenses involved, including operating costs, financial costs, and taxes. We didn't know about this stuff and found it quite difficult to fit in. We didn't even know what a supermarket was.

If I had any experience before founding Huawei, it would just have been my age. I had more experience with tough times than people in their 20s. I suffered huge setbacks and difficulties during the Cultural Revolution. So when it came to the market economy, I found the difficulties were much easier to bear. I didn't have any skills that could support the founding of Huawei.

04 Nicola Eliot: And given that this was such a risky enterprise for you, why did you decide to start a company anyway without this knowledge?

Ren: Honestly, I had no other choice at that time. I wasn't able to do my job well and got fired. The Shenzhen science and technology bureau suggested that I start a technology company because I had previously worked on technology. I thought it was possible for me to deal with some technology, so I chose this path we are on right now. Looking back, I think I was very naive

to choose this path, but there was no turning back for me. If I were to give up, I would have to get by on manual labor, because I had already used up all the compensation I got when leaving the military.

05 Nicola Eliot: And some reports say that your experience with the PLA proves that Huawei, in turn, has ties with the PLA. Can you talk to me about this?

Ren: Over the last 70 years, over 50 million people have been demobilized from the Chinese military, and I was one of them. These people need to get employed after being demobilized, just as people do in the US. We are no longer tied to the military after leaving it, because we take up civilian professions. Therefore, this inference is unreasonable.

06 Nicola Eliot: And you mentioned the funding for Huawei and that, if you failed, you would have to lose that funding and start from scratch. How much funding did you start with for Huawei and where did that funding come from if not from PLA?

Ren: Huawei's registered capital was roughly 21,000 yuan, but the compensation I received upon leaving the military was only about 3,000 yuan. So I pooled funds from different individuals and founded Huawei.

When the company grew a litter bigger, they wanted to cash out their shares for a lot of money. So they filed a lawsuit and won a large sum of compensation. After that, they all pulled out and the company was owned by me alone. I gradually distributed the company's shares to our employees. The court rulings with regard to their cashing out their shares are all archived at Huawei, and you can have a look at them if you like. We didn't receive a single penny from the government, and our funds were pooled from individuals. I didn't have 21,000 yuan of my own to start a business.

07 **Nicola Eliot: There were several hundred companies selling switches back then, but most of them did not survive. What was the secret to Huawei's survival when selling these switches for the Hong Kong company?**

Ren: First, Huawei has been customer-centric from day one. To protect the interests of our customers, we'd rather take on more difficulties ourselves. That's how we have earned our customers' recognition.

The statement that there were several hundred companies selling switches may be an underestimate. These companies survived for a while because China was such a huge market where undersupply was a serious issue, and any product, even ones that weren't very good, could sell. Huawei was a reseller of the switches

made by Hung Nien Electronics Limited, a company based in Hong Kong. Their analog switches were relatively advanced at the time. We worked hard and made some money during those early years. We didn't spend the money ourselves; we invested it in our service system to create even more value for our customers.

I didn't even have my own house until 2000. Before that, my family rented a 30-square-meter apartment. I couldn't understand why Forbes called me a rich man when I didn't even own a house just about two decades ago.

I wasn't able to take good care of my parents. My father died from food poisoning after drinking something he bought from a street vendor. My mother was constantly worried about the political implications of being called rich so publicly by Forbes. She asked me where the money came from. Given the environment at the time, she was haunted by these fears, and eventually died in a car accident on her way back home from the local market.

At that time, we invested all the money we'd earned during our early years into our future development. This sets us apart from other companies that spend their money elsewhere or invest in other businesses.

Second, we dealt in good faith with our suppliers. As soon as we got paid by our customers, we immediately

paid our suppliers. Some suppliers trusted us so much that sometimes they sent us supplies first. That's how we managed to buy products from suppliers and then resell them even though we didn't have any money. This model gave us some opportunities for development. The support we received from Hung Nien cannot be overstated.

08 Nicola Eliot: When you moved on to develop your own technology, there was a massive risk for Huawei. Can you explain to me why it was such a big risk and why you decided to take the risk to go into developing your own technology?

Ren: I was cheated out of a big sum of money when working for a state-owned company. This was a major setback in my life. As I didn't have money to hire a lawyer for my lawsuit, I read a lot of law books, including those about common law and civil law, as I wanted to serve as my own lawyer. From this experience, I learned that a market economy is mainly about two things – the customer and the goods – and the law governs what's in between: the transaction. I knew that we could never control customers, so we had to get hold of the goods. The only way to get hold of the goods was to do R&D on our own.

In the earliest days, we were a reseller of BH01

switches made by a small company in Zhuhai. This company refused to continue supplying to us when our resale business started booming. Things were similar when we were added to the US's Entity List. We later became a reseller of the HAX products from Hung Nien. Again, the Hong Kong company stopped supplying to us when our business started doing too well. This forced us to develop our own communications products. It was the external environment and our inner drive to serve customers well that compelled us to make our own products.

When Huawei was up and running, I paid some of the debts of my former employer.

Nicola Eliot: And what potential downside could there have been to developing this product? What would have been the result for Huawei if this investment into your own product went wrong?

Ren: At that time, we had no other options. We didn't think about what would happen if we failed; we were quite confident that we could succeed. Analog communications equipment was not as complicated back then, and we were confident in our own abilities.

We started out by making 40-line switches for hotels, and we succeeded. This success gave us the confidence to develop 100-line and then 200-line switches. We moved ahead one step at a time. We didn't start by

making something really big.

09

Nicola Eliot: Where did you get the knowledge to invent these switches to go from selling someone else's product to understanding how to create your own product?

Ren: All of our knowledge came from a textbook written by Professor Chen Xisheng which was published by China's Nanjing University of Posts & Telecommunications. All of us studied this textbook to figure out how to make a switch.

10

Nicola Eliot: And at the time, the Chinese market was dominated by Western products. How did you break through that Western dominance to have your products being bought in China?

Ren: Back then, there was no way we could compete with Western companies. We started out by making small analog switches for small hotels. Later we gradually worked to make larger analog switches. We didn't begin to make digital switches until we already had many years of experience.

11

Nicola Eliot: And at the time, Huawei lost many opportunities because you chose not to invest in the

CDMA technology, which then became the prevalent technology in China. Looking back on this lost opportunity, would you have done that differently? Would you have invested in CDMA?

Ren: There is a long story behind this. Starting in 2000, China was indecisive about which wireless communications technology to choose, whether it be CDMA, GSM, or something else. As the government didn't grant a mobile license to China Telecom, the carrier brought the Personal Handy-phone System (PHS), a technology that had been phased out in Japan, to the Chinese market. We guessed that PHS might be profitable, but it had no prospects, so we didn't invest in it. We actually invested in CDMA, but we chose to invest in 1X rather than IS-95, an outdated technology. In the end, China only went for IS-95 rather than 1X, so it turned out that we had made the wrong choice and were not selected by the Chinese market. Both of these were frustrations we faced back then.

From 2000 to 2008, China was making a decision on 3G and we were deciding how to develop our wireless technology. During the eight years, I went through a lot and was on the brink of collapse. I insisted on investing in 3GPP's GSM and UMTS, instead of the other two technologies. I faced tremendous pressure. I was not afraid of external pressure, because no matter how

tough it was, I could just keep moving forward. But I was afraid of internal pressure. Company executives kept writing emails and giving me reports saying, "If you made the wrong choice, Huawei would collapse."

During those eight years, every day felt like a year. No one but me could take responsibility for this decision. At that time, many companies made big money but we didn't. We were having a much harder time than others. Many articles talked about Huawei in a very ironic and cynical way. What if I really made a mistake? About eight years later, the Chinese government finally issued 3G licenses. Suddenly, we were able to unleash our potential, but we didn't feel like we succeeded. We just felt like a huge burden had been lifted since our equipment could finally be used.

When we had no more opportunities at that time in the Chinese market, we put most of our efforts in markets overseas. But during our first years in overseas markets, we had no opportunity to meet with customers, let alone secure a contract or make any money. Back then, China was selling knock-offs like down jackets to Russia. Because of that, Russia's Minister of Communications and Informatics said, "What high-tech products could China have? All you have are fake ones." We brought along our own products and tried to win their recognition, all the while being lumped together

with those who were selling fakes. It was really a difficult time for us then. Despite all this, we had to get into overseas markets. If we failed to do so, we would just end up facing more difficult situations down the road since we didn't have any opportunities in China.

Back then, I spent most of my time in Africa and Latin America. I seldom connected with my family. Looking back I feel very sorry because my younger daughter was growing up. She wanted me to play games and spend more time with her, but I didn't. When I came back home from overseas, I was so tired that I would just lie on the bed. I didn't talk much with her, because I had to focus on how to make sure Huawei could survive.

Around 2000, we began selling some equipment and getting contracts overseas, giving us the opportunity to show our commitment to serving our customers. Customers gradually accepted us. Actually, our products were not even that good, and we were not on par with our Western competitors. But why did the African market accept us? Because they were in the middle of a war and the Western companies all ran away. As Africa had a demand for our equipment, we could sell it to them. We were also able to sell in a few other countries stricken by epidemics and under extreme conditions, helping us gain some successful overseas experience.

Today at Huawei, we require our managers to have

experience working in Africa and other challenging regions overseas. When we decide whether to promote employees to managerial positions, we follow similar criteria to what the US military uses to appraise their officers. In the US military when they decide whether to promote a person, they ask: Has this person been in combat? Has this person been in a live firefight? Has this person been wounded? Successful overseas experience is a must for those up for promotion; otherwise, high-quality employees who've only worked away from the frontlines will end up becoming managers. This is not how our value assessment system works. Although this system may not help us make the best use of some very talented people, our first-string team comprises of our toughest. That's why today we have such a strong team. Although the US has kept attacking Huawei, we haven't collapsed; instead, our team has even better morale than before.

While we were losing opportunities in the Chinese market, we sought opportunities abroad. After we returned to the Chinese market, we found the country was experiencing a new phase of development. Since we have developed an excellent team of managers overseas, we are bringing some of them back to China to regain ground here.

12

Nicola Eliot: It's reported that you spent nearly half your annual profit in 1998 bringing in advice from Western companies. Can you talk to me about what advice you sought, and why that was so important to you?

Ren: When Huawei started out, it was only me. Then people started joining the company. We didn't have any rules back then. For example, I had the final say about everyone's salary raises. That practice benefited some people, but also hurt some others. As the company grew bigger and bigger, we needed to draft many documents to standardize corporate management. But I wasn't really experienced in this. I had only worked in technical areas when I was in the military and had no clue how to manage a company. To drive the company forward, we drafted a lot of documents. But I still thought that they weren't standardized and would prevent the company from growing into a large one.

At that time, I saw the potential of Huawei to become a large company, so we hired many consulting firms like IBM and Accenture. The hourly salary for each consultant was 680 US dollars, almost equal to the average monthly salary of our employees, which was about 5,000 yuan. But to prepare for the future, we had to learn from others. We recognized the value of these consultants and sent many people to learn from them. There were some among the team who didn't cherish

the opportunity to learn. When they saw others getting promoted, they became impatient and left halfway through their training. Because of this, we didn't end up seeing many of the consulting programs through to the end. This is a pity.

But we did see one program through. When IBM started to advise us on financial management and auditing, Meng Wanzhou was still a low-ranking employee. She became the project manager and then worked with IBM consultants for the next 20 years, making Huawei's financial management really stand out. In addition, she moved beyond the guidelines of the consultants, set even higher standards, and greatly improved Huawei's financial management. Now the quality of our financial management systems is much better than that of many Western companies. Many consultants from large consulting firms have offered to become our consultants for free. We have politely declined because if they come to us, we will have to teach them our ways now. This is time-consuming. We don't want them to come because they are not up to our level.

As we learned from Western companies along the way, we kept optimizing what we had learned. That's why the current US attacks on us don't really affect us that much. We have understood, internalized, and

accepted many kinds of systems. In hindsight, we were right to learn extensively from the West.

13 Nicola Eliot: You talked about your strategy for targeting countries and regions outside of China that were less developed, like Africa and India. With your success in that, why did you consider selling to Motorola in 2003?

Ren: Because we had already anticipated that our growth would eventually lead us to the top where we would have to confront the US. Then US attacks against us would be inevitable. So we wanted to sell our company to Motorola, just to wear an "American cowboy hat". The company would still be run by tens of thousands of Chinese people. That would be a success for Chinese people. With capital from the US and labor from China, it was better for the company to expand into international markets. We agreed to sell the company to Motorola at 10 billion US dollars and all the contracts were signed.

We had two plans back then. Some of us were thinking about entering the tractor business after the Motorola acquisition. China's tractor business at that time was on the brink of collapse. We thought about buying all the tractor factories in China, including the Luoyang Tractor Factory. The average price of a tractor

in the market at that time was 1,000 US dollars. But the tractors were susceptible to oil leaks and overheated engines. With the Integrated Product Development (IPD) process we had learned from IBM, we could solve these problems, and then increase the unit price to 2,000 US dollars. Though we might not be able to disrupt the automotive industry, we could possibly create the largest tractor empire in the world. The majority of people, however, wanted to stay in the communications industry. Either way could work and lead to glory. However, the deal with Motorola fell through.

Our prediction about confrontation with the US was unfortunately correct. As you can see, we are now under fire. By adding Huawei to the Entity List, the US is trying to stop everyone from selling to Huawei. Even McDonald's outlets in Mexico were not allowed to sell to us for a while. The US is taking an extreme action by prohibiting all kinds of sales to Huawei. We can't even use things from our own subsidiary in the US. Our staff in the subsidiary are not allowed to communicate with us in China; otherwise, they would be violating US law as per the Entity List. We anticipated the kind of extreme situations that have become reality recently. We anticipated this years ago and we prepared ourselves, so we are not panicking. We can weather this storm.

14

Nicola Eliot: Despite the difficulties that you had in the European market, Huawei was able to break through by using cost-cutting measures. Some people have said that these cost-cutting measures, these price-cutting measures, were so extreme that the company must have had help from the Chinese government to be able to give such low prices for their equipment to the European market. Can you tell me about that?

Ren: This is a total misconception. The prices of our products were not that low; actually, they were pretty high. We can send you an electronic copy of our financial statements over the past 10 or 20 years, and you will see that we made a lot of profits. Otherwise, how could we have become such a large company?

Our breakthrough in the European market was attributed to our SingleRAN solution, which was developed by a mathematician who was in his twenties back then. He successfully integrated the algorithms for 2G and 3G. Thanks to his invention, a single piece of equipment could support 2G and 3G at the same time. The volume, weight, and cost of the equipment were all halved.

In Europe, the biggest problem was that it was often very difficult to find the right place for a tower where we needed to install heavy equipment. Europe has many old houses, so equipment could only be installed on

rooftops and thus needed to be pretty light. After our SingleRAN solution was developed, our distributed base stations immediately became very popular in Europe, and many carriers started buying our products.

Thanks to the SingleRAN solution, our costs dropped by at least 30% to 40%, so our profits were quite high. Our employees are much better paid than their counterparts in Western companies. That's why many talented individuals, including mathematicians and other scientists, have joined us.

Huawei became the world leader in the wireless domain because of one of our breakthroughs with algorithms, which was made by a young Russian man. He is now a Huawei Fellow. After that breakthrough, we tested and verified it in Shanghai and used the algorithms to get rid of many things in our equipment.

So why were those algorithms so important for our company? Back then, 3G and 4G equipment had three standards: CDMA, UMTS, and China's TD-SCDMA. With those algorithms, we only needed to produce a single piece of equipment to support these three standards at the same time. This significantly reduced our production costs. With the new algorithms, our vertical systems supported multiple frequencies. Why was this necessary? Many carriers had been around for 70 to 80 years, and the majority of them had been allocated more than a

dozen wireless frequency bands, which initially required more than a dozen antennas to receive all of the radio signals. Our algorithms integrated these multiple frequency bands, allowing one antenna to receive signals from all of these frequencies. You can take a tour of our antennas. They are extremely advanced. You can imagine how we saved in costs by reducing a dozen antennas down to one, so our profits were a little too good. These algorithms adapted our base stations to multimode and multi-frequency technologies, so they were high-quality and highly cost-effective.

Our financial statements cannot look too good anymore, because that will not be conducive to our development. We can only consume our profits by increasing our strategic investment in R&D. That's why we have been investing at least 15 to 20 billion US dollars in R&D every year, which includes increased funding for universities. By doing this, we are investing into the future. We cannot distribute too much money back to our employees; otherwise, they will become too well off and stop working hard. We also cannot distribute too much back to our shareholders, or they will also become complacent.

I often say that Apple is our teacher. They always sell their products at very high prices, which allows companies that charge low prices to survive. Huawei

actually also does this. If we sold our products at the lowest prices we could afford, all of our peers would have been put out of business. We have won the European market through scientific and technological innovation rather than low prices.

15 Nicola Eliot: And so this investment into R&D, which you are so well-known for, you have actually invested into R&D centers outside of China as well, such as India. What is your global strategy for R&D outside of China?

Ren: We build R&D centers in places rich with talent. This allows our talented employees to work for Huawei in their hometowns without needing to come to China.

16 Nicola Eliot: And so, from 2011 to 2012 Huawei made a big shift in its business. So, as I understand it, the core of your business has always been connecting people. But the move from being the inside components and things that people don't see, to being a consumer-facing brand, why did you choose to make that decision?

Ren: Our primary goal of that move was to simplify management. We wanted to keep businesses that were not closely related separate. If these businesses were managed as one, they would be linked horizontally,

and would create a lot of problems. So we separated these businesses and treated them like independent "trees". These "trees" all grow from the same "soil", where they share corporate systems for finance, HR, and performance appraisal, but their actual business management is kept separate from each other. This makes our management much simpler.

17

Nicola Eliot: So, Huawei has been recently facing a lot of pressure from the US, who is claiming that Huawei is a security threat. Can you talk to me about your thoughts on Huawei's security?

Ren: I think cyber security will be an increasingly important issue for humanity. In the past, communications were conducted through physical connections. They had few security problems because external attacks could hardly break into them. Once they evolved into Internet Protocol (IP) networks, they became more vulnerable to security attacks. Now that communications networks are undergoing cloud transformation, more parts of the networks will be exposed to attacks, bringing greater security challenges than ever before.

Europe is doing right by establishing the General Data Protection Regulation (GDPR) and cyber security standards. These standards will push all companies to

work hard on cyber security and user privacy protection. But it will be very difficult to go forward, as this is a whole new area. For example, the river may end up flooding before we have finished building the dam. So it is a challenge for all equipment vendors, carriers, and humanity to figure out how to develop sufficiently robust cyber security and privacy protection systems amidst a rapid surge of information.

18

Nicola Eliot: So, how have Huawei's operations been affected by this pressure that is coming down from the US? Can you tell me about that?

Ren: I think being added to the Entity List basically has no impact on Huawei's operations. Our cutting-edge equipment, such as 5G equipment, can be produced independently of the US. The US is quite far behind when it comes to 5G. We can ensure a sufficient supply of chips and systems without the US. We have also long been a world leader in network connection equipment, including equipment for transmission, access, and core networks, and barely rely on the US at all in this regard. As for consumer devices, there will be some impact, as our ecosystem has not been fully developed. But this impact will not be very significant or essential to our survival.

19**Nicola Eliot: And specifically with Google not allowing you to utilize Android, can you talk to me about the development of your new operating system?**

Ren: We have already talked about our Hongmeng Operating System (OS). Its main feature is low latency, which mainly applies to industrial control, automatic control, autonomous driving, and connected vehicles. This OS will likely be applied first to Huawei's watches, 8K smart TVs, and industrial control systems.

As we know, 5G is actually a quite "simple" technology. 5G will support AI through its advantage in low latency. In addition, 5G provides high uplink bandwidth, which makes it convenient for companies to upload their data to the cloud. Previously, 4G and earlier technologies only supported communications between people. Now with 5G, communications between things as well as between companies can also be realized. This includes massive-scale automatic control. We haven't yet considered how to evolve the Hongmeng OS into a system that also supports mobile phones. Even if we decide to do so, it will take several years to develop a sound ecosystem. It cannot be established in a short time.

Today, the US should not blame Huawei's rise for its failures in the communications industry. The real reason was that the US picked the wrong path. When wireless communications emerged around the world

in the 1990s, the US was the most powerful country in science and technology, so they forcibly pushed the CDMA and WiMAX standards on other countries, just like how it is now urging many countries not to use Huawei's 5G equipment. However, the US was wrong. The global trend led by 3GPP was the right path. The US's poor decision has led to its current failures in the communications industry. Another example is that the US used to lead the world with x86 CPUs, and had a big opportunity to dominate the global market. They should be more open and collaborative. We can add our AI to their plate to help them seize more opportunities in data centers. But unexpectedly, several new types of CPUs have emerged in other countries. We have also launched our Kunpeng CPU ecosystem, which will compete with our US counterparts.

Ultra-fast connections will be realized in the 5G era. In the future, AI will rely on the von Neumann architecture that includes supercomputers, ultra-large storage capacity, and ultra-fast connections. The US has supercomputers and ultra-large storage capacity. If the US also has ultra-fast connections, it could become a world leader in AI; but without these, it will lag behind. In addition to 5G, fiber technology is also critical to delivering ultra-fast connections.

China also has supercomputing centers and ultra-

large storage capacity. If China deploys 5G and optical networks on a large scale, it may be able to take the lead also in AI. In a word, 5G technology is "simple". The US's ignorance of 5G may be a result of a bad decision long ago. I believe AI will present the biggest opportunity for the future of society.

20

Nicola Eliot: So when you're talking to your employees about your overall strategy for combating the difficulties of being put on the US Entity List, what do you say to them?

Ren: We are telling them that we're an aircraft riddled with bullets shot by the US, and everyone needs to work hard to patch the holes. All employees know that patching these holes is their responsibility, and that if we can patch them up, we will survive.

21

Nicola Eliot: So we also heard that Huawei has built up stations on Mount Everest and that you've been to the camp 5,200 meters above sea level. Why is Huawei always looking to build networks in such dangerous areas that nobody else wants to go?

Ren: If customers make such a request, we will honor our commitment to them. China needed to build a base station on that 6,500-meter peak as a requirement for

the live broadcast of the 2008 Beijing Olympics' torch bearing relay. To make it possible, a broadband base station was a necessity, so we built a base station on that 6,500-meter peak.

The same is true for Nepal. We are also building base stations there. And near Nepal, there is a Chinese county called Medog. Even though it had been part of modern China for decades, it still had no communication network. The government had specially deployed a satellite network for them, but it didn't work. The county had been constantly experiencing earthquakes and landslides; the roads could hardly be repaired before being destroyed again. Medog was in a very difficult situation. Back then, we were using outdated CDMA 450 equipment. When we went to build a base station there, Huawei employees and over 200 rural workers had to carry a complete set of such equipment, and climb over four snow-capped mountains. They spent four nights in the snow before they reached Medog, and then they installed the first base station there. Since then, people in Medog have been able to make phone calls. Are we making money there? Absolutely not.

Huawei's ideal is to serve humanity, not just to earn money. We are different from Wall Street. We also do not exist to serve our employees, so we are different from European companies, which tend to

distribute almost all their money to their employees. Their employees are often happy and feel free to have a leisurely cup of coffee on the street, but some lack a strong force driving development. When we make money, we don't prioritize giving it to our shareholders or employees, but invest it in our customers. In specific, we invest the money in future-oriented scientific research, and in fully fulfilling the spirit of serving customers.

Our total sales in Africa add up to less than half of our total sales in Guangdong Province. However, employees' income in Africa triples that of our employees in Guangdong. Due to the low sales and high expenditures in Africa, we can hardly make a profit there. But still, we encourage our employees to go to the front line. Specifically, we set this as a prerequisite for their future promotion, and give them more money as compensation. All of this shows our aspirations of serving humanity.

As you can see today, carriers are suffering more than we are from the US's ban on Huawei. But they are still buying equipment from us. This shows their trust in us. Under Theresa May, even UK Parliament adopted the proposal of continuing buying Huawei's equipment for their non-core networks. This shows their great support for us. Now UK Parliament and its Intelligence

and Security Committee are concerned that if they don't buy Huawei's core technology, they may fall behind. So maybe they will also buy our core network products. Although the US and the UK are close allies and the US is exerting a great amount of pressure on the UK, the UK is still buying from Huawei. This shows that our dedication to customers all these years has really started to pay off.

22

That relationship with the UK goes back many years with certification from BT and Vodafone. And can you talk to me about how the UK has been in that long relationship with Huawei a bit more?

Ren: We place great trust in the UK government. The UK is a country ruled by law, and we believe their decision-making process is rational and deliberate. We do have received a lot of criticism from the UK, but we always consider such criticism as a sign of caring. It's impossible for any company to make any equipment perfectly. We are working to correct any mistakes that have been identified.

That's why we are making strategic investments in the UK.

First, we are supporting Arm. One or two decades ago, when I met officials from the European Union, they

thought the information industry in Europe was being left behind, because the US took advantage of so many opportunities. I said we still could work together.

We decided to support Arm more than 10 years ago. Arm has grown fast, and has been sold at around 32 billion US dollars. With more money, Arm is expanding even faster. Now, Europe has its own CPUs. That's a contribution we have made to Europe.

Second, we have purchased more than 500 acres of land in the UK, and have plans to build an optical chip factory there. This factory will export chips to the rest of world. Why? Because we place great trust in the UK. What's more, the UK is a great hub for scientific and technological talent.

We have also made breakthroughs in optics. Now, we are able to make optical chips that support 800G. No other company in the world can do this, and the US is being left far behind in this regard. This is also a contribution we have made to Europe.

Third, we are leading the world in microwave. We have plans to build our microwave plants in Italy.

We are making contributions to Europe, and we will continue to do more in the future. Strategically, we regard Europe as our second largest home market. When I talk about Europe, I also include the UK. We are making huge investments in these European countries.

23 Nicola Eliot: And you mentioned that the 5G era is going to be all about connectivity. Can you talk to me about what you see happening in the 5G era? What the future will look like in a 5G era?

Ren: 5G is just a tool. Like a screwdriver, it cannot create value on its own. However, a screwdriver can be used to help assemble cars. I think the value of 5G lies in its ability to support the development of AI.

The concept of AI was proposed by British scientist Alan Turing in the 1940s. During World War II, he used these basic theories to crack the Germans' Enigma code. This allowed the UK to track German movements. But the UK decided they couldn't reveal they had cracked the code. When German fighters bombed factories and industrial bases in the UK, Winston Churchill kept this secret instead of intercepting the German fighters. He was worried that revealing they had cracked the code would ruin the Normandy landings.

Even though Alan Turing first proposed AI as early as the 1940s, and many other people around the world have also pondered similar ideas, AI hasn't really been taken seriously until today. Why?

AI relies on supercomputing, ultra-large storage capacity, and super-fast connections. It's only recently that we have been able to get all the things ready for AI. 5G itself will not bring many disruptive changes. But it

will help make AI a reality around the world.

On a more positive note, AI will create massive wealth for humanity. For example, an AI-powered tractor can work 24x7 ploughing land without any human intervention. This way, we can grow more crops. In rougher parts of the world where people don't want to go, AI-powered tractors can plough the land instead of people.

24

Nicola Eliot: Can you tell me about Huawei's vision of the future? What does the world, according to Huawei, look like in 5 years time? 10 years time?

Ren: I can't foresee what will happen in 5 to 10 years. I can't even foresee what will happen in 3 years, because this world is developing so rapidly. A number of years ago, it was difficult to even make phone calls. Then, all of a sudden, Steve Jobs's iPhones gave rise to the mobile Internet. How could we have possibly known this would happen in the years leading up to it? So it's impossible for me to envision what will happen 3 to 5 years from now. We will just act like a chameleon and adapt to the changing world a little bit more rapidly so that we are not left behind.

Nicola Eliot: Just maybe in a shorter time frame, given what Huawei is working on now, what are the things

that you would like to achieve in the near future with Huawei?

Ren: Huawei is committed to making networks faster, with much lower latency, so that people can fully enjoy the value created by information services. The bandwidth of 5G is around 10 to 100 times that of 4G. 5G equipment is 70% smaller and consumes one-tenth of the power that 4G equipment consumes per bit. In the 5G era, people will surely enjoy higher bandwidth and faster information services, with higher quality and lower prices. Of course, this is still not possible today. When 5G is deployed all over the world, the prices of information services will drop, enabling underprivileged kids and kids living in rural areas to gain access to the outside world via the Internet. This will improve their education, which will then enhance their ability to create wealth for humanity.

25 Nicola Eliot: And speaking of children everywhere, I was given some fantastic pictures yesterday of you with your family. And, as a person growing up in the UK, I have no idea what this was like. Can you tell me a little bit about what it was like to grow up in China at this time?

Ren: I grew up in a very small town where people were very poor. We were a bit better off than our neighbors,

because my parents were both teachers. By better off, I mean we could add salt when we cooked vegetables. And that was also how local people understood being rich. At that time, there was only rock salt, not granulated salt. Poor people tied the salt together with some string, and when the vegetables were done, they put the salt in for a bit just to add some flavor. That was what I saw personally when I was a child. Even that was not available to the poorest. When we were young, we lived in such an environment. I knew nothing about the outside world. I had no idea that people in the UK had an abundance of bread. At that time, we just didn't have enough to eat. As we lived in rural areas, we didn't know anything about the outside world – not even cities in China. If kids in rural areas can broaden their horizons via the Internet, think of how much progress they will help China make!

26 Nicola Eliot: And so, this need to survive, how has that fed into Huawei's philosophy of success through survival, success through struggle?

Ren: There is no logical connection between these two things. Although I lived in a remote, mountainous region, I had a strong sense of curiosity about the world. I learned about the outside world through story books and science books like One Hundred Thousand Whys.

When I eventually went to university, I borrowed books from the library there. By reading books, I was able to broaden my horizons constantly. This was all driven by my curiosity. This curiosity is also driving Huawei forward. We adopted the concept of lowering our center of gravity for development because we believe that we need to maintain stability. If we develop too rapidly, we might not be able to keep it up. This would be a huge disaster for any company. We must remain stable, so we use the concept of survival to denote stability. We must not be rash. This has nothing to do with what I experienced when I was young.



Ren Zhengfei's Interview with Sky News

August 15, 2019 Shenzhen, China

01 Tom Cheshire: Mr. Ren, thank you very much for speaking with us. Right now, Huawei is probably the most controversial company in the world. Did you ever anticipate being in this situation?

Ren: Maybe I would have anticipated this, maybe not. I could never have expected this controversy to be so intense though. We knew that if there were two teams climbing up the same mountain from opposing sides, we would eventually meet on the peak and we may clash. We just didn't expect this clash to be so intense and lead to this kind of conflict between the state apparatus of a country and a company. We could not have foreseen the intensity of this clash. We haven't yet patched up all holes in our aircraft, in our business. It will take us two or three years to patch all of them up, and we will need three to five years to fully revitalize the company. Of course, during this process, we will still grow gradually.

02 Tom Cheshire: I read that, 10 years ago, you started preparing. Sounds like you did anticipate conflicts. Why did you anticipate conflicts specifically for Huawei back then?

Ren: Our company has no desire for anything other than delivering better products and getting our work done. We have only one goal and always stay focused. We believed that decades of heavy investment in one

area would ultimately make us a leader. When we had hundreds of people, we charged at an opening in the city gate. When we had several thousand people, we still charged at the same opening. When we had tens of thousands, and now hundreds of thousands of people, we are still charging at the same opening together. We spend 15 to 20 billion US dollars a year on R&D, so we believe we may lead the world in this area. This will lead to conflicts with other leading international companies as well as some countries. Given all this, we knew we had to prepare, since that conflict was inevitable.

My personality is the kind that tends to compromise and give in. I am not that good at fighting. Over a dozen years ago, we planned to sell Huawei to Motorola for 10 billion US dollars. We had signed all contracts, but their Board of Directors didn't approve the deal. So we discussed whether we would continue with this business or sell the company. Our younger executives then all had electronics backgrounds and wanted to continue in this sector. I said we could easily sell the company and move onto other sectors, but they insisted that we continue working in the electronics sector. We voted and reached a consensus. When this decision was made, I told them, if we continued to work in this sector, we would definitely be in a race against the US in 10 years. We had to prepare. That's the process. That's also why we are not divided when we meet with such huge

difficulties. Instead, we are more united than ever before.

03 Tom Cheshire: You talked about the intensity of the assault. I think the most important thing maybe was being placed on the Entity List by the US. What was the effect of being placed on that list? What's been the effect on your company, on your business?

Ren: First of all, please note that adding us to the Entity List was not fair. Huawei has not done anything wrong, but was still placed on this list. This list didn't have that much impact on us. As you saw in our exhibition hall yesterday, most of our more advanced equipment does not contain US components, despite the fact that we used their components in the past. These newest versions of our equipment even function 30% more efficiently than before. In August and September, we will undergo a run-in period before we can mass produce these new versions. So we can only produce around 5,000 base stations each month during that period. Following that, we will be able to produce 600,000 5G base stations this year and at least 1.5 million next year. That means we don't need to rely on US companies for our survival in this area.

Despite this, we will always embrace US companies. As long as they can continue to supply to us, we will continue to buy their components in bulk. Actually,

some companies have already restarted their sales to us to the extent permitted by law and the size of our orders to them never shrinks. We believe globalization benefits everyone, so we won't adopt a closed approach even if we can make some components ourselves.

04 Tom Cheshire: On the consumer side of things away from 5G, if there is a British customer using a Huawei phone in a town in Basingstoke, say, they might be worried that the Android software is not going to update. They are not going to get a better experience. Will they get the same experience from their Huawei phone without the Android software, if there is no longer supply?

Ren: Google is a great company. We have a sound relationship with Google. We have signed many agreements with Google over the years. We still want to use Google's system in our devices and develop within its ecosystem. Because of this, we hope that the US government will approve the sale of Google's system to us. There are billions of Android system users and billions of Windows system users around the world. Banning one or two companies from using these systems won't help ensure the security of the US as a country, so they should keep their doors open.

If the US doesn't want to sell the Android system

to us, we will have no choice but to develop our own ecosystem. This isn't something that can be achieved overnight. We estimate that it will take us two or three years to build this ecosystem. In light of all this, we don't believe we will be able to become the No. 1 player in the device sector any time soon.

Tom Cheshire: Is that a way of saying that HarmonyOS, your new operating system, isn't ready yet to compete with Android and Windows?

Ren: We started designing and developing HarmonyOS seven years ago in order to address IoT issues as well as AI's potential contributions to society. Low latency is the biggest feature of our OS. There are numerous edge computing models around the world. The computing models used by different industries, like the electricity, automotive, agriculture, and tractor industries, are all different, so a different OS is needed to support these different models.

It would take us some time to adapt HarmonyOS to mobile phones. We are waiting to see whether the US government will allow Google to continue serving more people. We don't want to see another OS entry to the market because Apple and Google are still dominating the global market in terms of software systems. But if the US bars Google from keeping Android open, then a third OS will have to appear, and it may threaten

the US's global dominance. It's possible that a small newcomer might have a stronger drive than the reigning champion, and if this newcomer comes out on top, the US may be in a tight spot.

Tom Cheshire: Is that why you made it open source, so that it might actually outrun them, and the whole world might adopt HarmonyOS?

Ren: Yes. You may wonder why we have opted to go open source. There are numerous small companies around the world, especially in Europe. Since the Industrial Revolution, Europe, especially the UK, has produced a lot of talent. These people shine as bright as pearls, yet the value of such pearls is only fully realized by being strung together into a necklace. Open source is the string that connects the pearls in our ecosystem. This way, the value of these pearls from the UK can be shared with other parts of the world. This open source approach amplifies business value and gives a boost to the UK, Europe, and other parts of the world.

The problem with China, the UK, and Europe is that they don't have their own platforms. Without a platform, they can only innovate sporadically. Our HarmonyOS is open-source and thus will be helpful for innovation in China, the UK, and across Europe. It could also be helpful for small companies around the world. Low latency is a big feature of our OS, which can deliver superior experiences.

05 Tom Cheshire: So Huawei is the string that runs through all these companies. I want to talk a bit wide about the conflict with the US. Your daughter was arrested in Canada, because of the extradition requested by the US. Can you take us through your reaction when you had that news?

Ren: The Meng Wanzhou case may not be a small case, and it can't be addressed just through small talks. We need to rely on the law and the Canadian legal system to resolve this case. Our lawyers have been working on this case, and we are waiting for their updates.

There is one trait my family members share, which is fussing over little matters but staying calm in times of crisis. We believe that when there is already a huge problem, it's no use trying to rush a solution.

Tom Cheshire: Did you speak to her? How is she now?

Ren: She is doing very well. She often goes out for coffee and eats Chinese hotpot, and she talks with others in the restaurants. She isn't the kind of person who comes across as indifferent or keeps her distance from other people. When she's at a restaurant, she often chats with other people just like anyone else would.

Tom Cheshire: After she was arrested, two Canadian citizens were arrested in China. They have been held. They are not allowed to have coffee. They don't see

anyone. This happened straight after she was arrested. Do you feel in any way implicated or responsible in the arrest of those two Canadians?

Ren: I don't know. Your question is about international relationships, which have nothing to do with us. The US has made groundless allegations to have my daughter detained. This is unfair. Canada isn't at fault. The US is using Huawei as a pawn for the China-US trade talks. Their plan is to detain my daughter, destroy my willpower, and benefit from all of this during the trade talks. Sadly, Canada has suffered because of this. I feel sympathetic to Canada. I have never and will never hate the Canadian government or the Canadian legal system for this. We will have this case settled according to laws. As to other issues, I don't know what the people you mentioned have or have not done, so how could I possibly judge whether there is any link between their arrests and my daughter's case? I'm not a government official.

Tom Cheshire: It does sound like that you think that your daughter's arrest and the extradition request are politically motivated rather than a purely legal process.

Ren: That's true. The US has sued us, which means they believe that we are legally at fault for something. So why are they including us in their trade negotiations with China? Isn't it true that in law, there is no room

for political negotiation? Legal issues must be resolved through legal means. If an issue can be resolved through negotiation, then it's not a legal issue. If that was the case, then they shouldn't have sued us. They are contradicting their own claim to be a country governed by the rule of law.

Tom Cheshire: Why do you think the US has been so aggressive in targeting Huawei and your family?

Ren: Over the past few decades, people within Huawei tend to think of me as a person who easily compromises. This is because I'm not that aggressive and easily compromise within the company. In reality, I'm more of a figurehead instead of a demanding leader. The Executive Committee of our Board of Directors is the demanding leader. We established this management system by learning from the UK's constitutional monarchy. In the UK, a monarch's power is limited by the law, and the law lies in the hands of Parliament. In such a system, the monarch serves a primarily ceremonial role and does not intervene in politics. At Huawei, I have the right to veto certain things, but I don't actually have much power. Because of this, the US may think it's easy to attack me. However, I'm much stronger than I had thought when backed into a corner. Right now, we would have no way out if we compromised. The only thing we need to do is ensure that Huawei can survive and thrive, so that we

can better serve people around the world and create more value. This may mean that my family and I will need to make some sacrifices.

06 Tom Cheshire: I want to talk about some of the US concerns, the perceived relationship between Huawei and the Chinese state. The first thing, I know you have talked about it before, but the National Intelligence Law in 2017, this law states that any organization shall support and cooperate in national intelligence work with the Chinese state. On an equivalent state, Chinese companies, public or private, must work with and be directed by intelligence agencies. That has been caveated, but why should we not just take this law as it stands in black and white?

Ren: I totally understand the concerns about whether a Chinese company would fully comply with this law.

At the Munich Security Conference, Yang Jiechi, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and Director of the Office of the Foreign Affairs Commission of the CPC Central Committee, made it very clear that the Chinese government never requires companies to install backdoors. Premier Li Keqiang then reiterated that position at the press conference held after the second session of the 13th National People's Congress in March

2019. When Premier Li visited our booth at this year's 16+1 Summit in Croatia, he directly told our staff not to install backdoors. They have made this commitment on behalf of the Chinese government. By doing this they have publicly announced how this law will be interpreted by courts in China. So we will follow their requirements not to install backdoors or engage in intelligence gathering activities.

Moreover, if we did something like what the US implies, our customers around the world would stop buying our equipment. This would be a huge financial hit to us. So we will never do something like that.

Tom Cheshire: I know Mr. Yang and Mr. Li have said these things, these politicians saying things. The law is there though in black and white. Why does this law exist, if it's not for the purpose of compelling Chinese companies to assist in national intelligence?

Ren: I don't know. I didn't participate in the legislative process.

Tom Cheshire: You have said that you'd shut the company down and go to jail rather than follow this law. At that point, can the Chinese government, even if you go to jail, still be in control of Huawei, as you say, your constitutional monarch, if the Chinese government wants to take over, sure they can take over?

Ren: It couldn't happen. We wouldn't do this kind of thing. If we did that, it would mean the end of our company, again, because our customers wouldn't buy our equipment and we would go bankrupt and cease to exist.

Europe has established its own cyber security law. Germany and the UK have also proposed laws that would bar all network equipment providers and carriers from installing backdoors. All will be treated equally. I totally agree with this proposal. As long as carriers and network equipment providers around the world promise that they don't install backdoors, then cyber security management will be made much easier. Right now it is only a proposal and hasn't yet become a law that applies globally.

We will continue to work more closely with the UK's National Cyber Security Centre, strictly follow the UK government's cyber security requirements, and make ongoing improvements. We will also follow the EU's cyber security law and the General Data Protection Regulation (GDPR). We will meet these standards and restructure our networks to make them fully adaptive to the future society.

Information is managed by sovereign states, not by equipment vendors. In 5G networks, information packages are not opened when they are transmitted

across base stations and access networks. They are directly transmitted to the core networks and are only opened there. Networks in the UK are managed and operated by UK carriers, not Huawei. Huawei only provides these carriers with a screwdriver, or a pipe. There are so many vendors around the world. Why is Huawei the only company that is being targeted? The UK's management and testing regime for Huawei is the world's most stringent, so they should have confidence in our products and services. Since everyone is looking at us, we will improve faster. We don't have the kind of problems you mentioned.

Tom Cheshire: I slightly disagree, because the UK government recently said, they do want a way to view encrypted messages, for instance, on Facebook. So there is this political move to weaken security, I think. If we think back the Snowden revelations, it was revealed that many Western companies were spying at the request of governments on users around the world. In many cases, they had been forced to spy without users' knowledge. That has been made secret as a result of the law. Isn't it very naive to assume that China wouldn't ask the same thing as Western governments in terms of spying?

Ren: I can assure you that I won't allow backdoors on our equipment.

07

Tom Cheshire: The Chinese government often has quite opaque relationships with private businesses. How would you describe Huawei's relationships with the Chinese Communist Party?

Ren: First, we are obliged to obey Chinese law. Second, we are obliged to pay taxes. These are the only connections we have to the Chinese government.

Tom Cheshire: President Xi Jinping said at the 2017 National People's Congress that the Party is the leader of everything. Does that not include Huawei?

Ren: I may interpret this in a different way. An enterprise is an economic organization which needs to undertake its due responsibilities. If the Party is capable of managing all economic organizations, then there's no need to develop private enterprises. In that case, party committees will be enough to manage them, and even manager offices won't be needed. However, China's experience over the past decades showed that this model does not work. That's why Deng Xiaoping proposed reforms and opening-up. This was a new model. Under the new model, party committees in enterprises are there just for educational purposes. They educate employees to work hard and refrain from immoral or illicit behaviour. They do not take responsibility for business management, though different enterprises may take different approaches.

Tom Cheshire: I understand that interpretation, and I'm not saying that when the Party leads everything, they are making business decisions, even if there are committees. I'm saying ultimately when it comes down to national security risks, the Party will intervene at that point. Do you agree with that? Or do you have a different interpretation?

Ren: That would be impossible.

08

Tom Cheshire: Since the conflicts between the US and Huawei began, what conversations have you had with the Chinese leadership?

Ren: None. I don't think it necessary to have such conversations. Otherwise, we would be falling into Trump's trap. Trump wants China to give up some interests in exchange for Huawei's survival. Why would the Chinese government do that? We can survive on our own. The US cannot crush us, though we may be going through a tougher time than we have expected. China doesn't have to make concessions in China-US trade talks on behalf of Huawei. I don't want to cause Chinese people to get hurt by this. I'm much richer than most of them. How can I ask people with less than me to trade with Trump at their own expense, just for our benefit? I don't want us to be tied with China-US trade talks. We have made up our mind to overcome this difficulty on

our own. We won't complain or ask for help, and we believe we will succeed.

You are the first foreign journalist to have visited the exhibition hall in our Ji Jia Center. Our technical departments used to stick to the strategy of keeping our exhibition halls closed to journalists, let alone taking pictures or filming them. They're afraid of our trade secrets being disclosed to our competitors. I don't think there is anything to hide if we stand strong. I think we should be open-minded. So now you are the first journalist in the world to visit our 5G exhibition hall, and you were allowed to not only photograph, but also film while touring around. We just want to show the world that we can still survive without the US's support.

We are confident that we will still be leading the world over the next three to five years. Whether we will decline after that remains a question. If the US cuts us off from its science and technology, will we gradually decline just as the Qing Dynasty waxed and waned, if we fall behind the times in terms of scientific technology and theoretical innovation? Probably. Given the current situation, I hope Chinese scientists and research institutes can look past the academic bubble, because if the bubble continues to grow, it will stop people from doing serious learning.

To overcome our difficulties, we won't turn to the

Chinese government for help. If we did that, it would benefit the US. Why would we do that? We can solve our problems by ourselves. Why would we ask the Chinese government to make any concessions for us?

Tom Cheshire: So they haven't been helping, but there have been a lot of interventions by the Chinese government, you know, a little bit of pressure on states everywhere to accept Huawei. Is that sort of pressure from the Chinese government helpful or unhelpful to Huawei?

Ren: It's not necessary. Seeing that Huawei is strong enough to make the US scared, some countries have concluded that Huawei's products are the most advanced in the world. They immediately bought large quantities of our equipment even without doing tests. This has resulted in a rapid increase in our contracts, which is beyond my expectations. Now many people say my previous prediction that "we would see a drop of 30 billion US dollars in revenue" was wrong. Our revenue is actually growing very fast. So I don't want the Chinese government to try and help sell our equipment. If some customers don't want to buy from us, we won't try to sell to them for a while. First, Huawei is not worried about sales at all, and second, our component supply has become completely independent of the US. Next, we will work to replace complacent employees with new, hardworking talent.

Tom Cheshire: Just to get it straight, to sum up, the US government is actually being helpful to Huawei, while the Chinese government is being unhelpful to Huawei?

Ren: Without Trump's publicity, many people around the world would not have realized that Huawei's products are so advanced. So it is Trump that has created more market opportunities for us. After Trump said that Huawei's products were very good and posed a threat to their national security, some countries not allied with the US felt they should buy our equipment as soon as possible in case we sold out. Recently, visits by carriers to Huawei facilities have increased by 49%. They wanted to check whether we would be able to continue supplying to them. When they found out that our products don't need to contain US components, they became reassured and placed large orders. But we need some time to complete this transition. We can only produce 600,000 5G base stations this year, and 1.5 million next year. After that, we will be able to ensure sufficient global supply.

09

Tom Cheshire: A last question related to this topic, am I right to think you are a member of the Communist Party here in China?

Ren: Yes.

Tom Cheshire: So that involves taking an oath. Some of that says you promise to be loyal to the party; work

enthusiastically, and fight for communism all your life; you are ready at all times to sacrifice everything for the party and people; and never betray the party. Do you still abide by the oath?

Ren: Of course. But the oath aims to serve not only the Chinese people, but all humanity. In fact, the manifesto of any political party must aim to serve the people; otherwise, the party won't last. It is the same in the UK. Either the Conservative Party or the Labour Party has to claim that it serves the British people, or even all humanity. This is the foundation of any political party.

Huawei's ideal and mission is also to serve all the people of the world. For example, we operate under harsh and desolate environments in Africa to serve the people there. These efforts are not to turn a profit, but to strive for the well-being of humanity. We are different from people on Wall Street who work for money. We work for ideals and this has yielded positive results. This means we have honoured our oath to the Party.

Tom Cheshire: I don't think the Conservative Party or the Labour Party makes their members take an oath. I think that's a very sunny interpretation. It says "never betray the party". It's about the party. Ultimately the party must come first. You have to choose between, the party, that oath, and Huawei. The oath must come first, surely?

Ren: Yes, the party's mission is to serve the people, and also all of humanity. How could we ever betray such a mission?

Later, I'll show you an article called A Man, A Cook, and A Dog which was written by a Huawei employee. It tells his story on the islands of Comoros which used to be extremely impoverished. Electricity there used to be available only for an hour every day. At first, he was our only permanent employee there, and only had a dog to keep him company. We later sent a cook to help improve his living standards. By reading this article, or talking with our employees in remote areas by video calls, you'll get to understand how Huawei employees have been striving to work for our ideals and serve people all around the world.

10 Tom Cheshire: Huawei has been in Shenzhen for 30 years. It's where you started; it's the home of Huawei. Just across the water in Hong Kong, we are seeing a very different situation from what we have ever seen in Hong Kong. What do you make of what's happening in Hong Kong right now?

Ren: I don't know anything about what is happening in Hong Kong. I focus everything I do on improving product quality and ensuring the continuity of our supply chain in order to overcome the US campaign against Huawei.

The UK is a very friendly country, and the UK government has been very open-minded, whether being led by David Cameron, Teresa May, or Boris Johnson. That's why Huawei has made huge investments there, and we have made contributions to the UK in at least two things.

The first was that we decided to support Arm more than 10 years ago when it was still a really small company. It was sold to SoftBank for 33 billion US dollars a few years ago, and thanks to Arm, the UK and Europe have their own CPUs.

The second thing was that we bought hundreds of acres of land in Cambridge to build an optical chip factory. It will be the most cutting-edge factory in the world. We believe the UK has a very favourable investment environment. In addition, it has cut taxes and is also a very open-minded country. The UK should not follow in the footsteps of a few other countries by trying to intimidate investors. If that happened, we would run away and stop investing there. They should welcome investors from around the world, as this will help the country become even more prosperous. I've always had a lot of confidence in the UK.

Tom Cheshire: I do want to talk about the UK; we will get to that very shortly. I know you've been busy, but there has been the news still about Hong Kong. Even

not in the business capacity, but as a Shenzhen resident, as a Chinese citizen, just over the water, do you have any view about what's happening in Hong Kong?

Ren: I don't have any opinions on Hong Kong. I just hope that the airport will remain open, as people need to take a plane to go to school. I don't have other views regarding what's happening in Hong Kong.

China is a very stable country. The most important foundation for stability is an improved life for the poor. President Xi Jinping has been working hard to reduce poverty since he took office. He requires the party secretaries of counties and government officials at all levels to take responsibility for poverty relief.

I have visited some poor places myself in my years. For example, Guizhou used to be the second poorest province in China, and Hezhang County was the poorest county in Guizhou. Things are completely different now. Hezhang runs large-scale production of a kind of thin, bunching onion. The onions are shipped out by air and so on to big cities like Beijing, Shanghai, Guangzhou, and Shenzhen. Farmers rent their land to cooperatives and are also hired by these cooperatives. I saw an interview with a farmer on TV, who said that he rented his land to a cooperative at a price of about 3,000 yuan per acre per year, and he was also hired to plant and process onions, through which he earned a monthly salary of

another several thousand yuan. This way, farmers in poor counties have been lifted out of poverty.

I went to school in Zhenning County. Residents there were mostly members of ethnic minorities, and it was a very poor area. The party secretary of Zhenning once came to see me and told me that his county planted over 2,000 acres of ginger and a lot of plums, and had been lifted out of poverty. I once drove there to see it for myself, and I really felt that those poor regions had completely changed.

Tibet used to be the poorest province in China. However, after traveling there, I almost feel like the infrastructure in Tibet is better than Shenzhen's now. I even joked in Shanghai once that even their infrastructure is not as good as Tibet's. The roads in Tibet are also very good now. I recently travelled to Xinjiang, and it seems to be a very tranquil place. I drove along the Duku Highway, which was both quiet and beautiful. Travelling there was very safe.

China has lifted many people out of poverty. As people's lives improve, so do their levels of satisfaction. Why did the Colour Revolution never impact China? I think the reason is that the lives of the poor have improved, and people are more content. Their living standards may still not be high compared with those in some Western countries, but have improved significantly

in recent years.

Of course, China is still working to lift more people out of poverty. China's 900 million farmers are increasingly happy about their lives. Urban citizens may face some difficulties because of high inflation and slowing income growth, but overall China is pretty stable.

Tom Cheshire: So when you mentioned the improvement of people's lives, people may be feeling their lives aren't improving. Is that why you think there is that turmoil in Hong Kong, because people want more and they are not getting it, they are not seeing that improvement, and that's where the political unrest comes from?

Ren: I don't know what has caused the unrest in Hong Kong. What other countries say about China may not be correct. The Shenzhen municipal government has recently taken a lot of measures to cut taxes for small- and medium-sized enterprises. Taxes on low-income taxi drivers have also been cut significantly. That is really amazing, because it will prevent social instability caused by the widening gap between the rich and the poor. I saw the news about tax cuts in Shenzhen on the evening news, but I don't have a full picture of relevant policies.

The growing income gap between the rich and the

poor is a fundamental reason for social instability. Capital monopolies, as they develop, may cause instability. In China, we need to guard against the widening income gap between the rich and the poor, and ensure that it doesn't become excessive.

11

Tom Cheshire: What's your view of Boris Johnson as the UK's new prime minister?

Ren: He is very capable and good at making decisions.

Tom Cheshire: Have you spoken with Boris Johnson about the coming decision on whether to let Huawei into the UK's critical infrastructure?

Ren: I think he is too busy at the moment. If he has the time and invites me to talk, I'll be willing to go.

Tom Cheshire: How important is that decision for Huawei as a company?

Ren: I think it's very important. I noticed that the third day after Mr. Johnson took office, he said that the UK should deploy 5G nationwide as soon as possible. I think this is a wise decision, because speed determines a country's economic development. Of course, Huawei is not the only vendor of 5G equipment, and other companies can also provide good 5G equipment, although Huawei's is better still.

Let me share a story. China used to be an agricultural

country, and its army was generally made up of infantry. This meant they were unable to defeat the mounted warriors of their tribal neighbours. Over 2,000 years ago, when Emperor Wu of the Western Han Dynasty went on expeditions to the west, his tactic was to arm his forces with strong horses, because cavalries had a greater advantage in battle. China was conquered twice by the cavalries of its tribal neighbours. In the 18th century, the Industrial Revolution began in the UK, resulting in the inventions of trains and steamships. This greatly advanced industrial civilization. At that time, however, China was still an agricultural civilization that mainly relied on carriages as its major means of transportation. Therefore, speed determines national strength and economic development. If the UK increases information transmission speed through 5G, they will be able to seize the high ground of AI.

The UK must attach great importance to the development of 5G networks. According to what the new PM said, the UK will strengthen its rollout of optical networks. They should widely deploy optical networks in large cities. However, optical networks are not necessary for small- and medium-sized cities in the UK. That's because 5G can replace optical networks in these cities.

Tom Cheshire: So, from what you said, 5G is a good thing. In regards to the UK's decision about allowing

Huawei into critical national infrastructure, are you hopeful that the UK government, under this new Prime Minister, will allow Huawei into critical national infrastructure?

Ren: I am not speaking on behalf of Huawei. I don't think there will be any issues, no matter which vendor the UK chooses for its 5G. The Prime Minister has proposed to speed up the rollout of optical networks and 5G networks. This is an important decision for the UK, which will help it seize the strategic high ground of this information revolution. The UK must widely deploy optical networks in big cities, because the radio frequencies in big cities are not currently enough. However, in small- and medium-sized cities, 5G can be used to replace optical networks and function as wireless telecom equipment. We can provide the equipment they need, and so can other vendors. Other vendors can also provide very good equipment. The UK government and carriers can make comparisons and choose whichever vendors they believe to be the best. Objectively speaking, I think 5G is critical to the UK.

Currently, South Korea is the most advanced country in terms of 5G deployment. So far, Korean carriers have secured over two million 5G users within just four months.

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Tom Cheshire: Okay, so do you think Huawei should be involved and should be allowed in every part of the network?

Ren: Of course. The UK has conducted the most rigorous reviews on Huawei's products. Our products have been "dissected" by many carriers around the world, and the UK's "dissection" has been the most thorough of all. Therefore, they should have confidence in Huawei. However, I think the UK can still compare our products with those of other vendors, so that they can identify which ones are the best.

Tom Cheshire: Isn't that telling us that Huawei has, for a long time, had this rigorous testing, had these labs in the UK, as well as all these reports. But there are still doubts, there are still delays with decisions, and senior politicians, senior members, the premium administrations still didn't trust Huawei?

Ren: It is impossible to make everything perfect, without any defects. The more we innovate, the more defects there will be. As long as we comply with the UK's requirements and continue to address any issues or defects that have been identified, we can become a qualified UK supplier. That's why we are willing to work hard and step up our investments.

The Industrial Revolution was first started in the UK, and has become a key part of the UK's DNA. In the

future, AI will be in dire need of 5G networks. When AI becomes a reality, even a small workforce will be able to produce a large number of quality products.

The UK doesn't have a large population, but it will be able to shine again. An important reason for this is that tax rates in the UK have become much lower. When it comes to digitization, the UK should remain unaffected by ideology and politics, and work to advance its digitization agenda. If the UK government does not trust others, they could strengthen their oversight. This is the only way for the UK to stay on the fast-track to economic growth.

Tom Cheshire: If the UK does say no to Huawei in this decision after all this testing, it's pretty damning for Huawei?

Ren: We are confident that they will not say no if they really take the tests seriously. They might say no, but I don't think it would be to us.

Tom Cheshire: If you were talking about the strict testing, then we talk again about the political pressure from the US. Mike Pompeo, the US Secretary of State, met with our new foreign secretary in Washington, and John Bolton, the US national security adviser, came to the UK to speak to Boris Johnson, the most senior US official to do so. Afterwards he said, the UK government is going to look at Huawei from square

one – they are going to start from the beginning. Do you think the US is putting pressure on the UK government? Is the US interfering in UK affairs?

Ren: The US is putting a lot of pressure on many countries around the world, but how many countries have they convinced?

We are not particularly concerned with which countries buy our products. Our main concern now is that our supply will be unable to meet demand.

We have spoken with our carrier customers in China and hope they can understand that we need to ship equipment to overseas customers first at this critical time. This is because it takes time for a new product to enter mass production, and we can't produce such large amounts of equipment at the moment.

We told Chinese carriers that we would ship more equipment to them next year, because there are currently many customers buying from us, contrary to what many currently believe. We are not afraid because some important people keep advertising Huawei all over the world.

13 Tom Cheshire: Part of Boris Johnson's new government signature policy is Brexit. Is Brexit a good idea or is no-deal Brexit a good idea?

Ren: I am not a politician, so I don't know much about Brexit.

Tom Cheshire: You said in an interview in May with Chinese media, talking about your veto on the board, and talking about democracy within Huawei. You said, "If we allow voting as the British did, the fate of Huawei might be ruined as a company." You're saying that Brexit would ruin Huawei, so you do have a view on this?

Ren: My right to veto was supposed to expire at the end of 2018 when our transition to new leadership was completed. I had planned to give it up when that date arrived. However, in 2018, the UK had a referendum on its EU membership. They voted to leave the EU. That's it.

Huawei's leadership in governance, including the Representatives' Committee, the Board of Directors, and the Supervisory Board, are elected by shareholding employees in a democratic way from bottom up. We were afraid that if our employees had a sudden vote one day, the company would face great twists and turns. Therefore, I retained my right to veto, which can be conferrable. However, this right will not be passed to my family members, but to the seven elite members who will be selected among our senior management.

They will be partially retired by then, so they will be fair while exercising the right to veto. A tenure system

will then be adopted for these members. Their terms of office, which may be iterated, can be four or eight years.

These members, as a group, will be conferred with the right to veto on major matters. They are the most senior leadership who have left the Board of Directors and the Supervisory Board, and they will exercise the right to veto as major shareholders. This will prevent the company from making wrong decisions on major matters by simply acting on the wishes of employees. We should not allow major changes to the company to be based purely on what employees desire.

Tom Cheshire: As an example, you saw the referendum we had about leaving the European Union. And you decided not to enable full democracy to stop big mistakes on major matters. Does this sound like you think that the Brexit was a big mistake on a major matter?

Ren: No, that's not what I meant. What I said just now is that we should extract lessons from the UK's decision-making process when establishing our own systems. I didn't comment on whether the UK should leave the EU or not.

14

Tom Cheshire: Beyond the UK, there are other issues alongside the relationship with Chinese state. One of the things that keeps coming up is about the theft of

the intellectual property. Has Huawei ever engaged in an IP theft?

Ren: No. The company has strict rules, and we've never stolen any intellectual property. We have a large amount of cutting-edge intellectual property, and we are an industry leader in this regard. We have respected IP protection since we started the company. Even when this interview is finished and you release the video in the UK, we will pay all copyright fees required for any rebroadcasting we want to do. We obviously can't rebroadcast your video without paying for the copyright. So in addition to IP related to technologies, we also pay a lot of attention to IP protection in other aspects. We proactively observe all related laws and regulations.

Tom Cheshire: You are very welcome to use our video. But with things like the Motorola case in 2007, Cisco in 2003, and Tappy, the T-Mobile robot, these are all pure inventions. A lot of these cases have been settled. But I believe Huawei admitted to copying some source code for routers. These things do keep happening, so it does seem like there's a small problem here?

Ren: First, these kinds of judgments are made by the courts. Recently Cisco has also used our code. A lot of code is publically available and can be accessed online. When programmers downloaded a bit of code online, it does not create problems.

15

Tom Cheshire: You mentioned Xinjiang earlier. You mentioned that it had become stabilized. A lot of people are worried about what's happening in Xinjiang. The first question is that is Huawei supplying equipment, software, or expertise to authorities in Xinjiang?

Ren: As a communications equipment provider, we sell equipment to carriers and relevant companies. However, it's the carriers who decide how to use the equipment. Similarly, carmakers sell cars to anyone, and so the cars they've sold may be used for different purposes. I suggest that you also visit Guizhou, Yunnan, Tibet, and other regions in China inhabited by ethnic minorities, and take a look at the situations for yourself. You should visit these places in person. I may not be able to explain everything clearly to you.

Tom Cheshire: We've been to Xinjiang. We've seen it with our eyes and felt it. Do you approve of the government's policies in that region?

Ren: I am not familiar with government policies in Xinjiang. I only know the overall living standards there are improving. The only way to guarantee social stability is to eliminate poverty. In regards to specific policies, I am not very familiar with them. I am not a politician, and I don't study policies. My knowledge about Xinjiang is based on what I experienced on vacation there. I visited farm houses and listened to the farmers' stories.

16

Tom Cheshire: You talked about cars, like supplying cars to people, and this is a more general question. Do you worry that when you supply technology, it might be misused by governments, especially by authoritarian governments, wherever they are around the world, especially when it comes to things like big data and AI? Are you concerned about how governments will use your technologies, all the types of technologies you have?

Ren: We don't sell equipment based on what countries the carriers come from. Governments hold sovereignty over their country. There are lots of different types of governments around the world: monarchies, democracies, republics, and so on. We won't interfere with other countries' internal affairs. If we decide to sell equipment to some countries and reject some others, that essentially means we are taking a political stance. Sovereign states have the right to decide how to use the equipment.

17

Tom Cheshire: Your experience as an entrepreneur growing up in China, during an era that experienced the great leap forward, the Cultural Revolution, reform and opening up, how did those shape you as an entrepreneur? And how did they shape Huawei as well?

Ren: I matured and such experiences made me less naïve.

Tom Cheshire: And in terms of Huawei's culture, how does that reflect, that maturity and lack of naivety?

Ren: Huawei is now full of vigour everywhere. Employees are free to criticize me and the company in our Xinsheng Community, and we do not consider those who criticize us to be bad people. Our Human Resource Mgmt Dept will check whether these employees' criticisms of us are valid. If they are valid, the department will further check whether these employees have been high performers during the latest three years. If they have, these employees will be transferred to work at HQ for six months and then be assigned back to operating teams. This has made our corporate culture flexible. People outside Huawei might think that there is chaos at Huawei when we are attacked. However, as you can see here on our campus, there's no chaos. Instead, you only see our employees working diligently. Such a relaxed environment enables employees to speak out when they see things unpleasant and then become relieved.

Tom Cheshire: It feels like one word to describe Huawei, one noun, would be toughness. That analogy of the plane, you talk about this conflict, getting to the top of the mountain, being tough seems to be, maybe the most prized attribute of Huawei.

Ren: You're right. Before Trump's attacks against us, Huawei was like a plate of loose sand. That was because many employees were very rich and didn't want to go to work in hardship regions. They just wanted to stay where they were. The company was too big to manage as well, so it was in a shaky and unsteady state. However, the US's attacks against us activated this organization. If employees work hard, they are likely to grow in the company. Otherwise, they might have to leave. I would like to thank Trump for activating our company.

18 Tom Cheshire: Is there anything else you'd like to add? Anything you'd like to say to the people that are watching at UK, including Boris Johnson, but also around the world?

Ren: First, I have high respect for the UK. The country has made outstanding contributions to the world over the past several hundred years, especially during the Industrial Revolution. The British are known for global expansion, through which they brought their advanced culture and industry to different parts of the world. Today, two-thirds of the world's population are using English in one form or another. This shows the tremendous contributions that the UK has made to the world. Without a unified language, it would be impossible to modernize the world. Today, English is the

world's most universal language. The UK has spread the elements of its modern civilization like industry and culture across the world, so I think the contributions the UK has made to the world are really great.

Second, the key characteristics of the UK lie in its institutional development, which has made significant contributions to the world history. The Glorious Revolution in the UK was a peaceful revolution, which was also known as "The Bloodless Revolution". In the 350 years that followed, there were no major internal conflicts within the country. The UK has adopted a constitutional monarchy. Under this system, the monarch serves a primarily ceremonial role and doesn't intervene in politics, thus allowing Parliament to leverage its collective wisdom. The development of the UK provides a new model for the world. Revolutions often cause much damage to society. It is not just about casualties. The damage can be so severe that it cannot be repaired, even over several hundred years. I think the path that the UK chose has been very successful. The UK pays a lot of attention to standardisation, but it lacks one thing, innovation. The US has inherited the attribute of standardisation from the UK, because a great many Protestants migrated to the US. The US had been expanding too rapidly, so it couldn't control its end points; however, this left room for innovation. As a result, the rise of the US has been even faster than the rise of the UK.

Third, the UK should become a role model in the information era, as it has some of the greatest educational and cultural systems in the world, despite a small population. Looking ahead, the UK should focus on developing AI. Super-fast computing and super-large storage, which you can buy, are important for AI's development. But super-fast connections are more important. Fibre and 5G can provide super-fast connections. The US doesn't have super-fast connections, because it is still using cables for most of its networks, which provide low-speed connections. If the US wants advanced fibre networks, it would have to invest another 500 billion US dollars. The US also needs to invest heavily in 5G. The US is rejecting advanced 5G, so it has encountered big obstacles for AI development.

The UK must seize the opportunity to develop AI. At Huawei, we have a lab called the Turing Lab. Turing was a British mathematician, and the father of AI, over 80 years ago. The UK is also a world leader in genetic engineering. If electronics technology is combined with genetic engineering, will that create an even bigger industry for humanity? What if genetic, electronic, photon, quantum, and AI technologies are all combined? Then we will see a world that we can hardly imagine.

The UK must seize this historical opportunity and leverage AI to amplify the effects of its small population.

This will allow it to once again become a major industrial power. The British people are polite and well-educated, and they have everything that is necessary to make this happen. In the traditional industrial era, large-scale industrial manufacturing couldn't be achieved through automation and informationization. As a result, industries had to be moved east to countries with larger populations. You have visited our production lines, where we use a little bit of AI, but our reliance on manual labour has significantly reduced.

The UK should develop vigorously and become a role model for the world, encouraging people to focus on increasing productivity. The best goal for a country is to make its people rich and prosperous. I would like to convey my best wishes to the UK and I have complete confidence in our investments there.



Ren Zhengfei's Interview with The Associated Press

August 20, 2019 Shenzhen, China

Joe McDonald: Thank you, Mr. Ren, for seeing us. We understand you're very busy, so thank you for giving us this time.

Ren: I'm also very glad to see you, because you are giving us an opportunity to share our situation with a wider audience.

01

Joe McDonald: Last night in Washington, the US government announced it's going to postpone this Entity List by 90 days. May we ask your reaction to this? What difference will this 90-day extension mean to Huawei? You know, how much does the company still need the American products and components that will be affected by this Entity List?

Ren: This is a good thing. Both sides need to think it over cool-headedly though.

First of all, the US should weigh in on which party stands to lose more: Huawei or the US companies. They really need to do their research and then consider whether to keep us on the Entity List.

I am always an advocate of globalization. This is because globalization enables optimal allocation of resources and stands a better chance of delivering high quality services to customers around the world. The globalization we have achieved today was hard won

through decades of collaborative efforts. A further divided market is not in the best interests of the US, because the US is currently the world's most powerful country and has the biggest vested interest in the global tech sector.

Second, whether the temporary license is extended will not have too significant an impact on Huawei. From 5G products to core networks, we can do well without relying on the US. Yesterday, you must have seen our whole series of products that no longer contain US components. We need a short period of time to switch over and ensure run-in of these newly designed circuit boards. Following that run-in period, our production capacity will soar.

The biggest impact of the Entity List would be on our consumer business. There are billions of Android system users around the world. Banning Huawei from using this system will not ensure the US's national security. If the US still wants to ban us from Android, we may need to work on our own backup plan. Google is a great company and we have signed many agreements with them in good faith over the years. We want to continue using their products. If we are allowed to do so, we are more than willing to help extend the use of this US technology around the world. But if Google or Microsoft cannot continue to provide their systems to Huawei, then it is possible that there will have to be a third

system to replace theirs. No one can be certain that this third system will fail. If this system does succeed, it will pose a big threat to the US.

What's happened over the last few months has proven that the Entity List won't crush us. Huawei can definitely survive and thrive. Is this what they wanted when they added us to this Entity List? They might not get what they wanted. China and other countries will produce alternatives. In the future, US products may not be able to enter markets using these alternatives. If this happens, their market size will shrink, which will weaken their financial performance. We don't want to provoke confrontation. We still want to buy US components, despite the fact that we can mass produce alternatives ourselves. We want to reduce our own production and buy from the US, because we want to contribute to the prosperity of humanity together with the US companies.

02 Joe McDonald: You've been talking to foreign reporters a lot this year. For a long time you did not talk to reporters. I assume that your goal in talking to reporters this year is to repair Huawei's reputation abroad and to improve operating conditions in the face of this pressure from the United States. Do you think it's working? Do you think conditions are improving for Huawei? Do you think you're repairing your

reputation?

Ren: Your analysis is pretty much correct. I came forward to show who we really are during this time of crisis. When the US added Huawei to the Entity List in May, most people, including those from the media and other companies, thought Huawei was doomed. Some believed that Huawei would survive for more than two or three months, and that when our current inventory was used up, Huawei would collapse. As I met with more and more media outlets, many believed I was just trying to conceal how poorly prepared we were. Over the past six months, roughly 2,000 journalists have visited our campuses. When they saw how Huawei was actually doing, they came to realize that Huawei is still alive and its productivity is increasing. In the beginning, media coverage of Huawei was very negative, but then it started to improve slowly, and now it is almost good. This shows that what we have been doing has worked. If I were to only speak with the media, and not allow you guys to see firsthand how we are doing, I don't think our credibility would be very high.

03 Ken Moritsugu: I want to ask going back to your daughter's detention in Canada in December and then coming through the six or seven months of this year and the tensions with the US on trade and the Entity

List. In your time running Huawei, is this the biggest crisis you've felt as a company? Or have there been other crises in the past that you would say similar?

Ren: Actually, there have often been crises over the last 30 years. If it's not this crisis, then it's that crisis. Sometimes a particular crisis would be big enough to endanger our very survival. The crisis created by the US was a big blow to us, but its impact has not been too significant. In the past, we had no talent, technology, capital, or market share, and we had no clue whether we could survive the next day. Those crises might have been more severe than the one we are facing today. Regarding this current crisis, we are likely to overcome it, because our business has grown to a certain scale and we have developed our capabilities. Therefore, I don't think this is too scary.

04 Joe McDonald: President Trump has suggested that he might go easy on Huawei or drop the Entity List and also that he might improve conditions for your daughter Meng Wanzhou, if the Chinese government agrees to make some trade agreement with the United States. What's your reaction to this? Do you think Huawei is just a pawn or bargaining chip in this? How do you feel about the American President talking about your company this way?

Ren: It sounds like a good idea if this pawn can help solve the problem between the two countries. However, I will not push the Chinese government to make concessions for the benefit of Huawei, because trade is something governments should handle, not businesses. Despite the current US campaign against Huawei, we still have sufficient funds to help us get through the difficulty. Many people in China are still very poor. So as a matter of conscience, I could not accept it if the government had to sacrifice the interests of those poor people for the benefit of Huawei. I would rather withstand attacks for a couple more years and my daughter to suffer more, than let China concede something to the US for Huawei's benefit. In fact, the US should realize the standard of living for many people in China is still very low.

So I will never ask the Chinese government to make concessions so that the US would go easier on us. If the US does not ease up, Huawei might grow slower and Meng Wanzhou might have to stay longer in Canada and suffer more. But I would rather accept this because it is in the interests of China and the Chinese people. If the Chinese government makes many sacrifices for Huawei's survival, I would feel indebted to the country.

If some people in the US say, "Ren Zhengfei can spend some money to improve the situation for Huawei", they

are right. That is something I might consider. If some people in the US say our 5G technology poses a threat to the US's national security, then I'm open to discussing the possibility of transferring our 5G technologies and production techniques to US companies. Then they can develop their 6G based on our 5G and speed up the process of their technological development. I'm open to all of these possibilities because we will sacrifice our own interests instead of the interests of the Chinese people. Otherwise, people will curse at me on the street.

05 Joe McDonald: You mentioned people who say that Huawei or 5G might be a security threat. What additional things can Huawei do? Or what additional things is Huawei planning to do to reassure the United States and Australia and other governments that its technology is safe, is not a threat in order to gain access to their 5G markets?

Ren: I think if the US and Australia haven't been convinced that 5G is nothing more than an advanced tool and if they still have security concerns, maybe it's best for them not to buy Huawei's 5G technologies or products. They can decide whether to buy from us after all the other countries have proven our products pose no threats. By doing this, they will not feel as worried. I personally see 5G as just a tool to support the future

adoption of artificial intelligence. So the tool itself is not a security concern.

If you look into this tool further, data in 5G networks will be aggregated in core networks. These networks are owned by the telecom carriers of sovereign states. These carriers are subject to the laws of those states in which they operate, and their data is governed by local laws. There are no security issues there with 5G.

Although we currently think that we don't have any security issues, we are still working hard in that area. Huawei has grown from a small company to what we are today. Our software may not be perfect, but we will continue to improve it. This of course involves ensuring cyber security and privacy protection across entire networks. With privacy protection, for example, we are fully compliant with the EU's General Data Protection Regulation.

06

Joe McDonald: We've seen over the last three months protests in Hong Kong. We're wondering how these protests affect Huawei. I mean it's the next city over, adjacent to your HQ city, and Hong Kong is an important business center for you. What effects are these protests having on Huawei and what effects are they having on US-China relations and tensions in a way that might affect Huawei?

Ren: China operates based on a "one country, two systems" principle in Hong Kong. The problem as we see it is not as simple as a next-door-neighbor problem. Unlike two adjacent cities in the mainland, there's still a border and customs between Hong Kong and Shenzhen.

In terms of the "one country, two systems" policy, Hong Kong works under a free capitalist system while China's mainland works under a socialist system. These are two completely incompatible systems. For Hong Kong, the legal system gives people the freedom to demonstrate. That's understandable. There has been some violence recently, which is in nobody's best interest.

The protests in Hong Kong haven't had any impact on our business. We are still focusing on our production and are patching up the holes in our bullet-riddled plane so that it can return home safely. Right now, we are primarily concerned about whether we will continue to survive under the current US sanctions against Huawei. We are not concerned about what is happening in Hong Kong, nor will we analyze it. We are working to find out more about how the US's Entity List affects us and how to improve our production.

07

Joe McDonald: We're also wondering about Huawei's technological future. What do you see as the most important emerging technologies that have not been

developed yet? What do you see as the priority areas for Huawei to develop?

Ren: I think the future of emerging technologies is about intelligent computing and evolution from intelligent computing to artificial intelligence. 5G is just a supporting platform that lets artificial intelligence deliver low latency and high bandwidth. It is a tool rather than a result.

08

Joe McDonald: How is Huawei changing its research and development in response to US pressure? Are you acting as if the Entity List and restrictions will become permanent and you will have to produce your own components? In what areas does Huawei think that it has to become self-reliant or ensure it is no longer dependent on American suppliers? And how is it trying to accomplish that?

Ren: It's unlikely that the US will ever remove Huawei from the Entity List, because no one in the US will take a stand to get us removed from it. It seems that attacking Huawei in the US is politically correct and that the US has every reason to give Huawei a hard time. Any American who voices their support of Huawei, even once, would probably find themselves under attack by many. So we are mentally prepared for staying on the Entity List for a long time to come.

In the short term, we will work to fix the areas that need to be fixed. In the long term, we will set our sights on future-proof, emerging technologies such as artificial intelligence and cloud. If we aren't successful in these areas, we might become sidelined or just die out. If the US cuts its tech sector off from China, it may be difficult for us to access some advanced US elements. In that situation, will Huawei start to fall from the top? Probably. This is where Chinese scientists and research institutes will come into play.

09

Ken Moritsugu: I'm wondering how much this Entity List and the pressure on Huawei from the US have changed Huawei's strategy. Last year, before this happened, I think most people were talking about 5G rollout. That was the big Huawei story and here's what's coming next. Now, we're talking about the Entity List, the need for Huawei to reduce its dependence on US suppliers. How much have you or Huawei had to change the strategy of the company? And how is that affecting the company and its future?

Ren: The Entity List has not impacted our strategy; rather it has helped it. It has led us to give up on some marginal, unimportant products so that we can focus our resources on core products. In the past, we couldn't control budget allocation among entry-level teams, and

as a result, we worked on peripheral products, but now we've made up our mind to axe them. To do this, we implemented a transformation across our R&D functions, during which 46% of R&D departments were removed. The outstanding employees from these departments were relocated to our core product lines. This way, we will only become more competitive in our core products. You visited our exhibition hall yesterday and saw our products with your own eyes. If you have an opportunity to visit other companies and make a comparison, you will come to understand why we are so confident in our global leadership.

The Entity List will not crush us as the US hopes. By adding Huawei to the Entity List, the US wanted to kill off Huawei. But we are not dead; in fact, we are doing even better than before. This is not what they were hoping for, and the Entity List has not affected us as much as it has affected our US partners. They used to supply us with several hundred million or even several billion dollars' worth of components and were suddenly not allowed to do so. Their short-term financial results will surely be significantly impacted and their losses will be felt. After all, stock prices matter a lot to Wall Street.

I think the Entity List hurts the US a lot more than it hurts us. While it should be revoked, I don't think it is likely. So we are prepared for a situation where we will be on the Entity List for a long time.

10 Joe McDonald: You mentioned 5G earlier. How much does Huawei depend on American components or technology for 5G and how will the Entity List affect that and Huawei's ability to sell 5G products? Just products, any 5G technology?

Ren: Huawei's 5G products and core networks don't depend on US components or technology.

Joe McDonald: So either Huawei makes everything itself, or it has non-American suppliers?

Ren: We basically make everything ourselves.

11 Joe McDonald: I would like to ask about the foreign workforce at Huawei. Huawei is unusual among Chinese companies in that it has a large number of very advanced technicians and specialists who are not Chinese. What advantage does Huawei get by having foreign employees instead of an entire Chinese workforce? And what difficulty or what burden does that place on the company?

Ren: When different countries, nationalities, and cultures come together, collisions happen, but these collisions can be mutually beneficial and generate a lot of vitality. Our foreign employees have helped create a diversified culture within our company, giving our products a leading edge around the world. Today, the

US is the world's most advanced and most developed country as well as the most powerful country in terms of technology. A critical reason behind this is that the US is an immigrant society, which has attracted countless brilliant minds from around the world. Of course, Huawei is far less diversified than the US, but our foreign employees can serve as "gamma globulins" to inspire changes to the mindset of our current employees. So there are many advantages to hiring foreign workforce.

We are also working to increase the percentage of local hires in our overseas offices. Since it may not be easy for Chinese employees to adapt to overseas work environments, we now prefer hiring local employees to sending more Chinese staff overseas. This is more cost-effective, and more importantly, this creates jobs and cultivates talent for local communities.

Joe McDonald: Some people abroad are uneasy about Huawei and they say there are some questions about who controls the company or who makes decisions. For now, in the very top layer of people who make decisions, the board and the CEO level, all are Chinese citizens. Would Huawei consider adding non-Chinese members to the board of directors or appointing a non-Chinese chief executive as a way of increasing the trust of foreign countries? And if you don't think that's possible, why do you think it's not possible?

Ren: I think our foreign employees must first have the right skillset before being placed in a top management position. Besides, such foreign employees must have worked at Huawei for at least 25 years. This is because I believe a senior executive should start from the very bottom of the company and climb their way up the career ladder step-by-step to gain a comprehensive understanding of how the company works. Some Western companies change their CEOs frequently, but after several rounds of changes, these companies may be totally ruined. This is because new CEOs from other companies may not really understand how these companies run, especially not on the ground floor. Some might even think they can just drink a little wine, talk a little philosophy, and then they're good to run a company.

Non-Chinese employees have taken up positions at Huawei as country-level CEOs and directors of product lines, as well as senior experts like Huawei Fellows, which is the highest technical position at Huawei. Of course, please feel free to recommend qualified candidates for CEO, chairman, or other senior management positions. We will first assign these candidates to work in hardship regions, like in Africa and even way out on the Comoros Islands where we only have one permanent employee with only a cook and a dog to keep him company. We will then send them to other places to get more hands-

on experience and technological expertise. After they have developed a comprehensive understanding of Huawei's business, they may have opportunities to be promoted to top management positions.

Why are some Western companies not doing very well? Because their board of directors is focused on finding an excellent chief executive officer. After new executives come on board, they often leverage just about anything to expand capacity, but then have to drop prices when there is an oversupply of products. This might eventually lead to the collapse of these companies.

Therefore, at Huawei, we emphasize that our business leaders must come from within, and this includes our pool of 30,000-plus foreign employees.

Joe McDonald: If you appointed a non-Chinese board member or a non-Chinese chief executive-level person, could you see that causing any trouble with the Communist Party? Would it change the personality of the company from a political point of view? Do you think that's an obstacle?

Ren: No, absolutely not. We have established boards of directors in some countries outside of China, and in those cases, the majority of the members are renowned figures in the local communities.

12 **Ken Moritsugu:** We learned yesterday that you like to talk to your employees and you like to have tea or coffee, or you encourage them to have tea or coffee. Even as the company has gotten very big, you continue this. I'm wondering, when you speak to your employees now, is anybody worried about the future of Huawei because of the pressure from the US? Or are they comfortable? And why? How are you able to give the employees such confidence despite everything that is happening, if that's the case?

Ren: First, it's not me giving our employees the confidence they need to face our current situation. They get their confidence from the clear path to future success they can see on their own. We wouldn't be able to constantly preach to our employees and force them to believe in the stories we tell. Rather, they can see how their own hard work is contributing to the company. This fills our employees with hope. The Entity List incident has inspired our employees, and they have improved their abilities to solve problems. That further adds to their confidence in our company.

13 **Joe McDonald:** We want to ask about your life and how your life experiences influence the development of Huawei. Could I ask your background? You came from Guizhou, one of the poorest places in China and

you grew up in a poor town. How did someone from your background, a poor kid from Guizhou, become one of the most successful business people in China?

Ren: I personally don't know how I managed to get to where I am today. I once said, even if I had not gone to university and instead worked on raising pigs, I could have become a leading expert in pig farming. I focus relentlessly on whatever I choose to do, so I believe I could be good at anything.

Recently, I traveled to a place called Beidahuang in Northeast China. During that trip, I said if I had worked there when I was young, I would have transformed an entire village in Beidahuang into a noodle processing factory. This plant would have been able to process all the wheat in Beidahuang into various types of noodles and other wheat products. All the farmers would have become members of the business and shared in our success. That is not a hi-tech industry, and we just would have been turning wheat into noodles, so I don't think that business would have easily failed.

There is a village like this called Nanjie in Henan Province that focuses on making noodles. That village continues to adopt a model of collective dedication, and is very successful. There's yet another village in China called Huaxi that focuses on steel. That's a faster-paced tech industry, so it has been impossible for simple

farmers to keep pace with the times. That's why Huaxi village has declined slowly over time.

Even if I had not gone to university and instead raised pigs or worked on noodle processing or something else, I believe I would have still become the best in whichever area I chose, because I have this relentless focus. I established Huawei by accident.

When I was young, I did not have very big dreams. I always just wanted to have some fresh steamed buns because that was something that I was rarely able to have. The second dream I had when I was young was to go to university, so I could get some distance from my parents. I had never left the province where I grew up, so I really wanted to go to another province to broaden my horizons.

I didn't have big dreams when I was young. I just had this relentless focus on whatever I chose to do. With this kind of almost obsessive focus, the likelihood of success becomes much higher. I don't see any connection between my poor background and the success I have today.

Ken Moritsugu: Can I ask about the relentless focus that started when you were very young, when you were still a child? What gave you this relentless focus on whatever you are doing?

Ren: The place where I grew up was very poor. There was pretty much nothing that we could do to entertain ourselves. I played with mud and stones, and shot things at birds. These were the simple things that I could do. Maybe this was how my personality started to take shape. I don't have a background in psychology, so I'm not sure how my personality was formed. I think it may be attributable to my curiosity.

Joe McDonald: We met your author Tian Tao the other day, who wrote a book about Huawei. He said that he asked 50 people what the most important factor in your development was and he said that all 50 people said it was your mother. Is that true? Do you think that your mother influenced your life? And if so, can you tell us how? In what ways?

Ren: Back then, my behavior towards my parents was similar to the way today's young people act towards their parents. The youth of today tend to be cold towards their parents. For example, when they return home from abroad, they may not even bother to call their dad or mom. Instead of talking to their own parents, they will talk with others here and there. This was also true to me. I only came to understand the greatness of my parents' personality and integrity after they passed away. When they were alive, I couldn't understand them, and I often became fed up with what they said to me. So it's

hard to say what kind of influence my parents had on my personality.

My father was the principal of a middle school. My mother was responsible for a class of third-year high school students and also taught mathematics. At the same time, she had to take care of seven kids. We had no housekeeper, so my mother had to cook for all of us on her own. She generally spent the 10 minutes between her classes rushing back home to cook rice. Then after a class, she would rush back again to cook, possibly, two simple dishes. Actually, the dishes could hardly be called dishes. That was the life she had.

My father was denounced as a "capitalist roader". He was detained in a so-called cow shed, which was used to hold intellectuals at that time. Because of that, his salary was slashed. My mother was not a college graduate. Therefore, despite her hard work, she only earned 40 yuan per month, around 7 to 8 US dollars, to feed the entire family. We had grown up then, but we boys still had to wear patched and rugged clothes. It was too embarrassing for my sisters, especially those at college, though. So my mother gave the unpatched old clothes to my sisters, and she herself wore the clothes that had been patched up again and again. I was told by my younger brother that her colleagues didn't want to sit close to her during a meeting, because of what

she was wearing and the fact that she was the wife of a "capitalist roader". So it's hard to say what influence she had on our personalities. What I do remember was the pitiful experience she went through. By the time I came to understand my parents and I wanted to take good care of them, they had passed away. That was the biggest regret in my life: I missed the opportunity to take good care of my parents.

As I mentioned, my mother only graduated from a junior high school. But she continued studying on her own to better teach her students. Out of her students, more than 90% went to college. So you can imagine the great efforts she had to make. When she was 15 or 16, she joined a choir that sang songs opposing the Japanese invasion during the Second Sino-Japanese War. Because of the absence of the Communist Party there, the choir was probably organized by unofficial teams from the Nationalist Party. After the Chinese Civil War, this experience caused political pressure for her, and she mentally suffered severely for decades afterwards. On top of this, she had to feed and take care of seven kids. Although my father was a principal, the school was far away from where we lived. So he had no time for us, and it was my mother alone who took care of us. In such a difficult situation, how could my mother have time to talk with us? As far as I can recall, she only talked with us once or twice after cooking in the kitchen.

After my parents passed away, I came to reflect and regret how little I understood them. That's why I don't criticize my own kids for not being close to us. After all, I was just like that when I was a kid. So again, it's really hard to say what kind of influence my parents had on me. I believe that what society has taught us and what we learn by ourselves have a greater influence on us. We cannot attribute our personality entirely to our parents. Otherwise, we would be misled to the theory that your parents' genes define everything about you.

14 Joe McDonald: We were wondering whether there's an example of a problem you encountered and you solved in a way that you think illustrates the Huawei strategy. Someone suggested to us the story of Xiaolingtong and Huawei's decision on whether to develop Xiaolingtong or not. That's one possibility of the Huawei strategy, and how you think about the business.

Ren: I would say Xiaolingtong or the Personal Handy-phone System (PHS) in China was a strange occurrence. It was not born out of market demand; instead, it was a byproduct from the systems at the time. Back then, 55 MHz spectrum was still available at the 1,800 MHz frequency band in China, which could have been allocated to China Telecom to support GSM services. If

that had been the case, there would have been no reason for China Telecom to launch the PHS. However, that 55 MHz spectrum was not allocated to China Telecom and as a result, China Telecom had to find an alternative that could work on spectrums that were not strictly regulated. It happened that the PHS acted as cordless home telephones, and didn't require strong signals.

Therefore, China Telecom enhanced its mobility, and introduced it to the market. The PHS was just a temporary product. China Telecom did not have wireless products at the time, so they used the PHS in wireless scenarios.

I think our strategy is to take a long-term view and think about what the actual needs are. That's very important.

The PHS did not have a bright future, and consumed huge amounts of effort and energy. If we expanded into this market, how would we have focused our strategic forces on our promising core business?

Joe McDonald: We have read that that situation was very contentious within Huawei and that the company almost split apart because of it. Can you tell us about that?

Ren: We were not particularly concerned with the external pressure, and we insisted that we not go with

the PHS. But there was still pressure from within the company. What if Huawei had tumbled and even died because of my misjudgment?

At the time, Huawei was under great pressure to survive. We were focused on developing products that were in line with 3GPP standards. The whole process to achieve this lasted about eight years. During that period, there were many employees within Huawei who wrote reports asking the company to work on the PHS, because they wanted to make more money. They thought the PHS was very simple, and that Huawei was well positioned to work on it.

Every time I read a report, it was a struggle and an extremely painful experience for me. That's probably also when my depression got worse. Our concerns were not put to rest until China decided to issue 3G licenses eight years later.

15 Joe McDonald: You mentioned depression. We have heard that you have told employees that in about 2000 you felt great pressure and you would wake up in the night and worry about how you would pay employees, and that you even considered suicide. Is that true? And if it is true, can you tell us about that situation? What happened?

Ren: I don't want to talk about this painful experience any further. All I can tell you is that what they have said is true.

Ken Moritsugu: Can you talk about what you learned from that experience, maybe? And did it change you? And how did you overcome this kind of challenge?

Ren: I would say I learned nothing from it. It's like a journey that contains only pain, with no gain. All I can say is that if we spread things too thin and don't stay focused, we are doomed to fail. But if we choose the correct direction and stay the course, success is very likely. We have summarized this goal as the generally correct direction. It's impossible to choose a direction that is 100% correct. So all we need is a generally correct direction.

We also need to inspire passion across our organization, and ensure we all work towards the same goal. Looking back, I would say that's the bet we made on science and technology. It could have been wrong, but luckily, it turned out right. This relieved my pressure, and I never thought about suicide again.

Joe McDonald: How do you think of the situation now, the crisis facing Huawei with the United States, compared with the difficulties with Xiaolingtong in 2000 and so on? If you compare the two, what does this situation feel like?

Ren: The pressure we are facing now is probably only 1% or maybe 10% of what we faced back then, because now we are confident that we will weather this crisis. Back then, we knew nothing for sure and we feared the unknown. Now though, I don't have that fear. At that time, I was so tormented by my fear that I fell into depression. Now we are patching our holes step by step. The holes in our 5G and core networks have been fixed, and we only have a couple of holes remaining in our consumer business. We believe we can fix them over the next two to three years. Therefore, we have confidence that we didn't have back then. In addition, unlike those days, we now have more financial resources, and the company stands united as a whole.

Moreover, back then we had yet to define our own identity. We are a private company and in those days, private companies in China had very little social or political status. However, we were earning a profit, and people just couldn't understand why. The pain points that we feel today are the attacks from the US. They attack our business and our market, but this won't crush us. Only in China could my social standing be impacted; nothing the US does could hurt me because I wouldn't go there. I am more relaxed now.

I could have retired earlier, so why am I still working? Because I see I am still helpful in this current crisis. I will

continue working for a few more years, so it is likely we will meet again in the future. You can ask whatever questions you want; I will give you the honest answers.

The last 30 years has been a painful experience for me, with little joy. Every step of the way had its own difficulties and pains. You are the first journalist to ask me to compare the current crisis with the painful situation we experienced in 2000. This has given me an opportunity to refresh my memory. Thank you.

16

Joe McDonald: You're in your 70s now. Most Chinese business leaders at your age have already retired, and most people at your age would be enjoying being praised for having been very successful. Instead, you're now in the middle of this trade and technology war between Washington and Beijing. How does that feel? You had so much success and now you are in this conflict. How will you get through this?

Ren: Probably I'm too healthy to want to retire at this point in time. I would be bored if I retired, so I would rather do something for our PR department. This is also a way to entertain myself.

I'll share a few funny stories with you. AIG's former chairman, Allen Greenberg, once invited me to the US for a routine physical with his private doctor. Later on,

I did two other physicals at the 301 Hospital and the Peking Union Medical College Hospital back in China. The results of all of these showed that my heart and stomach are both very young and there are no areas of any concern regarding my heart or blood vessels.

I am still very healthy all around. It's probably because I don't have any really bad habits. I don't smoke or drink, and I eat healthy and follow my doctor's advice. What's more, I don't have any hobbies like singing or dancing, and I don't take care of children. If I retired, I would have nothing to do at all. I would rather stay at Huawei and do something helpful.

In the last couple of years, I followed my wife on trips to Bolivia. I did not feel uncomfortable at an altitude of more than 4,000 meters in Bolivia. One Huawei employee there told me that the oxygen level at that height was only 0.5 points lower than that in Shenzhen. I was unsure whether he was telling the truth. Recently I also went to Nepal for site visits. A helicopter took me to some level ground near our sites, and then I walked the rest of the way up to see our base stations at an altitude of 5,200 meters. I didn't feel that it was a burden for my heart. Of course, it was unlike walking fast at sea level, but I was able to handle it well. In these last two years, I have not been walking so much. During the years before that, I walked a lot, and young people walking with me

might have got blisters on their feet and been unable to carry on.

Why haven't I retired? The reason is that if I don't retire, I can often come to the company to have some coffee. It's inconvenient for me to drink coffee outside, because I am an Internet celebrity.

I told these funny stories to relax the atmosphere. Now let's return to our conversation.

17

Joe McDonald: One question from the news about current events. We saw a news report from the *Wall Street Journal* that said Huawei employees in two African countries had helped authorities there find or harass their political opponents. What is Huawei's position on this? What is your personal policy on helping other governments do political things? Do you agree to help governments do this sort of thing? Did Huawei agree to help these governments in Africa to do this?

Ren: No such thing happened at all. And this information was totally unsupported. We have issued a legal letter to the *Wall Street Journal*.

Joe McDonald: What sort of letter is that? A legal demand for retraction or something else?

Ren: It's about asking the media outlet to investigate

and clarify. They shouldn't circulate rumors. Instead, they must investigate thoroughly and correct their mistakes.

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Ken Moritsugu: One more follow-up question. I want to ask about technology because technology is very powerful; it can be used for good or bad in many ways. And I believe Google and Facebook had some of these debates going on about whether they had responsibility for how their technology is used. Do you have any thoughts on technology? Or do you just provide it and people use it? Or do you feel you have a responsibility for how technology is used?

Ren: Huawei provides technology and ensures that our technology complies with cyber security and privacy protection laws, like GDPR. At the end of the day, networks are controlled and managed by sovereign states through carriers, so this is not something that Huawei can or cannot do. After our equipment is installed, carriers observe and track you at all times. Otherwise, how can you dial and make phone calls? The whole process must comply with international laws as well as laws of different countries. This is not something Huawei employees can control. Therefore, the international community has to come up with a unified set of rules on this.

Content in this publication is based on excerpts of Huawei founder and CEO Mr. Ren's interviews with the media.

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