

ON THE RECORD

**HUAWEI EXECUTIVES
SPEAK TO THE PUBLIC**

VOLUME VI

Oct. 2019 – Nov. 2019



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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Ren Zhengfei's Northern European Media Roundtable

October 15, 2019
Shenzhen, China

Ren: Good afternoon. Welcome to our company. Feel free and speak up about any questions you might have, and I will try and be very direct in my answers. Challenging questions are welcome too.

01

S/V: **Maybe it's not a challenging one, but more, if you could just tell us a bit about where your inspiration comes from? What does this building mean for your inspiration? This is a very European setting and it feels like we're back in turn-of-the-century France or something.**

Ren: Well, first of all, this building was designed by a Japanese architect and decorated by companies and artists from Russia, Greece, China, and Japan. The layout of this building has the basement be an exhibition hall of our products and technologies, and our customers can chat over a cup of coffee up here after their visit. The architect had several different ideas and combined them all together in order to finish this entire building.

The Songshan Lake campus, Xi Liu Bei Po Cun, which you visited this morning, was also designed by a Japanese master architect Okamoto. He got his bachelor's, master's, and doctorate in the US but doesn't speak good English. His designs you see here today with elements of European classicism are accepted by our

review panel. But this design has nothing to do with our company's philosophies.

02

S/V: Your building here feels like it has an international environment, but still there are a lot of countries like the US, maybe the UK, and now potentially even Sweden that want to make laws banning companies that they think might be a security threat. What does this mean for Huawei and what does it mean for a country like Sweden?

Ren: I fully support the EU's new strategy about digital sovereignty. In the past, we cared a lot about material wealth, so geopolitics was very important. Today, we are in an information society. Since information has no boundaries, digital sovereignty really matters. The new strategy of the EU requires that everything should be based on facts, a company should promise to not commit any wrongdoing, and then be subject to review. If this company has not broken its promises, it is a good company and can survive in Europe.

Of course, these EU rules apply to every company, not just Huawei. I think the coordinated risk assessment report the EU has published on the cybersecurity of 5G networks can be carried out in any part of the world.

So I see this report as being positive. We are not

worried about it at all because we have never done anything wrong. So we are not worried about more rules and may have more opportunities as long as the rules are only about stringent reviews.

03

NRK: Huawei is at the forefront of two big international struggles. One is the trade conflict between China and the US which also spills over into Europe. The other has to do with the allegations that Huawei can be a tool for espionage. What is your straight answer on Huawei's position, and how do you defend Huawei on these two fronts?

Ren: First, I want to make it clear that the trade conflict between China and the US has nothing to do with Huawei. Huawei has virtually no business presence in the US, so whatever the result of the China-US trade talk ends up being, it won't have an impact on us.

Second, though the US has put us on its Entity List, we have now used our own chips in the vast majority of our products. In the past, we limited the use of our own chips and used more chips from the US. We did this so that we could keep good ties with US companies, which have maintained strong relationships with us over the past three decades. Why did we stop using their chips all of a sudden? When the US suspends our supply, we

have to start using our own chips on a larger scale. We have been preparing this for years. It didn't happen all of a sudden. The US government thinks cutting supply to Huawei will give them a leg up in its trade war with China, but really, it fails to hit its target. The sales of its own companies have been weakened instead.

Third, in terms of cyber security, Huawei has been faced with accusations from the US. But as you know, these accusations are groundless. Our sound track record has proven that Huawei is a reliable company. Over the past 30 years, we have served three billion people in more than 170 countries and regions. Even today, there hasn't been a single incident of data theft. An article published by the Lithuanian newspaper Lrytas UAB implied that the leaked information of the African Union was allegedly related to Huawei. The Lithuanian court has obliged Lrytas UAB to publish a statement to retract its false statements and apologize to Huawei. Our 30 years of sound track record is a testimony to people in Northern Europe that we are credible.

What will things be like in the next 30 years?

Mr. 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 a statement at the Munich Security Conference that China

has no law requiring companies to install backdoors. Premier Li Keqiang reiterated this point at a press conference following a recent session of the National People's Congress. So, from simply a policy perspective, we would never install backdoors in our equipment.

And from the perspective of our best interests, the backlash of a wrongdoing like this would spread around the world, and our business credibility earned through 30 years of hard work would be damaged. With all our employees running away, I would need to repay tens of billions in bank loans for the company. So I have no motivation for doing something like this. I can promise people in Northern Europe that we respect their digital sovereignty and would never do anything that would violate it.

Fourth, let me make a quick example. When a truck manufacturer sells a truck, the driver decides what the truck will carry, not the truck manufacturer. So, when our telecom equipment is sold to a carrier, it is the carrier and the local government that control and govern the data, we don't. So it is impossible for us to steal anything. We are a firm supporter of digital sovereignty.

That's why the US's accusations are groundless and they haven't presented any solid evidence to support these accusations. These are purely speculative and not the truth.

04

NRK: Norway is an ally of the US and a member of NATO. It's under pressure from the US, and just recently, Telia, who is its second biggest carrier, decided that they would use Ericsson for their 5G technology. And then there's Telenor, Norway's biggest carrier and one of Huawei's big global clients, who will make their decision about 5G later this year. Do you think that the decision by Telia was made based on network speed and quality or did political factors come into play?

Ren: We respect whatever decisions our customers make, which is basically the same as buying clothes at the mall. Everyone has different tastes, so our customers are going to buy whatever they want. There are countless carriers around the world, and it's impossible to make every single one of them like us. We were not able to do this in the past, and it is even less likely for us to do so given the current situation we find ourselves in.

NRK: Are you excluding the possibility that the political climate has influenced Telia's decision?

Ren: I'm not a decision-maker at Telia, so I could not tell you if their decision was politically influenced or not. As of now, we have signed 60 contracts for 5G and have shipped 400,000 5G base stations. And these numbers are still going up. Decisions made by one or two customers do not represent how the majority of our customers feel about Huawei.

05

Ye: You mentioned shortly that you have been able to become self-reliant. I would like to hear more about this. How did you get to that point? Where do you feel you have been able to do it well and where do you feel the difficulties of being on the Entity List?

Ren: To be frank, we have not seen a substantial impact of the US's attack on our communications domain. The attack is primarily against 5G and core networks. I can tell you that our revenue from the communications domain, including 5G and core networks, will not decline this year; in fact, it is estimated to grow a little. We will see growth with our communications domain, especially with 5G. There is little impact in this domain.

Our consumer business, however, will be affected. If the US does not allow us to participate in the Google ecosystem, we will see it play out in overseas markets.

We also find ourselves slightly behind US companies in intelligent computing and need to double our efforts to catch up.

Ye: What's your view on what's happening in the industry as this divide seems to grow? If it continues, do you think you will be able to build sort of another ecosystem besides Google? Will you be able to match their strength?

Ren: We have a good working relationship with Google.

Even if we develop our own ecosystem, that ecosystem will not be used to compete with them. I think if the world has ecosystems by Apple, Google, as well as Huawei, it will help advance our societies. We have never considered anyone as an adversary.

06 DR: You've said very clearly that if Beijing ever asked Huawei to spy on their behalf, you would close this company. I'm very fascinated by this answer. How would you in practice do this? It's very clear that you have a very powerful Chinese government and you have a president who doesn't tolerate dissent. How would you in practice close Huawei and make sure that was not a state takeover?

Ren: The Chinese government has never asked Huawei to spy on their behalf. In the past, they didn't even know networks could have backdoors. Since the US started making baseless accusations against Huawei, the Chinese government started to take cyber security seriously. It has taken some time for China to come to this level of awareness.

We have been subject to the strictest evaluations in the UK, performed by world-class technical experts. According to their findings, Huawei has no malicious cyber security issues, but the quality of our software

has room for improvement. The UK has placed trust in Huawei, and our business has developed very quickly there over the past decade. We also place huge trust in the UK and have established our own cyber security evaluation center there.

***DR:* Even as powerful as you are, can you say no to Beijing, say no to the Chinese President and leadership?**

Ren: 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 China has no law requiring companies to install backdoors in their equipment. During a press conference held after a recent session of the National People's Congress, Chinese Premier Li Keqiang reiterated this point. These are all directives from top government officials.

07 *Dagens Industri:* In an interview with The Economist, you recently proposed that you could license all your 5G technology to a non-Chinese company and allow them to use your 5G patents on fair, reasonable and non-discriminatory (FRAND) terms. Have you had any reactions to that statement yet? And have you had conversations about using your 5G patents with Ericsson?

Ren: First of all, this is a very big decision that will not be made quickly by any company that might be interested. Ericsson does not need to buy 5G patents from us because we have already signed cross-licensing agreements with each other. Patents are shared between our two companies. Ericsson has what it needs to develop 5G technology and does not need to spend huge sums of money to buy 5G patents from us.

I think US companies are the ones who need our 5G patents, because they don't have these 5G technologies or patents in the US. Without them, it would be difficult for the US to move forward. So far, we haven't seen any reactions to our offer from big US companies.

Dagens Industri: No reactions from any big American companies on this?

Ren: Correct. We've heard from some intermediaries who want to play the middleman, but they don't represent any big US companies. I don't think the reactions from the intermediaries are that important at the moment. What's important is for us to directly communicate with big US companies.

08

Dagens Industri: My second question, so the United States is contemplating funding money to issue credit to your competitors, including Ericsson, to make it

easier for them to compete with you. What's your view on this business practice, this trade practice? Do you find that fair, especially off the back of the fact that the United States is blaming Beijing for state support of its companies?

Ren: First, it is understandable if the US government issues credit to Ericsson and Nokia, or customers that buy equipment from them. It is a positive measure that we understand and support. I think this is good for society, because new things cannot collect funds as soon as they start developing. So I understand and support what the US government is doing.

Second, Huawei is unable to receive such financial support. Over the years, our business operations have provided 90% of the capital we need and are continuing to contribute cash flows to the company. So we have sufficient cash. Our rapid growth over the years is attributed to sufficient money and simple decision-making processes.

In the capital market, many shareholders often spend so long arguing that an age has passed before they have finished. However, we have a unified will at Huawei when it comes to decision making, so that we can quickly decide and invest large amounts of money in certain areas. This is a characteristic of our management.

Providing buyer's credit is a common practice internationally, so it is understandable for any country to help its export companies. For example, airplanes are bought through financing and leasing. Airlines have to pay off the money to banks in seven or eight years before they own the planes. Financing and leasing are common practices all over the world, so we support the US government's funding for Ericsson and Nokia. If their market shares increase while ours decrease, there would be no conflicts between us.

09

***Helsingin Sanomat:* My question is about reputation. Some people see Nokia's reputation as more transparent and more reliable compared with Huawei's. Can you describe your personal view on that? Is Nokia as pure and innocent as some people see?**

Ren: Finland is a great country. I have two reasons for believing this. First, today's Android system originated from Linux, which was invented in 1991 by a Finnish person. Linux then went open source and evolved into today's Android. Finland has made significant contributions in this regard.

Second, we worked with the University of Tampere and invented block-matching and 3D filtering (BM3D) technology for noise reduction. With this technology,

people can use cellphone cameras to take clear photos in the dark. This technology was initially found in an academic paper from a Finnish university.

Third, Nokia is a role model that we used to admire. Nokia started as a pulp mill and developed into a leading global cellphone maker. But Nokia later took a detour during the course of its development. The company stuck with the path of the Industrial Age, which placed quality as its top priority. Nokia phones were the only phones that could be sustained for almost 20 years. Someone once asked me to help repair his phone. When I found that it was a Nokia phone dating back over 20 years ago, I thought he should take it to Nokia's museum in exchange for a new one. This example showed that Nokia was determined to follow the path of the Industrial Age.

Technologies evolve very rapidly in the information society. The quality of mobile phones is now overshadowed by customer experience, but Nokia has failed to keep pace with this trend. However, Nokia is still a great company.

Some people always think that Huawei is not transparent. But in fact, Huawei is highly transparent. Our financial reports have been audited by KPMG for over a decade, and our financial statements clearly explain where our money comes from. The US

government should take a look at these statements.

Some people think we are not transparent because we haven't gone public, but this doesn't make sense to me. Huawei adopts a new model under which its funds are collected from its employees. This may even become a model for most companies in the future. How is this model different from those of Northern Europe? There is no difference at all. In other words, we embrace employee capitalism, instead of the large-shareholder capitalism adopted by Wall Street, and there are no zillionaires at our company. Under employee capitalism, many employees are getting a certain amount of shares, providing assurances to them once they are retired or if they get sick. Isn't this modeled after those of Northern Europe? Don't you embrace people's capitalism? Northern Europe does not have zillionaires, but it is still one of the richest places in the world.

Norway is very wealthy, but the people there still drive small cars and live in small houses. Every time I return from Norway, I ask our employees to learn from the country. In China, people tend to buy big cars and big houses. Since we are still a developing country, how can we live such luxurious lifestyles? We should be saving money for production and investments.

Our company is transparent throughout and exposed under the sunshine. Over the past 30 years, people

around the world have kept a close eye on Huawei, including the Central Intelligence Agency and other US government agencies. They've continued watching us but haven't found any problems. Isn't this a proof of our transparency? We are just as transparent as Nokia.

10

***Helsingin Sanomat:* About Mr. Xi, you are a really powerful man in China and member of the party. Can you describe your personal relationship with Mr. Xi Jinping and the last time you met?**

Ren: I only met President Xi once at Huawei's UK office in 2015.

***Helsingin Sanomat:* You don't think you will meet the Chinese President again?**

Ren: Maybe. It would be nice to see him again, but I haven't got any invitation yet.

11

***SVT:* Still you may have been personally affected by this rift between the US and China since your daughter has been arrested in Canada. How do you see that? Is that designed to put pressure on you and your company or designed to put pressure on China more?**

Ren: As for the case regarding my daughter's detainment in Canada, this will be decided by the law.

***S/T*: You don't think that has any relationship to the tense situation between the US and China?**

Ren: Right now we can't know for sure if there is a relationship. My daughter is a grown woman, and she can handle the challenges herself. I have three kids, and they are all independent and strong-willed. I have been married twice. Right now, I am married to Yao Ling. She is a kind and responsible mother. For 20 years, she chose to stay home to take care of our daughter, teach her to be diligent in her studies, and help her form good habits. My youngest's achievements are the result of her own strength and the education she received from her mother. I have always been busy with my work and didn't spend much time with my kids during their childhoods.

I think letting kids face some challenges isn't necessarily bad for them. As for the challenge now facing Wanzhou, I hope it won't get tangled up with state affairs. I don't think the country should make concessions for us, because they may have to sacrifice the interests of the less privileged. We think we should solve the issue by relying on the law and the courts.

12

***NRK*: In the current political climate, what is your advice to the big carriers that will now decide on 5G?**

What should they base their decisions on regarding which to choose and to what extent should they listen to their own government? What would be your advice to European countries' governments in the current political situation?

Ren: I fully support the digital sovereignty proposed by the EU. Digital sovereignty is as important to a state as their geographical sovereignty. Geographical sovereignty relates to geopolitics. This is not the case with digital sovereignty because information flows globally, so digital sovereignty is necessary. I agree with the idea that every country should establish their own digital sovereignty, and I fully support the strategies and requirements of digital sovereignty. We will try our best to contribute to the infrastructure they need in the EU. We are committed to going open source with our key technologies such as compilers and MindSpore framework for AI and Kunpeng products for European and global developers. European companies can innovate based on these open platforms, and their innovations will impact the world and extend to China. This will help improve their economic and revenue structures. We aspire to support the development of at-scale digital ecosystems in Europe.

***NRK:* Given the current political climate, how important is technology, speed, and quality in**

products? How important should each of these things be in decision making?

Ren: It's very hard to say. Different people like to buy different things. There is no standard way to decide what to buy. It wouldn't be practical for shops to only sell Hermès bags and not sell any other brands. Shops will sell different commodities for different uses. I don't think it's appropriate to buy things based on political factors. Products related to infrastructure have long lifecycles, and if you lag behind at the beginning, it becomes hard to catch up.

For example, Europe lagged behind China more than a thousand years ago. China's prosperity in its Tang and Song Dynasties is reflected in classical Chinese paintings like *Along the River During the Qingming Festival* (Qingming Shanghe Tu). Why did Europe develop faster while China fell into poverty over the last few hundred years? Because Europe invented the train and steamship, while China was still using horse-drawn carriages. Carriages move much slower than trains and carry less cargo than ships. Therefore, Europe developed, and China lagged behind in terms of industrialization. Speed determines achievement.

As for 5G, I think people should choose products that are able to deliver fast speeds, large bandwidths, and low latency for the development of an information society.

5G has presented new development opportunities, and we should choose the best equipment. I think products made by Ericsson, Nokia, Huawei, and Samsung are good choices, and are able to support decent networks. Carriers make their own choices based on their own decision-making mechanisms. They need to take speed into consideration, because speed is critical to social advancement. Trains and ships were faster than Chinese carriages, so Europe developed faster than China.

13 Ye: One thing that has certainly happened is that China has caught up on the ship and horse carriage game. So how did Huawei manage to overtake Nokia and Ericsson and why is there no mobile network company in the US? What is the Chinese idea? Why has it worked so well?

Ren: First, Huawei, Ericsson, and Nokia are on good terms. We worked together to create industry organizations like the 5G Automotive Association (5GAA) and the 5G Alliance for Connected Industries and Automation (5G-ACIA), which are set to contribute significantly to Europe's industrial development. Europe is known as a talent hub with a small population. With AI, Europe will be able to produce a massive quantity of goods with a relatively small workforce. There's a lot to look forward to in terms of what AI can bring to Europe.

5G is just a supporting pillar of AI. We are working with Ericsson and Nokia in good faith to advance the development of 5G.

As we move forward, conflicts between us will inevitably arise. But I would characterize our relationships as competitive and cooperative. Both competition and cooperation are important to drive us forward.

***Y/e:* For the telecom companies in the US, there were competitors from there, and now there aren't any. Do you think that there's some sort of difference between you? Why did they vanish? Why didn't they manage to compete with you and the Nordics?**

Ren: The US companies chose the wrong path. In terms of technology, the US is the most powerful country in the world. With its strong influence, the US strong armed the world into accepting CDMA and WiMAX. However, European standards – WCDMA – eventually became mainstream. US companies failed to follow through the 3GPP approach in their research. As a result, their tech didn't sell well abroad, which hurt their financial performance. Huawei's rise can't be blamed for US companies' decline. They vanished because they chose the wrong path.

14

DR: In the interviews you actually praised the American President. You've even said it's good that he lowered the taxes in the US. At the same time, a lot of people would probably say that he's also the architect of a lot of your troubles – your personal troubles, your company's troubles. What do you actually think of the American President?

Ren: I think the world should learn from the US president and lower the taxes so that businesses can earn more and develop more rapidly. Tax cuts aside, Mr. Trump is also wielding the stick against many countries, which is deterring foreign investment. Tax cuts were meant to attract foreign investment. If everyone is afraid to invest in the US, who will fill the revenue gap caused by the tax cuts? With less tax revenue, the US will find itself in a difficult financial situation.

If the US were nicer to other countries while lowering taxes, it would be a great boost to the US economy. However, the US is lowering taxes on one hand, and getting into trouble on the other hand.

The Chinese government is also cutting taxes, bit by bit, to reduce pressures on businesses and inject vitality. We believe all countries will eventually go down this path, because no country will be able to afford an excessively expensive welfare system.

***DR:* You must have some days or evenings when you dream a little bit of Donald Trump losing the next election.**

Ren: First of all, Trump has never appeared in my dreams. I don't miss him that much.

Second, whether or not he is re-elected will not affect us all that much. Whoever the next president is, we don't expect Huawei will be removed from the Entity List. No one in the US will speak for Huawei. Therefore, we are mentally prepared to remain on the Entity List for a long time. We must get used to living with it.

At Huawei University, classes often begin with a warm-up video of students from China's Hengshui High School doing morning exercises. It is a high school in an underdeveloped county. We all know that it's very difficult to change China's education system and the general teaching methods, and the school knows this too. But they changed their methods to adapt to the external environment and achieve success.

What have we learned from this high school? We can't change the world and we can't change our external environment, but we can change our own methods so that we can achieve success within the existing environment.

The US may or may not elect a new president, but

this will not change their policy towards us. We must be mentally prepared for this for a long time to come. If we rely too much on luck, we may one day fail.

15 *Dagens Industri*: I would like to come back to the issue of Huawei and possibly other Chinese tech companies becoming self-reliant on equipment, and how this turbulence has added more urgency to this issue. You said, for example, using your own chips will boost your profits, which I found interesting. I would like to hear a little bit more about how it would boost your profits. And could we draw the conclusion that this trade war, this tech war, has actually been in favor of Huawei and Chinese tech companies in your push to become more self-reliant on equipment?

Ren: First of all, we don't want to see de-globalization happen. We should firmly pursue globalization. We have been forced to use our own components as a last ditch effort because the US stopped supplying us with their components. We don't want to collapse, so we are using more of our own components. But in the long run, we believe globalization will create more wealth for humanity. We firmly believe in globalization.

Will some Chinese companies grow big enough to overtake US companies? That's possible. But we are

not counting on this possibility. I think the US is still the most powerful country in the world. We are not seeking de-Americanization or trying to decouple from the US. We have contingency plans in place to offset the impact caused by the US denying our access to US suppliers.

16 *Helsingin Sanomat*: **How do you see China's national security law and how does it affect Huawei? For example, a part of the law says individuals and organizations must cooperate with national security officers if needed. So does Huawei need to obey the law, too?**

Ren: I don't quite get what this part means. Chinese leaders have clearly stated that no Chinese law requires Chinese companies to install backdoors in their equipment, and we comply with this instruction.

17 *SVT*: **What's next after 5G? How do you see the future for Huawei and for competitor companies?**

Ren: I think that following 5G, we will see the large-scale adoption of AI, but there are three basic preconditions for that. First, the availability of super-computing systems. Second, the availability of super-large-capacity data storage systems. And third, there must be super-

fast connections between these two systems. When these conditions are met, AI will have huge potential.

In fact, AI was proposed by Alan Turing of the UK in the 1940s, but it only began to be applied 60 to 70 years later. Why is that? It's because these three preconditions had not been met until now. 5G is only a tool that supports AI with its low latency and large bandwidth. I believe that AI will develop rapidly around the world.

I think Europe will benefit most from AI, because European industry has very advanced systems engineering. They can use less labor to make more and better products. Europe is well positioned in this regard, because it has a relatively small population and has a well-trained workforce. With AI applied in production systems, they will be able to make more products. That's why I think that Europe will benefit most from 5G and AI. Huawei, Ericsson, and Nokia have set up the 5GAA and the 5G-ACIA. Both of them will promote better use of AI in production systems.

Will China also benefit this much from AI? I don't think that will be possible in the near future. This is because China's industry has just moved from manual to mechanical. The next step will be to move to automation and then to digitization. Only after we go digital will AI have a major role to play. So it will take a longer time for AI to play a role in China.

18

NRK: How do you think that 5G and artificial intelligence will change society and the way we live?

Ren: This question is too complex for me and I don't have enough knowledge to give a proper answer, but I can give you two examples.

In China, there is a 500-hectare farm that entirely relies on AI for production management, with no farmers working there. There is also a mine in Northeast China, but its operators are located in Shanghai.

If there were another disaster like the explosion at the Chernobyl nuclear power plant, we wouldn't have to send 600,000 soldiers for rescue and cleanup operations, like the Soviet Union did; we could use AI to operate robotics instead for the rescue efforts. Even today, we are moved by the spirit of sacrifice demonstrated by these Soviet Union soldiers. The first one to charge in, shovel in hand, was a lieutenant general. People can be exposed to high levels of radiation for 45 seconds at most; any longer could be fatal. At the time, 600,000 soldiers and thousands of helicopters carrying earth were sent to bury nuclear waste.

I don't know whether you have visited our mobile phone production lines. If you have, you may find that we have only a few people on the production lines. This is only partially intelligent production. If Europe uses this

mode of production on a large scale, they would make more products with relatively few workers. This will translate into higher yields and returns and significantly reduce social conflicts.

What will AI ultimately bring to future society? I'm not sure. I'm still envisioning what AI will bring as it continues to develop.

Europe is the first region that has proposed the concept of digital sovereignty. I think it's a very wise decision. It acts as a lighthouse and sets a benchmark for the development of information society around the world. We used to emphasize physical boundaries because of geopolitical factors. We used to claim that things like mines and trains were all ours. Now when information travels around the world, digital sovereignty becomes necessary to support national development. We will resolutely support this concept.

We will go open source with our AI ecosystem to support the innovation and development of European start-ups and small businesses. Our goal is to share success with our European partners, not to be the sole winner.

19

***Ye:* It seems that everybody is happy with the cyber security report that the EU made. Even the US is happy**

with it and you're happy with it because it doesn't mention names, but the US thinks that some names are written between the lines. How do you see this? Is there a Chinese company name between the lines of the EU cyber security report?

Ren: I don't think so. First, the EU has proposed that everything should be determined based on facts as that is fair to all vendors. Second, vendors should first promise that they will not build backdoors into their equipment and then should subject themselves to review. I think this is a scientific approach as it applies to all vendors. We support and welcome this approach. Different countries and people, including lawmakers, may have different interpretations or opinions. I think the conclusions of the report are fair.

20 DR: You started your career in the Chinese army, the PLA, and later on you created this empire. Do you understand why some people outside China are very confused? Are you basically a good old communist inside, or a capitalist? Do you have to choose between those two?

Ren: First, every soldier that chooses to leave the army is going to look for a new job. It's like this in every country. In total, the Chinese army has discharged tens

of millions of soldiers; it would be ridiculous for all of them to stay at home and not work. I was just one of these soldiers.

Second, regarding what kind of ideology Huawei follows, we don't really have a pretty label for what we are. There are over 90,000 employees who hold shares at Huawei. Even though I have more shares than any other individual, I only have less than 1% of all shares. Of course, our mechanism may not work for other companies, but it works for us as a technology company. The company's wealth is in the brains of our employees instead of any special quality of mine. If I were to hoard all the rewards, people wouldn't stay with Huawei, and nothing would be left. We distribute shares to employees according to the value of their brains. This is the foundation of our so called ideology. It's not specifically based on any traditional ideology. I don't know what to call it exactly, but I guess it may be called employee capitalism.

21 DR: Decisions about this company, also about the Union and the stakeholders. Aren't you still the actual person who, at least for a couple of years, will guide the direction of Huawei?

Ren: Operational decisions are actually out of my hands,

and I don't directly manage anything in particular. Instead, the Board of Directors does all of that. I do have the right to veto decisions on certain major issues, but I've never actually used this right. I just consult with members of the Board of Directors on major issues.

22 *Dagens Industri*: I would like to ask you again about how you see your chips increasing profits. To me, it sounds tremendously expensive. Could you explain to me how developing your own chips and your own operating system, developing other equipment and services will affect your revenue and profits going forward?

Ren: When people buy chips, what they are actually buying is the use of a bunch of math and physics equations. We had already been developing the data models for those equations, and that cost was already covered by our operational budgets over the years. Companies that don't develop their own chips need to bear this cost when they buy chips from other companies. This part is rather profitable.

Second, we manufacture a large number of chips. We will produce 270 million smartphones this year. Producing such a huge number of smartphones means that we may need to source chips from several different

chip makers. We don't just use things on a small scale. Once you scale out these things, the cost drops.

***Dagens Industri:* Will you start selling chips to other companies too? Is it possible in the future?**

Ren: We don't currently plan to do this.

23 *Helsingin Sanomat:* What are your personal views on Huawei products? Do you use social media? Do you prefer to read your news online or in the paper? Are you a tech nerd or more of a traditional type of man?

Ren: I use social media, and I look at stuff online. I mainly look at criticisms towards us, and I pass those criticisms on to relevant staff. I do this to remind them to check for problems with our products. As we all know, our products are used by billions of people. When people use our products, they are likely to find problems that are hard to identify in the lab. Some people post what they identify online, and when I see such posts, I am grateful, because then I can check with the relevant department as soon as possible to see if any improvements can be made.

We have an internal web forum at Huawei called the Xinsheng Community, where many employees criticize the company. We don't think they are bad employees

for criticizing us, and instead understand that most of them are probably really good employees. If an employee's criticism is useful, our Human Resource Management Department checks their performance records for the last three years. If they have done well, we actually bring them to our headquarters to work for three to six months. During that time, we give them training to equip them with more knowledge, and then send them back to their original posts. They might be promoted in the future after that. We wouldn't promote an employee just because they identify problems. Instead, we promote them after they make contributions on the frontlines. Our internal criticism platform is open to all our employees, and is like a Roman Forum where large-scale debates take place. It's a tool that helps us self-correct. This is similar to what happens in the US. Being able to self-correct makes the US a great nation. Trump is a great man, but his staff also criticize him. The US can correct itself if it makes mistakes. Like the US, we also have a self-correction mechanism. I've made looking at online posts a bit of a habit. I skip the good things people say, but look at the bad and pass it onto the relevant people.

After dinner, I normally read news, go for a walk, and take a shower. After that, I do a bit of email and look at people's comments about us before going to sleep around one o'clock. I forward anything I find to relevant

people, sometimes as late as midnight. I know this makes some people wonder whether I actually sleep or not. In fact, I just send the comments when I wake up and see them in the middle of the night.

***STV:* So no nightmares about Donald Trump?**

Ren: No, none. I actually feel like I need to thank Trump. After the company's 30 years of development, the majority of our employees have become fairly rich. However, this has made them complacent and they have started slacking off. Shenzhen is a great place to live, so why would they want to go and work hard in places like Africa and risk diseases like malaria? If all employees think this way, the company is bound to collapse soon.

However, with Trump brandishing his stick, our employees became nervous and aware that they must work hard to till the soil. That's why our sales revenue has increased, and our company has not collapsed yet. This is the result of our employees' collective efforts.

In this sense, I don't think Trump is a bad guy. Our employees were scared because he intimidated Huawei. I also used to intimidate our employees, but the stick I used was not as large as Trump's. So his intimidation played a big role in driving our employees to work harder than ever before.

24

STV: What would other Western countries risk if they follow the US example and ban Huawei?

Ren: I think other Western countries make their own decisions based on their own interests. There is no way they will all follow in the US's footsteps, because the US doesn't share what it earns with these countries.

If the US shared the money that it earned equally with other Western countries, it would make sense for these countries to follow the US. But the US only cares about its own interests, and even adopts its "America First" policy, showing it doesn't put its allies first.

That's why we believe that all countries will make their own independent decisions.

25

NRK: People are saying that you and President Trump are men of the same generation. If he said "I want to see Huawei for my own eyes," "I want to visit Mr. Ren," what would you show him?

Ren: I would show him anything he's interested in, and even give him a hug. It's just like when you visit our exhibition halls, you can film and photograph what you see. When reporters from AP visited our facilities, they even took photos of our circuit boards. I don't think it matters. If he wants to, he is even welcome to visit my

office, though my office is not as nice as his.

26 *Ye:* 5G is a political thing, a cyber security thing. And next, there is AI, as you just said, it will be the same. As you said, you don't expect to be removed from the Entity List soon. So isn't it certain that there will be some divides or de-globalization in the technological world?

Ren: I don't think that would happen. If we build a localized ecosystem in Europe, and support the separate development of companies in different countries, then these companies would not necessarily have strong relationships with Huawei. It would be impossible for the US to impose sanctions on each and every one of these companies, so they would still have the opportunity to develop. Huawei alone is not sufficient to change the trajectory of globalization or the way things work.

27 *DR:* A lot of people are scared of the rise of China, probably because of the different political system here. Do you think China has any responsibility for this fear, not only in Denmark, but in many countries? And what would you say to people who are somewhat afraid of a powerful China?

Ren: Denmark is a great country that I have a lot of appreciation for. It is a country that encourages intellectual and academic freedom. That's why Danish people have come up with many great inventions, like Niels Henrik David Bohr, the father of quantum mechanics, and Hans Christian Ørsted, who discovered electric currents create magnetic fields.

I have visited Denmark several times, and I've also studied Denmark's social structure. Denmark implements flexible labor laws, which allows companies to fire incompetent employees for justifiable reasons. But the Danish government has also established training institutions to help these people upskill. Companies in Denmark have become more flexible and efficient in terms of workforce deployment, and pay more taxes. In doing so, Denmark has become a country where employees enjoy decent pay and huge benefits.

If a country overprotects labor, companies operating there would not dare to hire large numbers of employees, making it difficult for them to develop into larger companies. This would bring about many difficulties for this country. So without overprotection of labor, a country actually protects its labor to the largest possible extent. In this sense, Denmark has made huge historical contributions. That's the way forward.

I think China needs to learn from the education

and labor systems in Denmark. Why can't China build technical training centers on a large scale, so that the unemployed can receive training and upskill themselves at the government's expense? Without these burdens, companies can go all out to make more money, and pay more taxes, which could then fund more workforce training. This would then help upgrade China's entire workforce, making the entire country progress faster.

28

DR: China has been good enough to explain what it wants with all this power and all this wealth that has come to this country over the last four decades.

Ren: Actually, China's top priority is to lift people out of poverty, because there are still tens of millions of people in China living below the poverty line. The Chinese government is determined to eliminate poverty by the end of next year.

You've been to some coastal cities in China, like Shenzhen and Shanghai, but I would imagine you haven't been to many remote areas here. These coastal cities are not fully representative of all of China. There are many less developed, poor areas in West China.

China must build its strength if it wants to address the poverty issue in its less developed areas. It needs to build infrastructure like railways, roads, and power grids,

which can help modernize those poverty-stricken areas. China should remain dedicated to eliminating poverty.

Another important issue for China is to improve its education systems. For example, 70 years ago, 70% of the Chinese population were illiterate, like a person in the West who doesn't understand A or B. Now, there are basically no illiterate people in the country, but there are still many who know little to nothing about science and technology. This is why I think China should establish more vocational and technical schools, so that ordinary people can master technical skills for better employment. This will ensure greater stability in the country, and stability is the foundation of development.

China has been exploring the right path for decades, and shifted from the planned economy to the current system.

30 years ago, Shenzhen was nowhere near as ordered as it is today, and China has been establishing this order gradually. Now, China has developed its own well-organized system. As long as you don't go over the top, you can say anything. That was not the case 30 or 40 years ago. At that time, I would not have even dared to talk to you. If I saw you in the street, I had to turn around and run away immediately. I could have been suspected of wrongdoing if I even brushed past you.

Now China is much more open, and I can talk with you as I like. I'm telling you the truth without polishing anything. I believe China is moving further towards modernization and democracy. It might not be considered satisfactory by people in the West, because you tend to compare China to Western countries, and because you have been on a journey of modernization for several centuries. But people in China are quite satisfied because the country has been improving day by day.

29

***Dagens Industri*: A question about this wolf culture that Huawei is so famous for. I met several people who worked many years for Huawei, long before you were a world leader, when Huawei was still a challenger. Would you say this last year's turbulence has brought back the feeling of the company being a challenger again and how important is this wolf culture, this fighting spirit, and how does it apply internally when you compete globally?**

Ren: The term "wolf culture" was coined by people outside Huawei to satirize us. We didn't come up with the term ourselves. The idea originated from an article where I said that we could learn from wolves' teamwork and perseverance. In the article, I talked about how wolves have sensitive noses, and can smell meat from far away. I hope our employees can learn from wolves to

be sensitive to market opportunities and technological development trends. Second, wolves do not hunt alone, but work in teams. This teaches us to value teamwork, and not to fight alone. Third, wolves are tenacious and unyielding. They keep fighting even if they fail at first. We hope our teams can learn from this spirit.

Since not all people can become wolves, they can learn from an animal called "Bei" from ancient Chinese legends instead. Bei were very smart animals, but had short front legs and long hind legs, so they couldn't hunt alone. They had to work with wolves to capture their prey. When they hunted, they held onto a wolf's back. If they saw the wolf running to the wrong direction, they would push it onto the right path. Together, these two animals made a perfect team.

However, in Chinese, the names of these two animals have negative connotations. For over 5,000 years, Chinese society has always been relatively conservative. In our culture, people tend to dislike being too aggressive, and view acting proactively as a negative thing.

Because of this, we didn't come up with a "wolf culture" metaphor on our own. It was proposed by outsiders. In fact, when people first used this term, they thought badly of Huawei. Some experts even wrote that wolves were cruel because they would steal meat

from other animals. But that is not what my article was talking about at all. I doubt whether those people read the full article I wrote. But Huawei was not developing very well back then, and many people had a negative perception of Huawei, so this term became quite widely known.

***Dagens Industri:* Do you feel the fighting spirit in the organization has increased over the last six months or the last year because of the turbulence, the trade war, and the tech war?**

Ren: Yes. It has increased. We no longer slack off now, and are becoming stronger and stronger.

30 *Helsingin Sanomat:* Thinking about the future, where is Huawei looking to down the road? And where will Huawei's revenue mainly be from? Maybe Africa or Asia?

Ren: I think most of our revenue will still come from China and Europe.

31 *SVT:* Being from Sweden, I have to ask, what do you think about Swedish ICT ecosystems and knowledge in IT and telecom?

Ren: I think Sweden is a great country. Over 20 years ago, when I told the Head of the Guangdong Communications Administration Cui Xun that one day we would catch up with Ericsson, he just laughed at me and said it was impossible. He told me how Sweden does a great job providing universal education and facilitating scientific and technological innovation, and how many new technologies emerge from Sweden.

We are now building a new campus for our Huawei University and the first phase will be finished in the beginning of next year. Its design was inspired by the buildings in Sweden's coastal areas. I think we can learn a lot from Sweden, in terms of both dedicated spirit of the Swedish people and Swedish culture as a whole. Chinese people are beginning to win the Nobel Prize awards. I truly feel that China is making much progress.

***SVT:* Twenty years ago you didn't think you would reach Ericsson's level, but today you think you're ahead of them, at least on 5G. Why? What happened?**

Ren: I think the first reason is that we knew we were lagging behind. So we spent more time on our work to try to catch up, even sacrificing the times that other people use to have coffee. Second, we are very open. We collaborate with research institutes and universities all around the world, and provide funding for their research. For example, the theory behind massive MIMO,

a key 5G technology, was first proposed by a professor at Linköping University in Sweden, and Huawei was the first to apply the technology to products. To sum up, since we knew we were lagging behind, we have been working all out with partners around the world to catch up with other world leaders.

32 ***NRK:* Your life is in many ways a testimony to China's development. Your generation experienced the Cultural Revolution. You have talked about how you saw French textile machinery and how that influenced your thoughts during the Cultural Revolution. How did China's Cultural Revolution shape the way you think and the way you shaped Huawei?**

Ren: I'm an eye-witness to how the People's Republic of China has grown into what it is today from when it was founded. I lived in an extremely poor region when I was a kid, and I saw what life was like for poor people with my own eyes. I also witnessed many political campaigns and how China struggled and kept moving in the wrong directions by constantly swinging one way to another.

I think the Cultural Revolution is the biggest mistake China has ever made, and it had an enormous impact on the country. At that time, China built the Liaoyang Synthetic Fiber Factory with equipment imported from

two French companies, Technip and Speichim. During my time at the factory, I had access to world-leading technologies, and was able to distance myself from the radical revolutionary movement. As China sought revival after the collapse of the Gang of Four, I had the opportunities to put what I had learned into practice. As a result, I grew rapidly during that period. Later, China significantly downsized its military so that it could focus on economic development. After my entire military unit was disbanded, I came to Shenzhen, which was then at the forefront of China's reform and opening-up.

At that time, I knew very little about the market economy. For instance, I didn't even know what supermarkets were when many friends who had studied abroad came back and told me about them. I knew nothing about them and could only guess what they were like or why they were called supermarkets. Just imagine how difficult it was for someone as ill-informed as I was to go into the market economy!

At first, I worked as the deputy manager of a small company and had very little power. Other managers were directly appointed top-down with certain titles; some of them never reported to me, but any mistakes they made would be my responsibility. With a poor grasp of the market economy, I made a big mistake that got me cheated out of a ton of money. Reclaiming

that money took me more than a year. I couldn't afford to hire a lawyer for my lawsuit, so I studied all the law books I could get my hands on and tried to be my own lawyer. In the end, what I got back were assets, rather than cash. Turning those assets into cash caused some losses to the company, so they decided to let me go. I had no option but to start a company of my own. After I started making some money, I helped my former employer repay some of its debt. It was not until then that I started to grasp a little bit about the market and the economy, and I ran my company without knowing what the world of communications was about.

The first generation of Huawei employees made communications products by referencing a textbook written by a university professor. This simple approach to R&D was the beginning of our journey. One thing that sets Huawei apart is that we spend less on our own meals or clothes but more on the company's future. You may wonder why Huawei is more successful than many other companies. Most Americans throw their money into Wall Street. Most Europeans spend their money on personal wellbeing. At Huawei, we invest all our money into the company's future. And our investments have been enormous. Our annual investments into R&D are around 15 to 20 billion US dollars, and we have about 90,000 R&D employees who throw themselves into their work no matter what. Our immense, focused

investments have led to breakthroughs.

At Huawei, there is no legacy holding us back, and we are always open to new things. Our 5G technology is based on a mathematics paper by Turkish professor Erdal Arıkan. We came across this paper just two months after it was released ten years ago. We have dedicated several thousand employees to analyzing the paper, turning out patents, and getting our 5G business up and running.

We are supporting universities all over the world. This practice has the same spirit as the US's Bayh-Dole Act, which provides funds for universities without demanding their research findings or returns on investment. The US government often gives funds to universities, and whatever patents come out of these funds still belong to the universities. We provide funds to universities the same way. Research findings that our funds make possible belong to the universities themselves, and we only want to be informed of the findings. This way, universities are like beacons that light the way for us and others. And we can stay one step ahead of others if we are the first to understand how these beacons work.

At Huawei, a team of 15,000 scientists, experts, and senior engineers focus on understanding the findings of scientists and turning money into knowledge. Another 70,000 engineers turn that knowledge into products and

finally money. This is how we have gradually explored our own path and learned new things. Having been through many ups and downs over the past three decades, we are now just beginning to scratch the surface of how things work. But there's still a long way to go, and we can't say for sure that we will never make the wrong step.

NRK: Did the Turkish professor ever receive revenue for his family or dividends from Huawei for using his formula?

Ren: No. We wanted to offer him some rewards, but he rejected outright. But we have been supporting his lab.

33

Ye: One thing that was briefly mentioned was the relationship between the Chinese government and Huawei. I had a discussion with the Nokia chairman two or three years ago. He said their customers really didn't expect Nokia to give them the kind of financial benefits or terms that you can provide. He might have meant Huawei or Chinese companies in general, I don't remember, but we were talking about Huawei at that time. So there is a possibility that you have strong financial backing from government export credit organizations, and that there's a whole movement in China to make this company global. That would mean

Huawei's success is not just Huawei's success; it's sort of the whole of China's push that none of the other technology companies can benefit from. Am I right?

Ren: First of all, export credit was first adopted by Western companies. When China was just starting its reform and opening up, it was still very poor and underdeveloped. As carriers didn't have money to buy equipment from Nokia, Ericsson, or Alcatel, the Western governments provided loans to these carriers to buy equipment from these vendors. However, the Chinese government at that time couldn't provide such loans to carriers, so they didn't buy our equipment. That was how things were in the beginning.

Later, the Chinese government mimicked its Western peers and started to provide loans to carriers in Africa and some other underdeveloped countries. The loans were offered to carriers, not us, because we couldn't afford to take on the debt ratio. In fact, we weren't eligible for that much export credit, and most of the credit was allocated to large-scale infrastructure projects, like bridges and railways. Generally, telecom contracts were relatively small, and most telecom carriers had enough money to buy equipment, so export credit wasn't a critical issue for our equipment sales. In China, export credit was first introduced by Western countries exporting to China. At that time, China was just opened

up, and it had very little money.

Export credit has become a common practice around the world.

***Ye:* Do you agree that Nokia and Ericsson are stuck with OECD or some other rules, or other terms on financing, while your hands are freer when you negotiate with customers?**

Ren: We have to abide by the rules too; otherwise, it would be difficult for us to survive.

34 *DR:* Influential people in China don't like the press, especially the foreign press. Until recently, you didn't give interviews like this. How come you feel comfortable doing this? For instance, just a moment ago, you criticized the Cultural Revolution. Don't you sometimes think that even you should be more careful about what you say in China?

Ren: This criticism of the Cultural Revolution isn't mine alone; the government also recognizes the impact of that mistake. It's not like we're not allowed to criticize anything in China. As long as we speak the truth based on real facts, we don't need to worry about what we say. Like in Western countries, China also respects people's freedom of speech. We are just more careful about not crossing the line.

Ren Zhengfei's Interview with Kyodo News

October 16, 2019
Shenzhen, China

Ren: Thank you for coming. Before we start, I would like to express my sincere sympathy for those affected by Typhoon Hagibis in Japan. I would also like to congratulate Akira Yoshino on winning the Nobel Prize. He has remained dedicated to his study for 38 years. To Huawei, this kind of spirit is worth learning. If scientists in China could concentrate their efforts on single projects and work relentlessly on them for 38 years straight, we would have an even more prosperous country.

Japan is a country that has left a very good impression on me. My family and I all have great admiration for your country. I think there are many philosophies we can learn from the Japanese people. I am so glad to have an interview with you today. Please feel free to speak up about any questions you might have. Challenging questions are welcome too.

01 Tomoji Tatsumi, China Bureau Chief, *Kyodo News*: Thank you for your time, Mr. Ren. The first time I met a Huawei employee was in Shanghai, 2012. At that time, I was still in charge of our Shanghai Bureau. I was attending a launch event there hosted by Huawei's Shanghai Research Center. Before then, I knew nothing about Huawei. That was the first time I realized China had such a large private company.

Since then, I have had the honor to keep in contact with a number of Huawei employees. If I'm not wrong, the media affairs director at Huawei HQ at the time was Scott, an American. Huawei happened to develop a mobile phone prototype at the time, and he cheerfully introduced the phone to us. Ever since then, I have paid much attention to Huawei and have always wanted an opportunity to interview you. Today, we can see that Huawei phones are very popular around the world. Also, my dream of interviewing you has come true. So this is a great pleasure and an honor. Let me officially say that it is a pleasure to meet you.

Ren: I am very glad to hear that you previously visited our Shanghai Research Center. We actually entered the mobile phone sector by accident. When we were preparing to sell 3G systems to the world, we realized it was impossible without 3G phones. So we tried to make such phones ourselves.

Can you guess how big the earliest 3G mobile phones were? You may well know the Toyota Coaster. Well, each Coaster car could only carry one phone. That is to say, the phone's components could fill up the entire car. That car drove the phone around Shanghai to test our base stations. Following that, it took us more than 10 years to shrink this "Coaster phone", step by step, to what you see today. In the early phases when we expanded

into the mobile phone sector, we had more failures than successes and experienced twists and turns. Today, we have started to see small successes in this sector, but no big ones yet. So we need to work even harder.

Our Japan Research Center has a solid partnership with Japanese firms. Japanese people are best in the world at making many items very exquisite. For example, mobile phones in your country are so compact. This is one of your key strengths. So we will invest heavily in Japan and work even more closely with Japanese firms.

02

I want to ask a question about the trade war between China and the US. We are not clear about the outcomes of this trade war. Some people are saying that China and the US are now in a new Cold War. What's your view on this? Do you think they are already there? If not, do you think it's possible in the future?

Ren: I don't think China and the US will enter a new Cold War. The US is becoming increasingly closed off from the rest of the world while China is becoming increasingly open. For every step the US takes to close itself off, China takes one towards openness. A Cold War will only happen when both countries become closed off. But since China is continuing to open itself up, I

don't think there will be a new Cold War.

The US cannot afford to abandon the Chinese market because without this market, its economy will be affected. Take cars for example. China now has 400 million cars on the road. If a car is replaced on average every 10 years, China will need around 40 to 50 million new cars every year. Last year, China set a schedule for opening up its automotive industry over the next five years. Foreign carmakers will be able to set up wholly foreign-owned subsidiaries in China without having to transfer their technologies to China. In this five-year period, tariffs for cars will also drop significantly.

Chinese people love European and Japanese cars. European cars are known for their luxury and Japanese cars are known for their quality. American cars are generally spacious but consume more fuel. The US should work harder to get Chinese people to like American cars. However, due to the trade war, an extra 25% tariff has been levied against American cars. It is already difficult enough for American cars to compete with Japanese cars even without the tariff hike. Wouldn't an extra 25% make it even harder for them to compete?

If the US government has second thoughts and wants to open up again in a few years, it would be too late, since European and Japanese cars would have already taken over the Chinese market by then. It's impossible

for the US to abandon globalization. It still needs the Chinese market.

China's finance industry has been relatively open over the past two years. As long as China remains open, the world will never be split in half within the context of globalization. The trade conflicts between China and the US can be resolved through negotiations, and China and Japan have set a good example for this. China and Japan have had some conflicts over the years, but the Japanese government has always separated politics from economics. There have been some political conflicts between the two countries over the years, but there is still a very close economic relationship. President Xi will visit Japan next year, and I believe Sino-Japan relations are going to reach new heights after the visit. Political relations will be improved and economic cooperation will be strengthened, which will greatly benefit these two countries.

China and Japan are highly complementary. China is good at system integration, and Japan is home to cutting-edge materials science and precision manufacturing. Working together, they could create great products.

I've always hoped that China, Japan, and South Korea would establish a free trade zone, where these three industrial powers can take full advantage of

each other's strengths. We would still need agricultural products though. ASEAN could then propose to join in by providing agricultural products and buying industrial products. This way, the free trade zone could be connected with ASEAN countries.

Seeing this bloc, with such a large population, the EU would also want to join and sell its products. What would be lacking if a China–Japan–South Korea Free Trade Zone, ASEAN, and the EU came together? Energy. Countries in the Middle East and Central Asia will be more than happy to transport their oil and natural gas over to this huge market, with a huge population and well-developed economies. This will result in a huge partnership combining Europe and Asia being established, which will definitely help us get out of an economic recession.

For this big partnership to come to fruition, Sino-Japan relations are key. If China and Japan settle their differences and work together, they can play a pivotal role in connecting the entire region. I really hope that President Xi will come to some good conclusions with Prime Minister Abe during his visit to Japan next year.

03 Moving on to 5G. The conflicts between China and the US are mainly about competing for dominance

in high technology. Which company can represent China's IT sector? I think the answer is Huawei. Do you agree that there are competitions for technological dominance in the global market?

Ren: I don't agree with the idea of competing for technological dominance. In a globalized market, everyone is interdependent. If a company produces a product entirely on its own, it will eventually fall behind. The second law of thermodynamics is about entropy. An isolated system never breaks the balance within it because it doesn't exchange energy with the outside world. As a result, the system's entropy will only increase and the system will end in entropy death.

I don't agree with the pursuit of self-reliance. We should all play our own roles in the globalized market and integrate the world's best components from different companies into the best products for human beings. If we make every component alone, we can never produce the best products. We are currently using our own components so that we can survive the crisis when the US cuts its supplies to us. I believe we can survive, but I cannot guarantee that we will remain the most advanced company in three to five years' time. Therefore, we must rely on the global division of labor to stay advanced.

Japan, the US, and Europe each have their own

unique strengths, and the Chinese are a very dedicated people. Only by working together can we make the best things in the world. Therefore, we must unswervingly follow the path of globalization.

I'm not worried that the Entity List may endanger Huawei's survival, but I'm really concerned that we may lose our position as an advanced company in three to five years. We will firmly rely on globalization, and I hope Chinese scientists can learn from Akira Yoshino, who spent 38 years of his life working on one thing. In doing so, they will then be able to provide advanced elements to drive humanity forward.

The US is a great country because it has used advanced culture and systems, as well as stringent IP protection mechanisms to attract the world's top talent to innovate in the country. Innovations are the result of decades or hundreds of years of hard work. These innovations have helped cultivate very fertile soil in the US. The US claimed that they would make better equipment than us in a few years. I have no doubt about that. I'm concerned that people may think we can continue to thrive after we survive the crisis. But this is not possible. Therefore, I'm determined to follow the path of globalization and oppose self-isolation.

04

My questions are about the Entity List and Sino-US relations. If the US doesn't remove Huawei from the Entity List, does it mean the US wants to decouple from China? Is the Chinese government also considering the possibility of this? Do you think the current situation between China and the US will remain what it is for some time?

Ren: I do not think the technologies of China and the US will be decoupled. On the contrary, they will remain interdependent. Even if Huawei is not removed from the Entity List, it only blocks Huawei, and other companies can still buy things from the US. We are not powerful enough to change the trend of globalization. Many other companies not on the Entity List will drive globalization forward. Huawei is a very tiny thing during the course of economic development, and won't have a big impact on all of society. I hope people will not isolate themselves from the US because of their sympathy for Huawei. We are being attacked, so others who are not being attacked should take this opportunity to develop and grow.

It is said that if we entered a new Cold War where China and US were completely decoupled, the world would have two economic communities separately led by China and the US. Do you think this could happen?

Ren: I don't think it will happen. History shows that

closing doors only moves us backwards. We can only make progress by staying open. Some politicians are trying to decouple the US and the Chinese economies, but many companies are reluctant to do so, because it would affect their sales. How could they just accept that kind of thing? They want to sell more of what they have, be it airplanes, cars, or electronic components. Vendors aren't just going to accept having to sell fewer products. Selling more products is the purpose of businesses. The two economies won't split as long as people still try to buy and sell things.

05 **Japan was in a fast-growing stage in the 1960s and 1970s. Many Japanese companies tried to catch up and even overtake the US. Do you have a similar goal?**

Ren: We can only overtake some US companies in some domains. We can't overtake the US in all domains, because the US is so powerful and has rich technology resources. We are only able to make some breakthroughs in certain domains. That's what we can possibly achieve.

06 **This question is about 5G and future communications. Right now, the world is entering a 5G era, and will even enter a 6G era in the future. During this process,**

**what changes will be seen in China or at Huawei?
What will be Huawei's role in a 5G society?**

Ren: For 5G, Huawei is temporarily in the lead because we invested earlier and heavier. But this doesn't mean we will be the leader forever. We have also been researching 6G. 6G will use higher frequency spectrums, so the bandwidth will be larger while the network coverage will be limited. That's why we haven't considered it as a mainstream technology yet. We may still need to wait another 10 years to see real applications of 6G. Our achievements in 5G wouldn't have been possible without Japan, and we will continue purchasing Japanese components at scale.

When you say 6G will arrive in about 10 years, do you mean 6G will see commercial use 10 years from now?

Ren: It's my personal conservative estimate. Maybe less than 10 years. In countries like Japan which is quite advanced in fiber, 6G will probably see faster commercial use if 6G is introduced only into the access network, instead of the entire wireless communications network. On Huawei's part, we actually worry whether it is necessary to pursue larger bandwidth, since the bandwidth provided by 5G is already too large to use up. We still need to measure the actual social needs for bandwidth based on the actual use of 5G in our society.

As our society evolves, consumer demands will

increase. The application of new technologies must be driven by demand. Any new technology that goes beyond what consumers actually need could easily fail.

07 **5G and AI are now seen as closely related. It follows naturally that 6G will drive even wider application of AI. In the current 4G era, smartphones are already ubiquitous. Do you think the way we live will be further reshaped in the future?**

Ren: How the way we live will be changed is simply beyond my imagination. The information society is evolving so fast. Let's not forget the fact that a few years ago, or maybe earlier, journalists like you might find data transmission quite a challenge in your work. Data transmission that used to take two days and two nights over a telecom network with a speed of 64 kbps now only takes one second.

Back then, if you wanted to use the Internet in your home, you had to get your home wired to a telephone line. Mr. Jobs' invention [of the iPhone] gave birth to the mobile Internet which erupted like a volcano, creating a huge impact. 5G and AI combined will definitely drive tremendous social progress to an extent I can't even imagine.

In the future 5G and AI era, do you think there will

be revolutionary innovation or invention like Mr. Jobs' that led to the boom of the mobile Internet? Will that invention come from Huawei?

Ren: I think AI will have an even more profound impact than that of Mr. Jobs' invention. But the revolutionary invention will not necessarily come from Huawei.

You mentioned that 5G and 6G will significantly contribute to the world. In what direction will Huawei develop? Will Huawei play a role in driving the adoption of 5G and 6G?

Ren: When massive amounts of data are generated, the next key step is data transmission and channeling. Huawei will remain focused on the channeling, distribution, storage, and processing of information traffic. Our business will not deviate from this path.

08 **It is globally acknowledged that Huawei is a very powerful player in technology, and may even guide the development of many technologies. Some have said that the reason behind the US's attack on Huawei is that it needs to weaken or even restrain Huawei's growth to curb China's growth? What do you think of this idea?**

Ren: In fact, they are doing us a favor by attacking us. Because we at Huawei are afraid to see the company

collapse, the US campaign against us has pushed us to work even harder than before. In fact, we achieved a year-on-year revenue growth rate of 24.4% for the first three quarters in 2019. In this sense, their attack is not stopping us from working hard.

09 **Four days ago, China and the US reached a deal for the first phase following trade talks. For example, tariffs that were expected to be raised on October 15 were postponed. An agreement was also reached on agricultural products. However, the export ban on Huawei was not mentioned in the trade talks. What are your views on this?**

Ren: I don't think that anyone in the US government will speak for us when it comes to the export ban on Huawei. It's virtually impossible that the US will lift the ban. If a member of US Congress were to speak out in defense of Huawei, they would be condemned by other members. There is a general consensus in the US government about the ban on Huawei. We are prepared to remain on the Entity List for a long time to come.

10 **Before the interview, I read the book Huawei: Leadership, Culture, and Connectivity written by Tian Tao. He mentioned you had predicted that there would be some conflicts between Huawei and European and**

US companies back in 2003. Are the conflicts you are facing now the same as those you predicted? It has been 15 years since 2003. What have you done to get prepared?

Ren: In fact, the conflicts we are facing today are much more serious than those we once imagined. The US is a member of the Wassenaar Arrangement and has its own rules for items with an Export Control Classification Number (ECCN) whose third and fourth digits are both 0. These rules prohibit the use of US technologies for military purposes by other countries. Huawei only makes products for civilian use. Many years ago, we were worried that the US would expand the scope of controlled items, leaving us unable to buy components from them, so we began to develop some components for our own use. We never imagined that the US would attack us so hard. It is indeed a heavy blow to us.



Just now you mentioned that there is a consensus in the US about imposing an export ban on Huawei and adding Huawei to the Entity List. Why is that?

Ren: I think there is a consensus among US politicians; I didn't say that businesses are on board.

The US has two major parties: the Democratic Party and the Republican Party. How is it that they hold the

same position on Huawei?

Ren: I don't know. In the 1970s and 1980s when Japan's growth rate hit an all-time high and could have afforded to buy pretty much anything in the world, the US launched a campaign against Japan. When the US thought that the military forces of the Soviet Union were too strong, they also worked to contain the state, which was one of the key factors that ultimately led it to break up into 15 countries.

Now the US wants to do the same to China – to limit its growth as they did to Japan and the Soviet Union. But they haven't realized that China can only buy more airplanes, cars, food, and other things from the US when China develops and has money to spend. If the Chinese economy collapsed, the US economy would also suffer.

12 **You have just mentioned that Huawei will remain on the Entity List for a long time to come. You also said that Huawei will help increase 5G penetration, and you also have a conservative forecast of 6G in the next decade. Will the US attack have a negative impact on the development of 5G and 6G? How will Huawei deal with these negative impacts?**

Ren: We need to make more investment in basic research and theoretical research to develop new

theories and new technologies that we cannot buy from elsewhere. This will help us keep up with the times.

Can Huawei continue to maintain its current growth momentum even if the US does not export components or technologies to Huawei for a long time to come?

Ren: Even if the US doesn't export to us, we can import from many other countries and regions like Europe and Japan.

Regarding basic research or theoretical research you mentioned just now, some US universities and research institutions have stopped collaborating with Huawei. Has this affected Huawei?

Ren: There are many other universities around the world. The US is not the only country that has top-notch universities.

The US has all kinds of technologies and products, like semiconductors, operating systems, as well as Google's products, and Qualcomm's chips. Without US technologies and products, do you think 5G will continue to develop?

Ren: Yes.

Some people think that we are currently heading towards a technology decoupling or split between China and the US, even if that isn't what the US may

intend to achieve with their actions. It looks like in the future, China and the US will have their respective technologies that they will not share with each other. The technology world is going to be split into two, and there even will be a Chinese economic circle and an American one. Do you think this is possible in the future?

Ren: No, I don't think so. If Qualcomm's and Huawei's chips are not interoperable, people would have to have two phones. In the past, it was difficult to send files from one device to another, but now it only takes a second. That's because there is a common set of standards. Two or three sets of standards will only hinder global development. Even if some politicians want this, the people will not accept this kind of change.

13

Kosuke Kinashi, Shanghai Bureau Chief, *Kyodo News*: I would like to ask you two questions. First, Germany officially announced this morning that it will not exclude Huawei from its 5G rollout. What do you think of this? Second, the Japanese government decided to exclude Huawei from its 5G rollout early on, without even trying to verify Huawei's security. What do you think of this?

Ren: First, we really welcome Germany's and the EU's

adoption of a fact-based approach to set higher security standards for all vendors instead of banning any one of them from its 5G rollout. I very much support the EU's digital sovereignty strategy. Previously, wealth came from things such as mining and agricultural products. Wealth was strongly related to how much land you owned. This is the basis for geopolitics. However, information has no national boundaries, and is transmitted all over the world. If a country defines its digital sovereignty, it establishes its sovereignty over its information-based wealth. We support Germany and the EU's practices in this respect. According to the rules they set, a company should promise to not commit any wrongdoing, and then be subject to review. If this company has not broken its promises, it is a good company. Their conclusions are based on facts and are not subjective.

Second, we understand the Japanese government's choice. Customers have the right to choose the products they like, and to choose how they decide what they prefer. We may sell some products, but not everyone has to buy it just because it has a big brand name like Hermès.

14 A question about Huawei's presence in the Japanese mobile phone market. Huawei smartphones are now very popular in Japan. But if Huawei phones couldn't use Google's operating system, Japanese people might

not use Huawei's new smartphones in the future. This is also my concern as a user. How does Huawei respond to this or what plans do you have?

Ren: We understand that some consumers might stop using Huawei mobile phones for a certain period, but we are working to change the status quo.

Are you working to develop your own operating system and create an ecosystem around it?

Ren: I cannot say for sure that we will nail it. But we are working hard to make it happen.

5G and 6G networks will become prevalent. Does this mean that 5G and 6G devices will be available on the market at the same time?

Ren: Yes.

Personally, I use devices like phones, tablets, and PCs quite a lot. Will there be any innovative devices that we have never seen before in the future?

Ren: Yes, there will be a wide range of devices in the future. All of them will be interconnected, and there will be no need to re-import data to new devices. Software is not something we can touch, so how does software deliver an experience to us? That's where devices come in. There will be various devices, not just mobile phones.

The future is beyond our imagination. I was based in Beijing as a correspondent between 1997 and 2000. At that time, a staff member at a TV station told me that in theory, smartphones could be developed, and that we would be able to film a video with a smartphone and send it to another phone. We laughed at him as we thought he was just kidding. But now, what he said has become a reality.

Ren: I'd like to give you a CD as a gift. This CD is about the grand evening gala that was held to celebrate China's 70th National Day. There were tens of thousands of people performing, and our 5G technology helped transmit these immersive performances to TV stations.

You are media professionals, so you must know that with traditional technologies, it's impossible to capture high-quality, crystal clear videos of such grand events, along with the movements of tens of thousands of performers in real time. There was not a single freeze frame throughout.

With this CD, you can experience how 5G is applied in broadcasting and TV. During the parade, we can see that some people have a small backpack, which is actually a base station. These people are holding their camera in front of them, which transmits the videos filmed back to CCTV for editing via the base station in their backpack. As experts in the media industry, you will understand

the incredible applications of 5G after seeing such high-quality videos.

Tens of thousands of people were moving quickly as they gave their performances. It just shows how happy the Chinese people are. The 5G networks used were all provided by Huawei.

15 US Congress imposed a series of sanctions on Huawei on the grounds that Huawei's communications equipment might be used to steal information. However, so far the US has provided no solid evidence supporting this. Has the US directly shown you the evidence that they have obtained?

Ren: Over the past 10-plus years, we have received the world's most rigorous oversight. Almost every country has cast doubts on us, and almost every intelligence agency has their eyes fixed on us. If there were really something wrong with us, they would have found it early on.

The firewall for our IT network was actually built with bricks from the US. Our network does not guard against the US or other countries. It only defends against our malicious competitor trying to steal our technologies. Everything is crystal clear to those who monitor us. Thus far, there is no evidence showing that we have

committed any wrongdoing.

It is widely believed that the US and European countries are very strict with domestic information management. Some people say that Chinese laws and regulations allow the Chinese government to access certain information. Some even claim that Huawei is not trustworthy because of the Chinese social system. What do you think?

Ren: We are a company of integrity and are responsible to our customers. We will not do anything unethical.

16

If I remember correctly, you will celebrate your 75th birthday on October 25. You are a very successful leader, but no one is immortal though. Have you started to consider who your successor will be? Has there been a decision on your successor? If there isn't yet, what kind of successor do you think can help maintain Huawei's leading position for the next 10 or 20 years?

Ren: Our company has developed an institutional succession mechanism. We will not appoint an individual as my successor, but instead will follow an institutional succession mechanism. We can send you a copy of my speech to the company's Fourth Representatives' Commission. In this speech, I talked

about this topic in detail.

Right now, I actually don't have any authority regarding the specifics of corporate operations. I only have the right to veto, but I've never used it. This right was set to expire at the end of last year. However, we worry that emergencies may happen. Then if a vote by all employees ended up accidentally setting the company down the wrong path, that decision would have to be vetoed. So we decided to keep this veto right.

The veto right will not be mine alone, and it will not be passed down to any of my family members. Instead, it will be eventually passed down to a Core Elite Group consisting of seven people who will be selected from former board members, supervisory board members, and senior executives. We set up this veto system to ensure that the company will not accidentally make a mistake that ends up destroying everything we've built.

17

We talked about your family just now. Is there any new progress regarding Ms. Meng in Canada?

Ren: We are still following the judicial procedures to resolve this issue one step at a time.

18

The Chinese government is promoting the Belt and Road Initiative. Has Huawei participated in or

supported this initiative?

Ren: Huawei has not participated in the Belt and Road Initiative. This initiative focuses on large-scale infrastructure projects, and generally, telecom contracts are relatively small. So we haven't signed any contracts under this initiative.

19 **The latest figures show that Huawei has 188,000 employees worldwide. Has the China-US trade war affected the number of employees? Will the number decrease?**

Ren: The number of our employees has increased to 194,000. Since we have many holes to patch, we need more talent, so we recruited several thousand more people this year.

You aren't just recruiting people in China, right?

Ren: No, globally.

If you are hiring people globally, are there any regions that you focus on? For example, countries like India have strengths in science and technology. Are you focusing on these countries?

Ren: When it comes to recruitment, we don't have any restrictions. Nevertheless, there are some restrictions in the US. The US government doesn't let Americans work

with us, and they will intervene in any engagements that they believe may have US elements. We are not hiring talented people from the US, which is a big loss for us. In other countries and regions, there aren't restrictions like this.

Many outstanding Chinese people at American universities, research institutions, and Silicon Valley are also under fire. Are Chinese people returning in droves from the US to join Huawei?

Ren: Chinese students who have studied in the US can join us, but Chinese-Americans, including those with green cards, cannot since they fall under the US's jurisdiction.

20 **What is it that you want most right now?**

Ren: Trust. I hope more people in the world will place their trust in us. I have frequently met with media representatives because I want our messages to be shared, which will help people know more about us and pull back the "veil". Actually, there is no veil at all. Made-up stories have just muddied the waters.

21 **We are the first Japanese media outlet you have had an exclusive interview with, Mr. Ren. It's such an honor**

and pleasure. Your candid replies today represent your high expectations for Japan, don't they?

Ren: I have always had high expectations for Japan. My younger daughter speaks Japanese as her second language and French as her third language.

It's said that you have come to Japan not just for work, but also for personal reasons.

Ren: Yes, to travel.

What do you like the most about Japan?

Ren: There's too much to name. I have visited almost every corner of Japan, from Kyushu to Hokkaido, and most of its cities and villages, big or small. I tell a lot of people that Japan has the world's best tourist attractions. You don't have to really decide where to go. Any small mountain village can be a good place to stay a while because it's always clean and the Ramen noodles are fantastic.

What are your hobbies, Mr. Ren?

Ren: Working and watching TV.

President Xi will visit Japan next year. Have you considered coming to Japan during President Xi's visit?

Ren: I'm willing to visit Japan at any time.

Do you have concerns or worries about your personal

safety when visiting Japan?

Ren: I don't think I have anything to worry about.

22

Huawei has business in more than 170 countries and regions and employs 194,000 people. But we have noticed that there are only Chinese employees on Huawei's board; if we look at the local offices or subsidiaries around the world, the majority of the executives are from China as well. Very few are local. Has Huawei considered appointing some non-Chinese board directors or more local executives for local subsidiaries? This would be helpful in making Huawei more open and transparent, wouldn't it?

Ren: We do have quite a few locally hired executives. We have more than 30,000 non-Chinese employees, and our subsidiaries also have many non-Chinese board directors. All of our board directors at HQ must have a solid work history with the company. Even if a non-Chinese employee was put on the board, if they haven't started from an entry-level position and climbed their way up step by step, then they would be on the board in name only, because they wouldn't have any real authority. I don't appoint our board members. All of them earned their seat on the board by working from the ground up at Huawei. So non-Chinese employees

can also join the board, but they need to work their way up step by step. Places on our board are definitely open to non-Chinese employees. Almost two-thirds of our Huawei Fellows are non-Chinese.

Thank you for your time today. This interview turned out to be very different from what we imagined. You've been very frank and straightforward over the course. It's been very helpful. Thank you so much!

Ren Zhengfei's Arabic Media Roundtable

October 20, 2019
Shenzhen, China

Ren: It's a great honor to have an interview with world-class media like everyone here today. I've been to many Arab countries and regions, traveling across almost all of the countries in the Middle East and Northern Africa. I have great admiration for the splendid culture and long history of the Arab world.

I have a good friend Wang Hanjiang who once served as Director of the West Asia and Africa Division of the Ministry of Foreign Economic Relations and Trade of China, the predecessor of China's Ministry of Commerce. He majored in Arabic. Over the 20 years of knowing each other, he has constantly told me about the profoundness of Arab culture. Though I can't read the parchment scrolls, his explanation has helped me understand and appreciate the beauty of the Arabic script, and it has ignited my heartfelt admiration for the splendor of the culture.

The Arab world has so much more than just the Hanging Gardens of Babylon and majestic pyramids. I felt shocked when I first saw the Baalbek temple complex. I was speechless for several hours. The guide was saying a lot, but I was awestruck by this civilization that could be traced back to four or five millennia ago, to the extent that I couldn't say a word. Even for today's master architects, building this huge complex would still be very difficult and challenging. We just don't know

how these ancestors living four to five thousand years ago did floor planning, three-dimensional design, and construction coordination to get this huge project done.

We have no answers to any of these questions. The stone columns are so big that you need several people holding hands to wrap around the base, but how did they make them so round? What geometry theories did they apply? How did they make the hundreds of columns so even? How did they measure them and what dimension did they use? How did they do the calculations? The columns are about 22 meters high, so how did they even stand them up? The roof is made up of a single piece of stone weighing about 900 tons. How could they put the stone on top of the columns? There are several hundred of these 900-ton stone roof slabs. How could they pile them up and transport them here? The design of the whole complex is so harmonious and perfect. But it was built four or five millennia ago. So I was deeply touched and impressed by the ingenuity and greatness of our ancestors.

I had the same kind of feeling at many other Arab tourist destinations, like the Luxor Temple, the ancient city Petra, and the Egyptian Museum. In the Egyptian Museum, you can see that the bright piercing eyes on statues made 4,500 years ago are still so vivid and lifelike. The civilization there must have been 1,000

years ahead of the Chinese civilization. The Middle East built these unparalleled architectures over four or five thousand years ago. I have so much respect for the Middle East civilization. Even today's top architects would feel it a huge challenge to design such buildings.

It would have been impossible to make these temples a reality without a very good mastery of mathematics, geometry, and engineering design. From history of the world, the splendid Arab civilization emerged even earlier than Greek civilization, which discovered Euclidean geometry and the Archimedes' principle. Things like spices, carrots, green onions, and garlic weren't the only things the Silk Road brought from the Arab world to China; geometry, algebra, engineering design, and Arabic numerals came too.

Today, we are all aware that Arabic numerals laid a great foundation for mathematics. In particular, the addition of the numeral "0" triggered an epoch-making technological revolution and innovation for the world, though it entailed a bit of controversy for a few hundred years. Overall though, the addition of "0" to the Arabic numerals gave a strong impetus to the progress of human civilization.

As we stand on the Great Wall and look in the direction of the pyramids, we can imagine how our ancestors used camels to transport our silk and tea to

the Arab world, and then transport spices, carrots, and garlic to China. This was a tough but great journey. The Silk Road established by our ancestors connected the cultures of China and Central Asia, and we have great admiration for it. I believe we should continue in the spirit of the Silk Road today. In the past, camels passed along the Silk Road, and today 5G and high-speed rail should be allowed to do the same. This will drive the economic growth of Africa and Asia.

Thank you! I am ready to take your questions now.

01

***Al-Ahram:* First of all, thank you, Mr. Ren, for giving us this opportunity. We all know that Huawei has been investing heavily in scientific research, and is a world leader in 5G. What future-proof 5G technologies will Huawei bring us over the next five years?**

Ren: First, Egypt is a great country, and I really admire it. Around 2,000 years ago, Egypt had the Great Library of Alexandria, the world's largest at the time. You also have the ancient pyramids and the more modern Suez Canal. These all represent great things in human civilization. I believe Egyptian society is stable, and Egyptian people are friendly, which has nurtured a booming tourism industry. When I took a boat and traveled along the Nile, I wondered why we can't sing on the Huangpu River in

China like they do on the Nile. We really have a lot to learn from Egypt.

The key to rejuvenating a country and a nation lies in education. I hope Huawei can help rejuvenate Egypt, a great country that is home to the pyramids, the Great Library of Alexandria, and the Suez Canal. We will use 5G and other cutting-edge technologies to help Egypt bridge the digital divide, contributing to the country's cultural and educational development.

02 *Al Bayan:* **First of all, I'd like to thank Huawei for giving me this opportunity. My question is about the recent conflict between China and the US. It focuses on economy and technology. You have often distanced Huawei from this conflict. However, during an interview with The Economist, you said Huawei is willing to share technology with the West. Wouldn't such an offer put Huawei at the center of the storm between China and the US?**

Ren: In 1996, the UN implemented an Oil-for-Food Program in Iraq, which was also when I visited Dubai for the very first time. At that time, Dubai was tearing down houses to begin mass construction. I was impressed by Dubai's open culture. It does not actually have that many resources, but is open and has an unshakeable

"can-do" spirit. I admire it greatly. I also read a book by Sheikh Zayed, and greatly respect his views.

After returning to China from Dubai, I wrote an article titled Resources Can Be Exhausted and Only Culture Endures. Huawei also has few resources to depend upon. What we do have is the brainpower of our employees. This is our oil, our coal, and our forests. So we strive to promote an open culture of dedication.

During the same period in 1996, I also visited Tunisia. At the time, the per capita GDP there was 1,400 US dollars, and people lived happy lives. Neither Dubai nor Tunisia has a lot of resources. Religious reforms in these two countries have brought new life to their cultures, making Tunisia and Dubai role models for reformation across the Arab world.

The UAE is now one of the world's prominent business centers, and has become a country full of immigrants. It has managed to build a world-class business center amidst desert, and I have every reason to believe that it is also capable of making itself a global center of scientific and technological innovation. I believe that the UAE should learn from the US, which attracted a great number of outstanding talent from other countries, and made itself the world's most powerful nation in just 200 years.

Is it possible for the UAE to also become the global center of scientific and technological innovation? Your UAE Centennial 2071 Plan means you are well positioned to achieve that. Many great Americans originally came from Eastern Europe, and fully leveraged their potential to make the US the most powerful country in the world. The UAE has a wonderful business environment, and I think you have the tools to build the world's best center of scientific and technological innovation by attracting immigrants like the US did in the past.

In the past, Arab civilization was ahead of some parts of the world for around 3,000 years. Why did it lag behind Europe later on? The Europeans invented trains and steam-powered ships, which allowed them to transport more goods far more efficiently than camels. That's why the Industrial Revolution took place in Europe first. From this we can see that speed and bandwidth determine how strong and prosperous a country is. In the past, speed was about how fast physical goods were shipped. Today, speed is about how fast data can be transmitted, and this will be powered by 5G. I believe the UAE should take this opportunity to surpass other countries.

We think that many countries in the Middle East may become the world's highest ground when it comes to

5G deployment, where a new, splendid Arab civilization may emerge with 5G's high speed, low latency, and high bandwidth. Saudi Arabia boasts the largest number of YouTube visitors every day, and the per-capita per-month data traffic consumed in Kuwait was among the world's highest, at 60 gigabytes. 5G from these countries will spread to other Arab countries and then to the rest of the world. In the 4G era, Japan and South Korea led the world; while in the 5G era, the Middle East is taking the lead. Therefore, a new splendid civilization will emerge in the Middle East. I strongly support the UAE Centennial 2071 Plan and its national strategy to develop 5G, AI, and cloud.

03 ***Al Bayan:* You just mentioned that Huawei is willing to share its technologies with Western companies, such as US and European companies. What are your thoughts on that?**

Ren: Europe does not need our technologies, because they have their own communications technologies. We have signed cross-licensing agreements with European companies, so we are open to each other. The US lacks the most advanced communications technologies, so we hope to strengthen our cooperation with US companies. If we could help them catch up in terms of communications, it would be helpful to strike a balance

around the world and resolve the conflicts we face.

The Middle East tends to remain politically neutral. The US has sanctioned only Huawei, and Huawei is only ahead of US companies in the communications sector, not in all sectors. We are ahead of the US only in 5G, and still lag behind them in AI, cloud, and intelligent computing. The Middle East can select the best technologies from the US, Europe, Japan, South Korea, and China to build a technology high ground in the region. Just like its culture, Dubai's ICT infrastructure can also be diversified in the future. A platform that is made up of various technologies from various countries will be the strongest platform.

04 *Sabq Online:* **I'd like to know if the US sanctioned Huawei based more on political grounds than on security grounds.**

Ren: Of course. Huawei hasn't done anything wrong, so the US sanction should be politically motivated. Saudi Arabia has a culture of wisdom, and it is clear to see the country's greatness today. I admired the government for remaining poised when its oil facilities were attacked. This allowed the country to quickly restore its global oil supply, helping the world avoid a huge crisis. I also admire Ahmed Zaki Yamani, former Minister of Oil of

Saudi Arabia. When oil prices skyrocketed to 140 US dollars per barrel, he said, "The Stone Age ended not because of a shortage of stones." These words really impressed me, and showed the amazing foresight that the Arab world has developed over its thousands of years of civilization.

The minister has discussed how the oil reserves will dry up one day, and how Saudi Arabia is worried about the rise of non-fossil energy. Saudi Arabia can use some of its oil wealth to research technology for non-fossil energy. When the oil reserves dry up, Saudi Arabia will then continue to be the greatest country in non-fossil energy. Saudi Arabia can take the lead to use non-fossil energy, and supply the oil and natural gas it would have otherwise consumed to the rest of the world. This will facilitate the development of technologies for non-fossil energy. The most critical technology for non-fossil energy is storage, and Japan has the most advanced technology regarding large-scale storage. If these strengths are brought together, a powerful non-fossil energy belt can form, ranging from the Sahara, to the Tibetan Plateau, to China and Japan, and finally to the Amazon and Latin America. When oil reserves dry up, Saudi Arabia will emerge as a key provider of energy machinery and non-fossil energy, and your wealth from oil can be transformed into cultural and digital wealth, meaning AI and other new technologies.

Oil will dry up and currency will depreciate. The way forward is to use the money earned from oil to improve education, enhance innovation in science and technology, and invest in digital technologies, keeping the country young forever.

Huawei can survive only in 5G without relying on the US. Saudi Arabia can consider using other technologies of the US.

***Sabq Online:* How can Saudi Arabia benefit from the technologies of China and the US?**

Ren: Introducing AI to energy technologies will generate huge wealth. I worked in petrochemicals over 40 years ago, and then later, about 20 years ago, I visited an oil refinery that China helped build, which could produce ten million tons of oil. When I got a glimpse of its control room, I was shocked by how much progress the industry had made. I haven't been to a plant or refinery again over the latest 20 years, so I can't imagine how advanced they must be now. The progress to be made in the future will be unimaginable.

Saudi Arabia is great because it invests heavily in education, such as its huge investment in Princess Nourah Bint Abdulrahman University, the world's largest university for women. Saudi Arabia has been opening up and constantly adapting itself to changes in society.

With the huge wealth it has, the country will certainly witness the rise of other industries in addition to the oil industry. Like highways, 5G is a sort of infrastructure that provides high bandwidth and low latency. 5G itself does not create wealth, but it enables new technologies that can create wealth.

05 ***Leaders:*** Thank you, Mr. Ren. I represent the Tunisian magazine *Leaders*. You said that Tunisia left a deep impression on you. Tunisia's experience shows that reforms and technological innovation can help rejuvenate our civilization. Based on your experience visiting Tunisia, how can Tunisian young people truly benefit from and contribute to Huawei's development and technological innovation?

Ren: Let me tell you a story which happened during my first visit to Tunisia. My colleague Lv Xiaofeng was accompanying me there but left one day earlier than me. Unfortunately, his plane crashed before landing in Tunisia. He was among the 40 people who survived the crash. I was supposed to be on that plane too, but I was delayed by other matters. It was raining heavily on the day of the plane crash. Lv called the police amidst the rain and saved a little girl from the plane. Seeing the girl shivering, he took off his coat and gave it to her. When I arrived the next day, I bought a suit for him. It was 2002.

At that time, per-capita GDP in Tunisia was over 2,000 US dollars, compared to about 1,000 US dollars in China. I felt like the Tunisian society was harmonious and pleasant, and the Mediterranean coastal regions were very beautiful. I was quite impressed by Tunisia the first time I was there and was even more impressed during my later visits there.

The development of Tunisia will require further religious reforms. I think they should be more open. Tunisia is situated across the sea from Europe and labor costs are lower than in Europe. Europe should undertake a large-scale relocation of its manufacturing centers. So how can you make sure you are prepared for such a relocation? First, you need to cultivate talent. Second, you need to improve your infrastructure, which of course includes communications networks. Networks can greatly improve access to education.

South Korea was among the earliest to invest heavily in 4G. This investment didn't bring high returns to telecom carriers, but it did greatly boost the country's GDP. Every dollar invested in ICT will generate multiple dollars in GDP. That's why AI and 5G are crucial to Tunisia. If you are to embrace Europe's relocation of its manufacturing centers here, you will need to adapt to their system and meet their standards and requirements.

Yesterday, you visited our production lines.

From design to manufacturing and supply, we use management software from Germany's Siemens and Bosch, and from Dassault of France. A lot of equipment on our production lines is from Japan and Germany, though our AI software was developed in-house. Our production lines can now turn out a mobile phone every 20 plus seconds with basically no manual operations. Therefore, I believe the industrial relocation will take place tier by tier. We all need to prepare ourselves for the relocation and unwaveringly embrace globalization.

06 ***Al Raya:* Thank you, Mr. Ren, especially for your remarks on the exchanges between the civilizations of the Arab world and China. As an Arabian, I will never forget the huge contributions that the Chinese civilization has made to the world's development, for example, papermaking and other advanced science and technology. Now Huawei is providing advanced 5G technologies to the world, which, I believe, will greatly fuel the development of the world's civilization. What role will Huawei's four sustainability strategies play in environmental protection?**

Ren: I think Qatar is a great country. I'm especially impressed by the importance that Her Highness Sheikha Moza bint Nasser attaches to education.

The UAE constantly sends its natives to the UK and other parts of the world to receive training. If grandfathers cannot make it, their sons will; if their sons cannot make it, their grandchildren will. By doing so, they want to make sure that their future generations can effectively manage their huge economy and maintain their high ground in the world.

Her Highness Sheikha Moza bint Nasser greatly values education, which, I think, is wonderful. She has introduced advanced elements of education from around the world and integrated them into Arab culture. She has also established lots of museums, allowing Qatari children to have access to the world's civilization from childhood. I really admire her on this.

One year I went to Qatar for a meeting. Before the meeting, I was told that Her Highness Sheikha Moza bint Nasser wanted to meet with me, but later I was told she wouldn't, so I didn't take my suit there. After I arrived, her secretary visited me and said the prime minister wanted to meet with me. I hadn't taken my suit, and felt it would be impolite to meet with the prime minister in casual wear, so I asked the board chair of the company to meet with the prime minister. The meeting focused on how to ensure smooth and secure communications during the 2022 World Cup. Now, with 5G, I'm sure that the 2022 World Cup will be a great

success.

During that meeting, we briefed the prime minister on Huawei's contributions to the Hajj pilgrimage in Saudi Arabia. For 15 straight years, there has not been a single network interruption, accident, or complaint throughout the event. Each year, 3 to 4 million Muslims gather in an area of just 10 square kilometers. They turn off their mobile phones before praying, and when they turn their phones on again, they need to get all of their phones authenticated almost immediately. This puts great pressure on networks, but we have managed to guarantee secure communications during the event for 15 years running.

We also worked together on the safe city project. The goal is to prevent terrorist attacks. This project was also developed from our experience in Hajj. The day after the meeting, the prime minister sent people to Mecca to examine our work. Here I'd like to wish Qatar a great success as the host of the 2022 World Cup. If you choose our equipment, we will do everything we can to provide communications assurance.

I will give each of you a CD, which shows a performance marking the 70th anniversary of the founding of the People's Republic of China. The video was shot over 5G networks. Although there were tens of thousands of people performing, the video flowed

smoothly and there was no buffering. You are all media insiders, so I'm sure you see the value 5G brought to this event.

Since our safe city project at Mecca, safety management has already come a long way. We can help ensure safety in Qatar during the 2022 World Cup. Of course, Huawei only provides equipment, and the police officers of Qatar will be responsible for the specific operations.

***Al Raya:* Has Huawei reached any agreement with the Qatari government on the 2022 World Cup?**

Ren: We are currently building communications networks for the 2022 World Cup stadiums in Qatar. We are still in talks with our local customers on some other projects.

07 *KUNA:* China and the US seemed to have sent positive signals about the trade negotiations. Will this affect Huawei? Will the US's sanctions against Huawei affect Huawei's overseas business and future development?

Ren: The US's sanctions against Huawei have little to do with the trade negotiations between China and the US. Currently, we haven't seen any improvement in our overall environment. Regardless, this will not affect our innovations and advancement. It does slightly affect our

overseas markets by making some customers hesitant to do business with us, but we will be patient with them.

08

KUNA: Kuwait is moving forward with smart city development in the Silk City and five northern islands. Could you explain to me what Huawei can do for Kuwait in this area? What are the two parties' future cooperation plans?

Ren: The per-capita per-month data traffic consumed in Kuwait was among the world's highest, at 60 gigabytes. With the most advanced 5G technologies, we want to help all the countries in the Middle East become the world's highest ground when it comes to the volumes of data traffic. With the support of 5G, the region will continue to create innovative new technologies and inventions.

The Middle East has chosen to use the 2.6 GHz to 3.5 GHz band for 5G, which is also used commonly around the world. By doing this, the Middle East can share in the value of the global 5G value chain, as they are the most suitable bands for 5G networks. China has also chosen to use these bands for 5G. In addition, the telecom regulator in Kuwait has allocated over 100 MHz of spectrum to every carrier and thus provided sufficient support to 5G's development. This means they can

make full use of 5G. Why have I said that the Silk Road of camels could evolve to a 5G road? We think that the Middle East will become the world's highest ground for 5G. How to rejuvenate the culture of the Arab world is a topic we need to discuss together. 5G will be the infrastructure of this new, rejuvenated civilization. Similarly, China will also become one of the world's high grounds for 5G.

Huawei is now participating in the planning and designing of Kuwait's five northern islands. When the Emir of Kuwait visited China in 2018, we signed a smart city cooperation agreement with Citra on the five northern islands. Huawei is now one of the consulting companies for this project. Huawei provides Kuwaiti carriers with 5G solutions, and works with the Kuwaiti telecom regulator to develop 5G use cases. In addition, we will also support the rollout of the New Kuwait Vision 2035.

09

***Le Matin:* I have learned a lot from your wisdom. You have spoken a lot about education and how important elementary education is, particularly how education is crucial to enhancing national competitiveness, in your media interviews. Your views have a lot in common with those we have in Morocco. Our country is committed to improving education. How can Huawei's**

technologies be used to transfer knowledge and skills in the future? How can the younger generations in Morocco contribute in this regard?

Ren: Morocco is a very beautiful country. I have visited several times, and Casablanca has left a vivid impression in my mind. I have known the name Casablanca since I was very young, because it was famous for being a "nest of spies" in World War II. I used to hear a lot about Rick's Café, but I didn't get a chance to have a cup of coffee there, even though I had been to Morocco many times. Later, I asked someone to make a reservation several days in advance, and took my wife there. I finally managed to have a cup of coffee there, and enjoyed what I had seen in the movie Casablanca – the beauty of Casablanca's coasts and the vastness of the sea.

We are aware that Morocco takes education very seriously. Morocco's University of al-Qarawiyyin is the oldest university in the world. Teachers and students used to sit in the corridors or the gardens reading scripture, exchanging ideas, and cultivating morality. That's how the term "academy" was coined. Universities evolve from academies, but are larger academies.

I think to rejuvenate a country, we need both hard and soft infrastructure. Hard infrastructure includes roads and networks, while soft infrastructure includes education, regulations, and institutions. Since ancient

times, government officials have said that building bridges, roads, and schools is their primary responsibility.

Morocco should leverage advanced networks to make basic education easily accessible to children. You need to give quality elementary education to children on a large scale, ensuring no one is left behind. In fact, I believe the educational model in Northern Europe would be a good fit for Morocco. I think the elementary education in both Finland and the UK is very good.

It would be beneficial if Morocco could make basic education more accessible, vigorously promote vocational and technical education, and provide the best students with elite education. In terms of elite education, the US has set a good example. Only a few US universities advocate elite education, which is not just about full marks in college entrance exams.

US elite education focuses not only on students' academic performance, but also morality. When admitting excellent students, these top US universities follow 10 standards, two of which are the most important: 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 see a huge decrease.

What is elite education for? To cultivate leaders. What are the responsibilities of leaders? Caring about all of society, including those who don't have the ability to take care of themselves. Top universities should not cultivate people who are too calculating or self-interested. Instead, elite universities should cultivate people who care about society.

If Morocco is able to classify education into these three levels, I believe you will have a huge number of engineers who can combine the industrial culture of Europe with your own culture. This way, you will see amazing new developments.

The only thing that separates you from Europe is the Mediterranean. If you have a large number of excellent engineers, you will definitely develop into a technological power.

10 ***ADTV:* First of all, thank you, Mr. Ren. You mentioned the UAE's diversified environment. Because of this, the UAE has achieved rapid economic growth in a short period of time without relying on oil. Now the UAE's economy ranks 29th in the world and second in the Arab world, next only to Saudi Arabia. The oil industry accounts for only about 30% of the UAE's economy, and the other 70% are non-oil industries.**

The UAE government has appointed a Minister for Happiness and Wellbeing and a Minister of Tolerance. The government also has a diversified workforce with talent from nearly 200 countries. Not long ago, we saw the first UAE astronaut board the International Space Station. The friendly partnership between China and the UAE is also developing rapidly. The UAE has been an early adopter of 5G, along with a number of other countries in the Middle East. However, some people claim that Huawei's 5G technologies pose information security risks. How do you respond to such claims?

Ren: First, Abu Dhabi is one of the richest places in the world. I fully understand and firmly support the UAE's Centennial Plan, and the plan to convert your oil wealth into scientific, technological, and digital wealth. Because one day, oilfields will be exhausted and the value of money will change, but digital science and technology will keep creating value through continuous innovation. The UAE has freed its reliance on oil. At the current historical moment, it is absolutely correct for the UAE to make this strategic decision.

When countries regard physical resources as wealth, geographical boundaries are very important. However, the wealth of digital technologies is global and transcends boundaries. We must respect the UAE's digital sovereignty as it can guarantee national

information security. Huawei is currently in discussions with countries around the world about signing a "no-backdoor" agreement. We can also sign this kind of agreement with the UAE.

***ADTV:* Could you talk more specifically about the concept of a "backdoor"?**

Ren: The term "backdoor" comes from the US. Through backdoors, data could be stolen from your networks.

***ADTV:* Does signing a "no backdoor" agreement mean Huawei will not acquire data from the networks of its customers?**

Ren: Yes.



***Al-Ahram:* Unemployment is a serious, global issue. Can new technologies help fix this issue?**

Ren: AI can create more wealth than ever for a society, but of course, people who can't find a place in this new society may have a hard time getting a job. In a traditional, industrial society, getting a job is not a problem for anyone who finished high school, vocational school, or higher-level education. In the new era, when AI and IT become the main drivers of productivity, people who don't have an advanced skillset might not be able to find a job. That said, society will keep growing

its wealth, and with more money at its disposal, it will need to consider how to put it to good use. The more money a country has, the easier it can solve its problems. The money can be used to provide support for people or to give them training.

As AI is becoming more widely adopted, employees who have been let go during this transformation can shift to sectors that focus on work related to user experience. People won't ever quite get used to having coffee with robots. I watched the movie *Star Trek* the other day, and I felt really down when I left the theater. In the spaceship, there were no human attendants at all, and all of the services were done by robots. This movie shows how lonely and horrifying life could be in the AI era. While AI is able to meet some human needs, people will still need a human touch. In the AI era, more people will work in sectors related to user experience.

Employment is a topic of sociology. I'm not a sociologist or a government official, so I'm not in a position to answer your question. What I can say is that AI can increase productivity. Take AI in agriculture as an example. AI-powered tractors can work 24 hours a day, no matter how scorching or cold the weather is, or how annoying the bugs are. These tractors can work around the clock to plough the land along rivers like the Nile. They can turn stony ground into arable land by taking

out the pebbles and rocks, and channel water from the Nile to irrigate the crops. Life may be a little less fun for people because they no longer need to do these things, but material wealth will increase.

12 *Le Matin:* Shenzhen has a beautiful environment. What is Huawei's social responsibility in terms of developing the green economy? Do you have any policies that require you to take greater social responsibility for environmental protection and green development? What are your contributions in these areas?

Ren: Our main direction is to move forward with new technology and explore what's next. The exploration itself is a contribution to society. During this process, our tax payments and consumption are also part of our contributions.

In terms of environmental protection and the green economy, there are two types of contributions: direct and indirect. Huawei makes indirect contributions. For example, our AI-powered base stations can reduce two tons of CO2 emissions every year per site.

13 *Al Bayan:* I have two questions. First, will the US sanctions affect the future cooperation between

Huawei and the UAE on 5G? Will Huawei launch 5G services and applications in the UAE? Second, will Huawei sign a "no backdoor" agreement with the UAE in the future?

Ren: For 5G base stations, transmission networks, and core networks, we don't rely on US parts or components at all, so we won't be affected by US sanctions. We will have no problem supplying the UAE with 5G products, and we will continue to make progress and innovate. We are willing to sign a "no backdoor" agreement with the UAE government whenever they want.

14

***Al Raya:* Huawei's sales increased by 24.4% in the first three quarters of 2019. What's the key reason for Huawei's continued growth? Considering the current pressures and challenges, will Huawei be able to sustain this growth in the future?**

Ren: Before the US's May 16 sanctions against Huawei, we saw high levels of uninterrupted growth. After May 16, our growth was somewhat affected. We have to switch some versions of our products, and the production process and network quality testing of these new versions have to be certified. We are affected in this regard, but we have managed to complete this shift. We had expected the sales for products affected by the US

sanctions to decline at the end of this year, but now we estimate sales to increase slightly.

The overall growth rate of 24.4% we saw in the first three quarters of 2019 was the result of the hard work from all Huawei employees. Sales for some products ended up not being affected at all. Our employees have been working even harder because of the pressure we are facing, so the growth turned out to be higher. We are confident that we will continue to see growth through the end of the year. We believe we'll be able to maintain this same level of growth next year as well. Any growth we see next year will have been achieved under the US sanctions. By the end of next year you'll see that Huawei has been able to survive. By 2021 or 2022 when these new versions of our products have matured, we may witness massive growth.

15

***Sabq Online:* When you founded Huawei, did you expect Huawei to grow into what it is today?**

Ren: We founded the company when we were at the edge of starving. Despite that, we didn't just focus on earning money; we focused on our vision. That vision has changed as the world around us changes. I'd never thought about whether we would grow to this size. It's just happened naturally.

16

Leaders: Last September, China-Africa cooperation reached a new level, and China agreed to invest more in Africa to boost its development. What role will Huawei play in this process?

Ren: China is investing heavily in infrastructure in Africa. Overall, the value of telecom contracts is small, so we can develop on our own, with our own money.

17

KUNA: It is being said that Huawei has begun its research on 6G. What is your progress in 6G?

Ren: We are actually researching 5G and 6G simultaneously. 6G provides higher bandwidth, but its scope of coverage is limited, as it uses millimeter waves. If we want to apply 6G in real-world scenarios, we need to make both theoretical and technological breakthroughs in communications. I estimate it may be 10 years before we see its application.

18

Al-Ahram: I am from Egypt, from Africa. How do you think Africa can catch up in terms of the development of information science and technology?

Ren: How can Africa catch up? I think the key lies in reducing taxes, adopting technology neutrality policies on spectrums, and sharing infrastructure. In large cities

like Cairo, every carrier can build their own networks. However, in small cities, they don't need to build their own network, because costs will be too high. Instead, all carriers can just build one shared network, where they pay when they use it. Therefore, Africa needs to strengthen its communications infrastructure, including fiber and broadband networks.

Ren Zhengfei's Interview with Euronews

October 22, 2019
Shenzhen, China

01

Damon Embling, Correspondent, *Euronews*: Ren, CEO and founder of Huawei. Thank you very much indeed for joining us on the Global Conversation here on Euronews.

Mr. Ren, I would like to start by taking you back to your early days of life, back to your childhood. You were born into one of the poorest provinces in China back then in 1944. What were your years like growing up in China? What do you remember of those years?

Ren: Well, I had a pretty carefree childhood. Today, children have so much homework to do due to the knowledge explosion. But at that time, we didn't have all this homework and our parents weren't that strict, so we could hang around and had a lot of freedom. We could just spend a lot of time playing around after school, like swimming in rivers, catching fish, and hunting birds with a slingshot.

Back then, we didn't have an abundance of material possessions and had no idea what it was like to be well-off. There was no way for us to know how our European counterparts lived their lives. Having no comparison meant that we didn't feel sad for not having it. Today, we are well aware that psychological wellbeing is actually more important than material wealth to children. Children today have a lot of stress at school

because their parents set the bar too high. Though they are much more well-off than we were, they are not necessarily happy.

So anyway I think I had a happy childhood.

02 **In fact, you described yourself in your early years as being a nobody, I think, in your own words. But then you went on to join the military here in China as an engineer in the army. How do you look back upon your time within the military services here?**

Ren: When I was young, China's economy was developing very slowly, but young people at the time had high hopes and were in search for new opportunities. Serving in the military offered more opportunities than other jobs. We really wanted to join because we thought of it as an honor. Being part of the military meant that we were disciplined and working hard. The Cultural Revolution made the entire country a mess. There was a prevailing view that knowledge and education were useless, and the construction of infrastructure in China was stagnated. No one wanted to work in hardship regions to support some key projects, like a major synthetic fiber factory that introduced foreign technologies. That was why the country commissioned

the military to get the project up and running. I was a member of the project. By being part of it, we had access to some of the most advanced equipment and technologies from France during the Cultural Revolution. The synthetic fiber production equipment was provided by Technip and Speichim. Life working on the project was tough, but I felt very lucky.

03

You stayed in the Chinese army for nine years I think and then you spent a couple of years in the oil industry. Then, Huawei was born. Back then in the late 1980s, what was your vision for the company? Why did you want to set it up and what were you trying to achieve really?

Ren: When we were in the military, China still had a planned economy that didn't pursue profit or cost-effectiveness. We just needed to get our jobs done. But when we got disbanded from the military, China had started its reform and opening-up and was transitioning towards a commodity economy. We weren't accustomed to the commodity economy and had no clue what commodities were. You see how unfamiliar the market economy sounded to us. The country issued documents requesting a transition into the commodity economy, triggering a heated discussion among those at the top.

This was because we had no idea what commodities were, not to mention how big of a change this was for our society. I had difficulty finding my way in this societal change. I was working in a state-owned company then and suffered a setback. The company just let me go. To survive, I had this idea of starting my own business, but doing so meant a lot of risks, because it was likely that I'd fail. But there was no other choice. I could only move forward with the idea.

You set up Huawei with a very limited amount of funds. It was around 3,000 US dollars, wasn't it? How did you manage to launch a company from that small pot of cash?

Ren: At that time, Chinese people were very poor. Startup companies like Huawei didn't have the money to really get up and running and were in a very tight spot. Registering a private tech company required five shareholders and around 3,000 US dollars in registered capital. I didn't have that much, so I had to raise it before I could register. After we registered, we barely had any cash left.

In the beginning, our company mainly worked as an agent selling equipment made by other companies, and we only paid the manufacturers after their equipment was sold. This model let us grow, but the development

process was extremely difficult. My monthly salary was extremely low at the beginning, less than 100 US dollars, and I didn't even ask for the salary for the first few months.

Given those challenges and difficulties that you faced starting the company, what was your driving force? What kept you going? What was your vision?

Ren: To survive.

Simple as that?

Ren: Yeah, it was as simple as that. I had to take responsibility for my kids' education and growth. In truth, I didn't take good care of my kids, but I had to earn enough money to feed them. I applied for several other jobs at the time, but they wouldn't hire me. I just wanted a job in the beginning, but no one would take me. There were two reasons for that. First, I had made some mistakes in a previous job, so they didn't trust me. Second, the technology I was trained in was not needed at the time, because society was in a period of speculative buying and selling. I had nowhere to go. At that time, China was beginning to allow for private tech companies, so on an impulse I started Huawei.

04 **Now, all these years on, since you started the company in the late 1980s, you have grown into a giant, a technology, a telecommunications, mobile communication company around the world... 188,000 employees. How would you explain your relatively rapid growth into the company that you are today? And now you've gone from those humble beginnings that you described into one of China's super-rich.**

Ren: We learned early on that the only way to survive is to respect our customers, which includes respecting their values and interests. Our customers will only pay us when we deliver high-quality products and superior services to them. At the time, we served our customers heart and soul, and we would rather take on hardships ourselves so that we could meet our customers' needs and respect their values. Through this, we gradually improved our brand image among customers, and our sales went up.

After our growth continued for a while, the manufacturers we represented thought we might dominate the market, so they stopped supplying us with equipment. So the situation we are currently facing is nothing new to us. That was when we knew we had to develop our own products in order to survive. We started by developing 40-line analog switches. Those seem

extremely simple today, but back then, we were under a great deal of pressure to develop them. At that time, China had just started its reform and opening-up, and small hotels and shops needed small bits of equipment, which was an opportunity for us. By developing our own small equipment, we started to build the talent, capital, experience, and customer trust we needed. From there we were able to grow step-by-step.

Throughout the whole process, we did not rush to spend our earnings on entertaining ourselves. Instead, we saved it, put everything we had into R&D, and devoted ourselves to serving our customers. That's how we gained their trust. Our customers still place enormous trust in us today. The US has frequently campaigned against us in Europe, who is their close ally, but our European customers have continued to buy our equipment despite all the pressure from the US. This is because we have been building trust with our customers over decades.

05 We'll talk more about America, the United States, in a few moments. But I just want to talk to you a little bit more for now about how you grew and developed your company here in China. How difficult was it growing your type of business in China over those

years? Because actually, on the face of it, you were going against the grain, weren't you?

Ren: At that time, 100% of China's communications equipment was supplied by Western vendors, mainly the big eight vendors from seven countries: Ericsson from Sweden, Nokia from Finland, Alcatel from France, Siemens from Germany, Lucent from the US, Nortel from Canada, and NEC and Fujitsu from Japan. However, the switches supplied by these vendors were the larger ones used in cities. They were too large to meet the needs of rural areas. Additionally, the rural market just couldn't afford such large switches.

At the time, China's rural communications market was just starting out. That was where we came in and developed 40-line switches, which were later expanded to 100-line, 200-line, and 2,000-line switches. After that, we began developing larger program-controlled switches for towns and gradually expanded from there.

06 **Alongside those technical and logistical issues, what I really want to know is how you developed a company in China when actually, at one point, the Chinese state, the government, really didn't like you, did they? They wanted to close you down, didn't they?**

Ren: Yes, the government didn't know us very well when we first started out, because we adopted the Employee Stock Ownership Plan, under which employees owned the company's capital. We might have been misunderstood as a capitalist company, which was not in line with socialism. But these misunderstandings began to disappear over 10 years ago, as we paid an increasing amount of tax to the government.

We now pay a total of 20 billion US dollars of tax to governments around the world every year, most of which goes to the Chinese government. The government has seen our contributions to society, as well as our integrity and legal compliance. That's how they have come to know us better and accept us. This was the first window of opportunity for us.

The second opportunity dates back to over two decades ago, when we first began doing business in Africa. Some African countries were embroiled in conflict at that time, so all Western companies had withdrawn from these countries and were no longer providing communications equipment to them. However, the equipment we sold in China's rural areas could also be used in Africa. By selling equipment to such countries, we managed to gain a strong foothold in many countries outside China and started to accumulate capital.

The success we achieved in countries outside China gave the Chinese government confidence in us: We didn't develop by taking advantage of the domestic market; we grew our business in countries outside China too. After we started operating in Europe, the Chinese government started believing we were performing well because we had managed to enter developed markets. This was how the government's misunderstandings about Huawei were dispelled.

The third opportunity is that we encountered many coincidences after entering Europe. A young Russian employee had been working on an algorithm for over a decade, which integrated algorithms for 2G and 3G software. That meant that 2G and 3G could be integrated into one piece of equipment, saving half of the costs and reducing half of the weight. In reality it may have been less than that, but the costs and weight were still reduced by 30%–40%. What was most important about the algorithm was that it helped reduce the weight of equipment. This was especially important for Europe, because Europe didn't have many towers or utility poles on which to install network equipment. Previously, most equipment had been installed on the roofs of old houses. If the equipment was too heavy, it could cause the houses to collapse. So our equipment was very popular in Europe, and this was made possible

by an algorithm that integrated 2G and 3G in our equipment. With this equipment, we quickly entered the European market.

This was how SingleRAN helped us establish a business presence in Europe. Later, we used that algorithm to integrate the algorithms of 2G, 3G, and 4G software. That meant that the same equipment could support 2G, 3G, and 4G, significantly boosting efficiency and increasing profits. That provided us with more money which we invested in R&D.

In the past, there used to be several different communications standards for 3G around the world, such as Europe's WCDMA, the US's CDMA2000, and China's TD-SCDMA. This algorithm was able to integrate all communications standards into one piece of equipment. That meant that we could sell the same equipment to Europe, China, and other places around the world, better satisfying our customers' needs. This again enhanced the company's competitiveness and profitability.

By integrating different standards into one piece of equipment, we significantly decreased our costs while increasing our revenue. We didn't use this revenue for consumption, but continued to invest it into the future.

The fourth opportunity is that global communications have been developing for seven to eight decades. At each stage of development, governments tended to allocate one block of spectrum in one band at one time, and another block in another band the next time. Therefore, established carriers would often have over 10 blocks of spectrum, requiring over 10 corresponding antennas. Every antenna is made up of different electronic components, which increases its own weight and costs. We used this algorithm to integrate the 10-plus antennas into one that could accommodate several standards, which is called multi-mode and multi-band technology. This is one of our unique technologies, pushing us to the forefront of the world stage. Our leadership didn't begin with 5G; we were already a leader in 4G. This technology allows us to lead the world in wireless communications. All of this success can be attributed to the mathematical algorithm developed by the Russian young man I mentioned earlier. He is now a scientist and Fellow at Huawei, who is only about 40.

Polar code is a key technology of 5G, originating from a mathematical paper published by Turkish Professor Erdal Arıkan over a decade ago. We discovered this paper two months later and dedicated several thousand people to analyze it and developed polar code.

We are now leading the world in 5G, which was actually the result of these two coincidences. Both turning points were related to basic theories.

The fifth opportunity, another coincidence, is also worth mentioning. Huawei was almost declining a few years ago because the market was becoming saturated. But thanks to the iPhone invented by Steve Jobs, the mobile Internet developed rapidly, enabling the telecoms equipment market to begin expanding. Carriers started purchasing more equipment, and we made more money, which helped us survive until today.

07

Clearly there's been a big technological path, success for your company. Within China, obviously, you have a strong foothold in the business. How difficult and challenging has it been – before the latest US trade row – how difficult has it been to build your business overseas? Or, in your view, has it been fairly straightforward? Because countries have a view of China, and some have suspicions about China.

Ren: Before we were added to the Entity List on May 16, we didn't face many difficulties in developing overseas markets. Customers made their own decisions even if politicians held different views on Huawei. Customers

can decide about us for themselves after using our products. The US politicians and state leaders have launched a campaign against Huawei across Europe, but our European customers continue buying our products. Despite the huge pressure from the big shots and their US ally, they are still buying our products. It proves that they recognize us for who we are.

Before May 16, customers were not facing the significant pressure that they are now. They chose to use our equipment after considering our technologies and services, as well as the benefits our products would bring.

You say customers still support you and they make the choice. But ultimately if their politicians, their governments are blocking Huawei, which has happened in some cases, how do you get beyond that?

Ren: If we can't overcome this opposition on a particular country, then we will give up on that country and probably the customers involved. We will only work with customers who want to work with us. We are not asking every customer or country to accept us. If all customers listened to politicians, would they make profits? It's not politicians but their customers who determine their fate. Customers always buy products that help them make profits, because this is the only way they can survive.

08

Now, the US is embroiled in a trade row with China at the moment. You find yourselves in the middle of that, as Huawei. You have the US administration accusing Huawei of possibly using its networks, its telecommunications, and its technology to spy on other countries. Have you spied on any other countries? Have you spied on customers?

Ren: First, the US-China trade dispute has nothing to do with us. We barely had any sales in the US, and US cyber and information security has nothing to do with us. It is a fact that the US networks and information are not safe even though no Huawei technology is present in them.

Second, we have served three billion people in more than 170 countries and regions for over 30 years. We have a strong track record. If we were involved in any security issues, the US would have used them as evidence to convince Europe. History has proved that we haven't done anything they've accused us of, nor would we have any reason to do these things.

Third, what should we do in the future? An EU report states that Huawei's 5G technology is very advanced, but the EU also has concerns regarding risks caused by non-technical issues. Therefore, we are committed to complying with all applicable laws and regulations of the

EU. We will make commitments to these governments about what we will and won't do, and be audited accordingly. This will help increase their trust in us. The UK has the most stringent oversight of Huawei. We trust the UK and Germany, so we are open to their checks. They also pay a lot of attention to our problems and provide us with constructive criticism. This process has further helped build trust. We are happy to make these commitments and submit ourselves to audits according to the EU's management requirements. We respect the EU's regulations, so we have opportunities there.

So, can we just be clear then... You're saying that Huawei has never spied, never will spy, and has never been asked to spy?

Ren: Yes. We have never and will never spy.

But it could be tempting, couldn't it? Because information and data, described as the new oil today.

Ren: We acknowledge the digital sovereignty of every country. Digital sovereignty lies with countries, not us. The data is of no value to us, so what's the point of us getting others' data? If we did this even once, the news would spread across the world. Customers would no longer buy our equipment and Huawei would go bankrupt. Then our employees would leave Huawei, leaving me to repay our debts. But would I still have the

ability to repay then?

But maybe you're hiding it?

Ren: Why would we do that? I don't think there's a good reason for it. It's unnecessary and unlikely. It's like selling a car. If I sell you a car, it's up to you what will be loaded into the car. Likewise, when we sell equipment to a carrier, it's the carrier that will operate the equipment. That carrier is subject to the oversight of its country. We can't even access the data [without permission], how can we possibly obtain the data? We can't access the data, and we don't need the data.

09

Whether the US is right or wrong, Australia has barred Huawei, and the UK is still trying to make a decision over it. There are concerns in other parts of the world about the way Huawei operates. Rightly or wrongly, as I say, the US allegations, they're deeply damaging for you, aren't they?

Ren: I don't think the US allegations have hurt or affected us that much. In fact, the lobbying of so many US politicians around the world has had a positive impact on Huawei. Seeing such a powerful country attack Huawei, customers in many countries take that as a sign of Huawei's strength. And so, they are rushing to buy our equipment as they're afraid our equipment will

sell out.

Since the US campaign against Huawei began, the number of customers visiting us has increased by 69%. They came and checked whether we could make our equipment without US components. Today you have visited our company and you have seen that we survive very well without US components. We have shipped the equipment to our customers and their test results show that our equipment works very well. Even without US components, we can continue to supply our customers. This has greatly boosted customer trust in us. The US has been doing amazing PR work for us, so no, I don't think the US campaign has created any obstacles for us.

So you don't think there's a financial risk to your company and you really think the general public, the consumers, haven't lost trust in you?

Ren: First, there won't be any financial risks. In fact, we might be growing even faster. This is because the existing crisis and pressure have pushed our employees to work harder than before. They were getting complacent before the US campaign began, but now they are on their toes. As a result, our productivity has improved. This is the first reason – an internal reason.

There is also an external reason. Some customers choose not to buy from Huawei. That's understandable.

But there are also many customers who continue to buy from us. That's because they see the unique advantages of our technology.

In a minute I want to give you a CD. It's a high-definition video that shows a performance marking the 70th anniversary of the founding of the People's Republic of China. It was broadcast over 5G. Although there were tens of thousands of people performing, there was no buffering. You work in the media, so you understand how advanced we are. We used our 5G base station, which is very compact. It actually fits in a backpack, and no wires are needed.

Projects like this have shown that we are well ahead of the competition, so we have plenty of opportunities. We are not worried that some customers may not choose us. In fact, we are a bit concerned that we may be unable to meet our customer demand if too many customers buy from us. We may even have to ask our Chinese customers to buy less from us, because we want to supply our equipment to overseas customers first. It is more difficult for us there.

So I don't think we'll have financial difficulties. Customers may trust us more as time goes by. They can come and visit our base stations, or they can buy and install some. They will then realize that our equipment

works very well even without US components.

You say you're not overly concerned about what's going on right now, but, for example, when you launch your latest smartphone outside of China, maybe in Europe or elsewhere around the globe, and people for example don't have access to Google services because of what's going on with the US at the moment. Surely that's going to deter people buying that phone, isn't it? So that will harm your company.

Ren: Well, I think first of all, it won't cause much harm because we are on very friendly terms with Google and we have previously signed many agreements. Second, Huawei smartphones have a lot of unique features. Though users in some regions may be unable to use Google services, they still love the other features of our smartphones. We estimate that our consumer business will sell more than 240 million units this year. So there will still be rapid growth. I don't think the overall impact will be larger than 10 billion US dollars. In fact, this is not a big number to us, so I don't think a 10-billion-US-dollar decrease in our forecasted sales revenue will be a big problem. When it comes to the ecosystem, we are confident that it will only take us two to three years to overcome that difficulty.

10

I want to talk more about the US trade blacklist. You find yourself on this US trade blacklist, effectively locking you out of the US. How have you tried to engage with the US administration about this?

Ren: First, we haven't negotiated with the US government. We chose to file a lawsuit against the US government in court. I think we should let the courts solve this problem based on the evidence.

Second, I don't expect the US to remove Huawei from the Entity List, even if a new administration is in power. We need to adapt so we can endure pressure from the US for a long time to come. We must mentally prepare ourselves for that. But ultimately, it will be US companies that suffer most. Huawei provides services to three billion people in 170 countries and regions. If US companies are not allowed to supply to us, they will lose many markets, especially the Chinese market. This is not in their best interests.

It seems that you're being quite stubborn. I mean the US does have a lot of influence around the world. Surely you should be trying to talk to Donald Trump. What would you say to him if you could?

Ren: I haven't had any opportunity to talk with him. He's very busy.

But if you did, what would you say to him?

Ren: If I did have the opportunity, I would ask him not to let US companies lose their foothold in the Chinese market. I would also say that the US will only see its companies performing better and benefitting from globalization when they can expand into the Chinese market.

I really don't understand why the US is unwilling to sell its high-quality products to China. What's the point? If you have good apples, you should sell those apples to whoever wants them and earn money from that. If you just keep the apples in your warehouse, they rot and then nobody wants them anymore.

The US government needs to think about the interests of its own companies and make sure they don't lose the Chinese market. Globalization is good for the US. If the US gave up on globalization, it would give Europe a huge opportunity.

11

In the wider trade war between China and the US that's going on, obviously, there are ongoing talks around that. How do you think it got to this stage, this much wider trade war, with your issue alongside that? How did it get to this and how much hope do

you have that the whole thing can be resolved? What needs to happen in your view?

Ren: I don't care what the dispute is about or how the negotiations have played out. After all, we sell almost nothing in the US. If the negotiations end well, we still won't be selling in the US. If the negotiations break down, we don't stand to lose much. So why would we care about the negotiations? This is something that should be settled between the two governments. I'm only concerned about the relationships between Huawei and US companies and our relationships with customers around the world.

But it's part of a wider spat, isn't it? You are part of it.

Ren: It won't work. If China buys more soybeans from the US, will the US sell more chips to us? It doesn't work that way. With less soybeans, we can make do by consuming less oil. It's not a matter of life or death for the country. I don't think there will be a big problem.

12 **The difficulties you face with the US right now, the challenges, they've extended sort of personally to your family with your daughter Meng in Canada. The US issued an arrest warrant over suspicions she was covering up links with a company that was apparently**

supplying Huawei equipment to Iran. Apparently, it was in breach of sanctions that are in place. How is your daughter? And how much is that worrying you right now?

Ren: We believe that the legal system in Canada is fair, just, and transparent. Evidence speaks for itself. We trust the judiciary system in Canada. We have no other thoughts apart from that.

Is she innocent?

Ren: Of course.

But you said that she might do jail time and she might study while she's in jail. You think she's going to go to jail?

Ren: I didn't say she would study in jail. I said she has been studying while under partial house arrest.

How is she? How much do you worry about her as a family?

Ren: She is out on bail and remains under partial house arrest. She has filled up her schedule. She goes out and talks with all sorts of people in Canada to show who she really is. She is living a comparatively normal life.

13

With that, and with the US trade blacklist, you really don't feel the house of Huawei is collapsing?

Ren: I think that Huawei might develop even faster. Over the past 30 years, our employees have worked really hard, and the lives of most of them have improved significantly. Naturally though, people tend to want a comfortable life, rather than working hard. This attack from the US has given us a sense of crisis that inspires our employees to be even more dedicated. Our sales revenue was supposed to be hurt by this attack, but instead it is still growing. Because of this, the house of Huawei will not collapse. As you can see, our production in all regions is still on track, our employees still come to work and go back home as usual, and our canteens are packed with employees at meal times. There has been no change to their salaries. I do worry that the company's profits may actually grow too fast because our employees work so hard. How do we deal with these profits? This is an actual problem we face. We are not experiencing a decline in business but instead are seeing rapidly growing profits. We will have to further increase our strategic investment in the future.

How important are your staff to Huawei? I mean we know that the vast majority of the shares are owned by the staff. How important is that, in the running of your company, do you think, and the performance of

your company?

Ren: I think holding shares has little to do with the dedication of our employees. They are dedicated to their work because they have a sense of mission. They aren't just driven by economic benefits. We implemented the Employee Stock Ownership Plan so that our employees could continue to share in the value they created in the past. The kind of value isn't just reflected in their bonuses. Their previous work continues to create value for years after their initial contribution was made. Holding shares enables employees to get returns on that, and share holding is used as a way to make sure employees are reasonably compensated. Their dedication comes from their sense of mission rather than these economic benefits. Our sense of mission has not been weakened by these attacks, but instead strengthened.

What kind of boss are you?

Ren: I don't have any special skills. I don't know much about finance, management, or technology. I actually don't know much in terms of the specifics. Instead, we have many competent and capable experts and managers who run the company.

It's very surprising you say that, given the growth of the company?

Ren: There are objective factors behind this year's growth. In the first half of the year, our growth was not affected by attacks from the US, and we maintained stable growth before we were added to the Entity List on May 16. Since then, we have been proactively patching up our holes, and we've quickly fixed most of them. This has enabled us to maintain reasonable growth despite some slowdown.

We were not affected by the US Entity List in the first half of this year, but we have been feeling the hit in the second half. Next year, we will feel it throughout the year, but we expect our business to maintain good momentum. You are welcome to visit us at the end of next year.

We have seen a huge increase in our total number of employees, and now employ nearly 194,000 people. This is because we have brought in many brilliant minds to patch up the holes caused by the US. We are fully confident in our performance next year. You are welcome to visit us at the end of next year again to see how we are doing.

14

And as you look to the future, obviously 5G is a big part of your business. It's clear from what I've seen on my tour of your headquarters here. But also obviously

for a lot of technology companies, 5G is big. Is it a game-changer in your view, 5G? How is it going to change our lives?

Ren: 5G will be like highways, whereas previous generations of communications technology are normal roads. Cars can run on both, but they can go faster on highways. 5G offers high bandwidth and low latency, and can create a pivotal foundation for the information society and AI. 5G does not directly create value for society, but the information systems that it supports will play a critical role in promoting social progress.

So what kind of things, for people watching this, how will 5G change their lives because 5G will facilitate all types of new technologies that cross right across our lives, won't they, public services, the way we get around, health even?

Ren: I'll give you a slightly abstract example to show what kind of value 5G can bring to our lives. An Airbus A320 has signaling cables that weigh about 17 tons. If wireless networks, rather than cables, were used to connect various types of equipment in the airplane, the airplane would be far lighter and need far less fuel. In addition, flight conditions would be improved. That would create tremendous value. We even nicknamed that particular wireless network project our Airbus A320

project.

In the past, a well-off family would also need many cables to support broadband connections in every corner of their house. But now, a small wireless box can make all of this a reality. This is the simplest example of how 5G could affect our lives.

We can also install small base stations in certain types of industrial machines, which can connect to other machines. This can provide real-time, autonomous connections to the systems that control all the machines.

5G's low latency can support autonomous driving, optimization of industrial automation, and other similar applications. Ultimately though, how 5G will change our lives is something we can't fully imagine at the moment. What I am describing now is just the initial impact.

I'd like to give you another example about remotely operated machines. You are media professionals, so you must be familiar with latency. If you operate machines several thousand kilometers away, this latency can cause operational mistakes. Latency in 5G networks can be kept lower than one millisecond, so it can support remote machine operations in real time. These applications will bring tremendous changes to humanity. But right now, this is just a vision.

How can we tap into the potential of 5G and create more value? This will require the concerted efforts of tens of millions of companies working together, not just us. At Huawei, we just provide a platform that is like fertile soil, and it's up to innovative companies to decide what crops they want to grow in this soil.

Because that's the risk, isn't it? Because 5G and all the things it will enable will generate a lot more data, a lot more information. But the challenge is really using that data in a safe, secure way that actually does change lives, right?

Ren: A new thing will never be purely good or bad. Everything has its pros and cons. The correct way to deal with a new thing is to better leverage its benefits, while controlling and mitigating its negative impacts. Nothing is inherently perfect.

The European Union very recently published a report about cyber security and 5G and this report concluded there could be an increased exposure to attacks because of 5G and they were saying attacks could come from non-EU states and state-backed actions... The European Union is clearly worried about security in 5G, while also they want to grasp 5G, they realise the potential... How risky is 5G in reality?

Ren: How risky is driving a car? You may get into an accident if you drive too fast. But if you drive a car responsibly, it can take you to many beautiful places. It's the same for 5G. Nothing is purely good or bad. The key lies in management.

The EU understands that 5G will bring a lot of benefits, as well as risks. The best approach is to manage and control those risks, rather than rejecting it.

15 **In the EU, privacy is a big issue. We have new regulations protecting data in the European Union. People do worry about how information and data about them is being used. At the same time, there have been concerns about states meddling in other states' affairs through using the Internet, social media, and what you have. There are some serious concerns in Europe right now. So, you as a big giant of this industry, Huawei, what are you saying to the European Union to actually reassure us, the consumers?**

Ren: I can understand those concerns. I'm also concerned as I don't know whether someone from the US is tapping my phone calls every day. Huawei is trying to reassure Europeans by complying with the EU's cyber security management regulations, the General Data

Protection Regulation (GDPR), and all other EU laws and regulations. But of course, the European people will need some time to verify our compliance before they truly feel reassured. So for now, all we can do is to promise that we will strictly abide by all applicable EU regulations and support the EU's digital sovereignty. We will never waver from this principle.

As 5G begins to be rolled out in the European Union over the coming months and coming years and the EU really positions itself about how it's going to use 5G and all the safeguards that go around that, what kind of relationship do you want to have with the European Union with 5G and other future digital technologies?

Ren: First, Huawei respects and supports the EU's digital sovereignty. Without in any way encroaching on that, we will work our best to provide Europe with AI-based technologies, intelligent computing systems under Arm architectures, the Atlas deep learning platform, etc. We will offer innovative open-source platforms and resources for European SMEs, and help the EU or European countries establish their own digital ecosystems. In this way, we will achieve shared success.

Second, we will also invest in and support the growth of European SMEs, and offer guidance where we can. This kind of cooperation will lead to shared success

for all. To compare a tech ecosystem to soil, we aim to provide fertile soil in Europe, and then European companies can plant crops on it. In other words, we will work hard to help European countries build their digital ecosystems step by step.

Amid all the difficulties the European Union has been facing recently, it's having a bit of an identity crisis to be honest. There are a lot of deep political divisions that have been going on. From your perspective, looking in at the European Union, and all that has been going on of late, how difficult a market is it now to crack when countries aren't necessarily agreeing with each other very much?

Ren: It won't be too difficult. What's important for Huawei is doing what we do well and gaining customer trust. We will never engage in [political] conflicts or take sides in politics. When we do our job well, it's not difficult for us to crack the market.

16 **Of course, one of the big political earthquakes in the European Union has been Brexit, Britain leaving the European Union. How do you see the future of China's relationship with Britain if and when Brexit happens? From a business perspective, what would you like**

to see in terms of a future trade, business, economic relationship with Britain?

Ren: No matter whether they exit or not, the UK has to work harder in order to become stronger. They have to rely on their own strength, because the impact of the external environment isn't as big as some people have thought.

Global trade is important for every country in the world. China will need to buy more airplanes from Europe than from anywhere else, and to meet this demand, Europe needs to ramp up production. China's growing demand for European products like machinery and cars is a great opportunity for European countries, especially the UK, so these countries should work harder to seize these opportunities. Government relationships are about building an environment. The macro environment has an impact on trade between countries, but this impact is not that large.

And do you worry, as big telecoms company that it could affect you? Or do you think Brexit could bring a company like yours new opportunities as well?

Ren: I don't think Brexit will affect Huawei at all. Our presence in a market is determined by its population. Everyone needs telecom services, and if there aren't any

changes in the population, then Brexit won't have an impact on us. The Brexit decision was made by British people themselves. For Huawei, we only need to adapt to the situation and do what we do well.

17 Closer to home, there's obviously been the ongoing unrest in Hong Kong. From a business perspective, how worrying is the instability in Hong Kong for your business and for this region, do you think?

Ren: The impact of Hong Kong on China's mainland and the world is not that big. Hong Kong is capitalist, while China's mainland is socialist, so what's happening in Hong Kong will not affect politics in China's mainland.

People in Hong Kong have freedom of speech and the right to demonstrate lawfully, but demonstrators shouldn't vandalize others' property, private or public. Vandalism is counter-productive. People who are neutral will distance themselves from these demonstrators. And if the demonstrators keep starting riots, they will ultimately be isolated from the rest of society.

In my opinion, demonstrators should use words to peacefully express their opinions, which is an important aspect of capitalist democracy. No country in the world will ever support vandalism.

18

I want to look to the future now... You're 75 and still running the company as the CEO. How do you see the future of Huawei? Where do you want it to go over the coming years? And how are you going to achieve that?

Ren: In truth, I haven't gotten involved in any of the company's specific operations for many years. I simply have the veto right. I've never exercised this right, but the company has been running on the right track. This has little to do with my age.

Now I have time on my hands, and I'm in good health. So our public relations department asked me to work for them and meet with journalists. I didn't meet with journalists in the past, but now I have more time to do this. Huawei's fate doesn't rely on me personally, so there is no need to worry about the company's continued development.

You say the fate of the company doesn't rely on you. But with the fate of the company – some would say – in question right now, what would you say to those critics that say Huawei is meddled in by the Chinese government – it's carrying out espionage, spying; it's not a company we should trust? What do you say to those critics?

Ren: I don't want to say anything to them. The facts will

determine whether those critics are right.

As I said, you're 75 years old now, you're still running the company. Although I think you play that down quite a lot in terms of your involvement. But clearly you've been at the helm for many years now and have been behind a lot of the company's success. Where do you personally go from here? When are you going to finally throw that hat on the floor and say, "Okay, it's enough now"?

Ren: First, my authority is limited within the company. It's not that I have the authority to do whatever I want. Second, Huawei has a democratic, collective decision-making system, which means I'm bound by collective decisions and vetoes. It may look like I'm here working every day, and while I'm an employee, I don't have any specific operational responsibilities. I just have the veto right, but I've never used it.

Anyone could fill this "figure head" role the same way I do in the future. As long as an executive is willing to take this position, they will also become a "figure head". Because I've been in this position all along, it might seem that we haven't had any personnel changes for 30 years. In fact, our personnel change all the time. My presence or absence doesn't affect the actual operations of this company.

You still haven't responded directly to my question regarding when you are going to retire.

Ren: First, when I become slow in thinking. Second, when the US government approves my retirement. Huawei is now in a state of crisis, so sometimes I need to act as a figure head and come out to meet with journalists.

Would you describe yourself as a workaholic, since you put your life into growing this company? You have said that you didn't see much of your children. You have been through a divorce. Do you think all the success in your life has come at the cost of your family? Do you look back now with any regrets?

Ren: I do have some regrets. During the company's early days, I used to go on long business trips in Africa and Latin America, staying there for several months. When I returned home, I often stayed for just a couple of days and then went out on business trips again. To survive, I didn't have much time to stay with my wife, and I often forgot to buy gifts for my wife and little daughter.

One time I did buy a gift for my little daughter, but she said she wouldn't accept my gift next time if I didn't buy one for her mother as well. That reminded me that I wasn't taking full responsibility for my family. There are

many things I could make it up to my current family. However, I didn't take good care of my parents and I couldn't make it up to them, as they are no longer with us. This is a great regret for me. Everyone has regrets, because no one lives a perfect life. But it's of no use to feel sorry. What we should do is to move forward.

If the company encounters greater frustrations or even collapses, the regrets will be greater than any of my other regrets. Today, all of us at Huawei are working hard to row this big boat of the company. Even though I am old and no longer strong, I will do my part.

When I was young, I played a lot of sports casually, but I was never a good athlete in any of them, even at a lower level. I was just a little short of the standards. That was a regret. Now I don't play sports anymore, so my physical condition will weaken. I will handle my retirement wisely. Please be assured that I will not dedicate my whole life to Huawei, and I have never considered that. I will leave myself some time to travel and relax.

Who would you like to replace you, because you have said you don't think your children have the right qualities to lead Huawei? Who would you like to see take your position?

Ren: Later on, I would ask our PR staff to give you a copy of my speech to the company's fourth Representatives' Commission. In this speech, I spoke about our systematic successions. Actually, we completed our succession a long time ago, not recently. The company has been operating smoothly. I am just a figure head in the middle. Please don't worry about this issue.

But you won't keep the company in your family?

Ren: My family don't share enough of the company's benefits. Why should we shoulder this big responsibility? In the future, there will be someone who can take on this responsibility, depending on their wisdom, capabilities, and virtue. This has nothing to do with my family.

Catherine Chen's Interview with Kauppalehti

October 22, 2019

01

I'd like to quickly introduce myself. I am a reporter from Kauppalehti, which mainly covers business news. Our outlet is around 150 years old now, and we have 12 papers published on the Internet. I think it's probably the most well recognized business newspaper in Finland. But that's just me. So I am delighted to have this opportunity to interview you.

Catherine Chen: I would also like to briefly introduce myself. I have worked at Huawei for 25 years, meaning I have been here almost my entire career. As you know, Huawei has over 90,000 shareholding employees, and I was honored to be elected by these employees as a member of the Board of Directors for the second time early this year. It's also a great honor to have this interview with you, so please feel free to ask me any questions. As I don't speak English that well, I will need consecutive interpretation of my answers to ensure smooth communication between us. So it might take a little longer than usual.

02

So this is your first time here. What has brought you here, apart from visiting the forests? Who are you planning to meet here?

Catherine Chen: I'm here at the invitation of our local office in Finland. I've traveled to many places around the

world, but this is my first time in Finland. I have always been very interested in Finland, so I quickly accepted the invitation once I received it.

What has brought me here in Finland? First, in China, we hear many stories about Finland. The most famous stories are of course those about Santa Claus. Second, I have heard that Slush, a grand event for startups, is held here each year. This is of great interest to a tech company like Huawei. So I wanted to come and hear more about the event. Third, Nokia, a well-respected company in our industry, is also based in Finland. Fourth, I have heard from my R&D colleagues that Finland boasts a huge number of R&D talent that specializes in engineering and technology. In fact, our research center here is working on smartphones and the development of some other unique technologies. So these are some of the key reasons I am here in Finland. I wanted to see it with my own eyes.

03 I actually visited Huawei's Shenzhen campus three or four years ago and was there for about four days. There were about 50,000 employees at that time, and I met a lot of people there who I do not remember any more. Since that time four years ago, what has changed? Are there new buildings or anything else that's new? I have heard you have new campuses in China.

Catherine Chen: Our company has changed a lot, and we now have 194,000 employees worldwide. You brought up our new campus, and yes it's very big and beautiful. You can see pictures online. Many people love it and it has been built in a European style.

04 **OK, I'll look it up.**

Catherine Chen: You are more than welcome to visit us again.

05 **I'd be glad to see it again. Huawei is growing fast, as you just said. You recently released your quarterly financial reports, which showed almost 25% growth in revenue. That's really impressive. Where do you see Huawei in the next five years, and what are going to be some of its biggest challenges?**

Catherine Chen: Huawei will continue its steady growth over the next five years. We have also released our vision: "Bring digital to every person, home and organization for a fully connected, intelligent world." At Huawei, we firmly believe that an intelligent world is at hand, so we are continuing to invest in technology in line with our strategy. Our investment will focus on consumer devices, AI, and cloud. We believe our business growth will continue at a steady pace.

As for the challenges we face, we often say in our internal meetings that our biggest challenge is ourselves. More specifically, is it possible to maintain the level of vitality we've had since we first started? We try really hard to inspire passion across our organization to make sure our employees still enjoy working at Huawei. I think this is the biggest challenge we're facing.

06 I don't know how familiar you are with Nokia. At their height, they kind of had it all. They were a world leader in mobile phones until 2006, I believe. Then everything went downhill very fast. Nobody knows exactly what are all the reasons were for Nokia's decline, but what can Huawei do to avoid similar problems, which can be caused as a company grows very quickly?

Catherine Chen: Huawei, with its 32 years of history, has always highly respected Nokia, a century-old company. Over the past three decades, Huawei, Nokia, and Ericsson have contributed much to the global communications industry. If it were not for companies like us, it wouldn't have been possible for five billion people around the world to go online, either via mobile or fixed networks. Huawei is proud of this achievement, and I think Nokia and Ericsson feel the same.

Just like no one lives forever, neither do businesses. Working in the communications industry is stressful because technology evolves at lightning speeds and anyone who misses a step may soon find themselves going downhill. That said, anyone can bounce back if they are able to seize the right opportunities. Moore's law, a famous observation made by Intel's co-founder Gordon Moore, attests to how stressful it can be to work in the tech sector: Computer performance doubles every 18 months while the price halves over the same period. In this industry, you can't let up or try to catch your breath for even a second.

At Huawei, we put a lot of effort into staying on the right track with technology to avoid any catastrophic missteps. We pursue technological innovation based on two factors: current customer needs and future technologies. About 70% of our R&D investments are spent on delivering products that meet the existing needs of customers and markets, and the remaining 30% on future technologies. Moving forward, our annual investments in R&D will reach around 20 billion US dollars. As we work to meet existing needs, we are also exploring what's next in technology.

While feasible mechanisms, strategies, and visions are vital, it's even more important to have the right people who can turn all these into a reality. That's why we need

to ramp up our efforts to get more talented people on board, ensuring our team stays vibrant. Veteran employees like myself are simply not enough.

07 **So what's it like to work for a company like Huawei? For example, how would you describe Mr. Ren as a business leader, as a management leader? What kind of person is he as a business leader?**

Catherine Chen: His most noticeable characteristic is that he talks a lot. He doesn't really get involved in business operations, not because the company has grown so big or because he is the founder. He didn't engage in corporate stuff himself when the company was still very small and when I had just joined the company. We received instructions from him and took care of all these things. He just told us his thoughts and encouraged us by raising our salaries to do the next job. He acts like this all the time.

What I feel most at Huawei is that time has passed so quickly. It is unbelievable that 25 years have passed since I joined the company at the age of 24. I cannot believe it myself, and this is what I have noticed most during my time with Huawei.

08

Okay, now about something that everybody is probably asking you. Regarding US trade politics and Huawei and the threat of the US blacklist stripping Huawei of Google software. Is there a solution, either political or technological?

Catherine Chen: Whether these issues can be solved depends on the US government, not Huawei. We believe these issues could have been resolved already. But as things have developed into the current state, I think it is clear that Huawei does not have the final say on these issues. For example, the US government made some allegations against Huawei, which should be handled by courts, following legal procedures. But just as the legal process began, the US added us to the Entity List. There is also the issue of cyber security. As a tech company, we are well aware of the importance of cyber security, and that we must develop technical methods or risk management methods to address the challenges posed by cyber security. However, if the US considers cyber security to be a political issue, then it cannot be solved by Huawei. We hope to talk with the US government to solve this issue. But the US currently seems unwilling to talk with us, so we will need to wait for some time.

09

About two days ago, the EU published a risk assessment report on 5G technology. No companies

were mentioned by name. They agreed that the major risk was one state launching a cyber attack against another. At least that was the Finnish government's view. Why do you think the EU's approach is so different from the US approach?

Catherine Chen: I would say the EU approach to cyber security assessment, including the assessment on 5G, is quite objective, rational, and pragmatic. The report has laid out systematic assessment requirements for 5G technology, ranging from standards, deployment, accountability, and the source of supply, as you just mentioned. I think the EU model is the right approach to cyber security, in that it is based on thoroughly analyzing all the relevant factors, identifying potential risks, and coming up with ways to mitigate those risks.

I'm not sure whether you are aware of the Catalog of Security Requirements unveiled by the German government a couple of days ago. Basically, the catalog sets out 10 cyber security declarations that all related companies, including both equipment vendors like Huawei and carriers, must make beforehand. In addition, there will be process-based inspections in place. This includes identifying key components and establishing testing, certification, and inspection schemes for these components. The gist of the German model is that declarations are provided in advance of deployment, and

this is followed up with process-based inspections, which I think is an excellent way to manage cyber security.

I read in the news that the Finnish government would also like to take this approach. We must first acknowledge the existence of the challenges, and then come up with ways, technological and managerial, to address them, rather than putting them aside. So I think the German approach is quite good.

You asked about why the US is approaching cyber security differently. I don't know. They don't think that standards, or managerial and technological means, can address their cyber security concerns. They don't seem to believe in any potential solutions to cyber security. The only thing they believe is that anything from China is dangerous. This is definitely not going to help solve cyber security issues.

From media coverage we can see that, although Huawei or other Chinese companies have virtually no presence in the US, there have been major cyber security incidents there. The origin of a company doesn't matter that much. I don't quite understand why they treat cyber security as a political issue.

10 **Do you think it's possible for the US and Chinese governments to reach a larger trade deal and make**

this Huawei problem go away?

Catherine Chen: It's really difficult for me to predict if they will reach a larger trade deal. As you probably know, President Trump is quite unpredictable. Huawei has already stated its position on this issue. We absolutely don't want to get involved in international trade negotiations. We think if we got involved, we would suffer whenever they had a dispute. I don't believe there is any company that would want to get involved in a conflict between countries. But it's hard to say if we have will have much choice regarding our involvement. I can only say that we ourselves don't want to be involved. We wish to solve the issue directly with the US government, whether through legal action or bilateral communication. We hope to find our own solution.

11

What can you tell me about 5G markets? I mean, looking at the three 5G equipment vendors, Ericsson, Nokia, and Huawei, the implementation so far, at least here in Europe, has been quite slow. There are not that many 5G networks, mainly just regional experiments. When do you think this technology, I mean 5G, will really get up and running?

Catherine Chen: 5G is developing faster than we

forecasted. We didn't think 5G deployment would begin until 2020, but now it has begun a year ahead of our forecast. One major reason for this is that many countries believe 5G will play an important role in their future digital economies. This is like building a highway, with all countries racing to be the first.

I know that Finland has been an early mover on 5G. It allocated spectrum for 5G early and the prices it charges for 5G spectrum are reasonable in Europe, which is rare. The spectrum resources allocated to each carrier are sufficient, which I think this is very wise. It also suggests that many European countries value 5G and hope to accelerate the deployment process.

Compared with previous generations of technology, 5G is doing better in several respects. First, 5G smartphones and base stations have become market ready at the same time. This was never the case with previous generations of communications technology. In the past, mobile phones usually appeared on the market two years later than base stations. Second, 5G fully accounts for the weaknesses of previous generations. For example, it considers how to further enhance security. This is fully assured in 5G solution design. Third, 5G is more environmentally friendly. Take Huawei's 5G products, for example. They consume much less power and are easy to deploy. A 4G base station weighs as

much as 80 to 100 kilograms. This means that one person could not install a base station alone. You had to block off roads and use cranes for installation. By contrast, Huawei's 5G base station weighs just slightly over 20 kilograms, requiring only one person for installation. In addition, 5G delivers faster speeds and provides network access to more people.

I'd like to show you a video. This is a 5G base station.

12 Elisa has some of those 5G base stations in Finland, and I have seen them. They are impressive. I tested them two years ago when they were still just prototypes.

Catherine Chen: This kind of base station is quite small. A single person can transport and install it on their own. As I just said, 5G is like a highway. In addition, 5G applications are now becoming more readily available. I'd like to show you a video about remote mining. Work conditions for miners have always been really tough, but now we can remotely operate mining equipment.

13 I noticed that the mining industry was one of the first to deploy 5G.

Catherine Chen: Bosch's UK factory has also been

connected with 5G. The key benefit of 5G is that information can be transmitted very quickly because of the networks' ultra-low latency. The factory has seen a 3% increase in productivity since being connected to 5G base stations. Why? It's quite simple. Product lines no longer unexpectedly shut down because problems can now be addressed before they occur. The sensors connected to the 5G network can identify problems much earlier and faster. Huawei has shipped 400,000 5G base stations so far this year, far more than we expected several years ago. I think next year's shipments will be even higher.

14 **It's a competition between Huawei, Nokia, Ericsson, and a couple of others. I've noticed there are many carriers buying three systems, ensuring the systems are not dependent on only one vendor.**

Catherine Chen: Where did you make the observation regarding the purchase of three systems at the same time?

15 **Well, two, three, or four. It happens, at least in Finland, and the reason for it is that they can encourage competition between different vendors, like Huawei, Nokia, and Ericsson. Carriers will then say, "Okay! We**

will buy three systems at the same time, but next time in 5G systems, we will see which vendor provides the best services or the best price." Is there anything else Madam Chen would like to say to the readers at home?

Catherine Chen: I think 5G is a major upgrade to current communications technology, so the arrival of 5G will represent a critical moment across the globe. I really appreciate the efforts that many countries and carriers have made to speed up 5G rollout. I am very supportive of faster 5G development, because 5G will play a critical role in building a country's competitiveness in the future digital economy.

Artificial intelligence (AI) is another technology that will revolutionize the world. However, I haven't seen the same level of proactive investments in AI as we have seen in 5G in Europe. But I believe AI development should also be accelerated, because AI will help make companies more competitive and people's work and lives more convenient.

I also think Europe is a leader in promoting technological innovation and setting corresponding rules and standards. I hope Europe will continue to uphold these practices. I'd like to use some examples from our industry to elaborate on that.

For example, we are now making the transition to the fifth generation of mobile communications technology. If we look back at the last 30-plus years of technological evolution, it's clear that the US always promoted its own standards, most notably CDMA and WiMAX. These standards were developed by the US alone and were closed in nature, but the US only asked others to trust them and buy their equipment.

However, Europe has always taken an open approach. A great example of this is the communications standards body 3GPP. 3GPP is always open to all companies, universities, and government organizations, no matter whether they are from the US, China, Asia, Europe, or any other region around the world. Through such joint efforts, 3GPP led the formation of the 3G standards WCDMA and the current 5G standards. Thanks to this open approach, most companies in the industry have participated in the development of European standards, thus making them de facto global standards. Europe is a leader in this regard.

In contrast, the US communications industry repeatedly went down the wrong path because it took a closed approach, all the while insisting that its way was the best. As a result, the US now finds itself without any strong companies of its own as we enter the 5G era.

Europe's example has taught Huawei the importance

of being open, and we are following that principle in practice. We have adopted an open approach to our technologies, from CPUs, to operating systems, to AI technologies. We also offer open-source versions of some of our software. We have learned from Europe that only through openness can we attract more partners to work with us.

Catherine Chen's Interview with Norway's Inside Telecom

October 23, 2019

Oslo, Norway

Catherine Chen: This is my first visit to Norway. Thank you for having me. My colleague Erik told me that you are quite famous in the industry.

01 Thank you for taking this interview. I was thinking we could start with this discussion about China's National Intelligence Law that says it requires organizations to support, assist, and cooperate with the state intelligence work. Now, Huawei has stated that the company would never be subject to such demands from Chinese authorities, but how can you substantiate the idea that Huawei would contradict Beijing, if asked to hand over 5G data to the government? We have a hard time understanding this.

Catherine Chen: China's National Intelligence Law does not require Chinese companies to implant backdoors or steal information from other countries. I am not a legal expert, so I may not be the right person to give a credible explanation, but I do believe this is an important matter. That's why I brought a document to Europe with me. It's a copy of legal opinions provided by two renowned law firms – London-based Clifford Chance LLP and a leading Chinese law firm Zhong Lun. They are both well-respected law firms. They have written at length about this issue, but the gist of their interpretations is in line with what I've said.

Following the media frenzy about China's National Intelligence Law, public explanations and clarifications regarding the law have been offered by Chinese state leaders, including Premier Li Keqiang, Yang Jiechi, and multiple spokespersons from China's Ministry of Foreign Affairs and China's embassies in a number of countries. I can give you a copy of their statements. They have all made it clear that the law does not require Chinese companies to do such things. They obviously speak on behalf of the Chinese government. You can find the exact quotes in both Chinese and English. The remarks by these Chinese leaders were made during on-the-record interviews and other public events.

You asked why Huawei can refuse such requests. Of course we can, because the law allows us to refuse. We have never received such requests. There is no such law in China that authorizes the Chinese government to ask Huawei to do such things. During interviews, Mr. Ren and other Huawei executives have publicly committed that Huawei will always put customer interest first, regardless of the circumstances, and that Huawei will never do the kind of things you mentioned in your question. These public commitments mean that we are willing to subject ourselves to public oversight. While founded in China, Huawei is now a global company. We would never intentionally do anything that would harm anyone.

02 **So, to sum that up, you're quite confident that you will never find yourself in a situation where you actually have to choose, because you don't think that the request will ever be made from the government. Is that correct?**

Catherine Chen: I'd like to make three points regarding this.

First, we have never been in such a situation in the past.

Second, the Chinese government has clarified its position regarding this law.

Third, Huawei will never do such things under any circumstances. Even if the Chinese government changed its position, or the law was modified, Huawei would not do such things. To be as clear as possible, this is an issue where we would not bend under pressure from any country or government, not just the Chinese government.

03 **According to Mr. Ren, and I'm referring to an interview that was given to a Norwegian broadcaster just a few days ago, Norway could fall behind in 5G if it surrenders to the pressure from the US government. Could you elaborate on this? Please tell me what it means, I mean, the long-term implications of making**

a political choice rather than a technological choice.

Catherine Chen: I think what you have quoted is not exactly what Mr. Ren said during the interview. It might be the journalist's own interpretation of Mr. Ren's words. We will send you the full transcript of his interview with the Norwegian broadcaster. I can also share some of my own opinions.

Over the past 30-plus years, Huawei has closely partnered with carriers here in Norway, such as Telenor and Telia, on various mobile networks including LTE. These two carriers are very professional companies. They have worked with Huawei for ten or more years, so I'm sure they have a deep understanding of Huawei's products and technologies, including 5G.

You're tech savvy yourself, so you must know very well how the tech industry works and how carriers make their choices. Buying telecom infrastructure equipment is quite different from buying mobile phones. We can buy a new phone every two to three years. Telecom infrastructure equipment, on the other hand, is used for much longer. So carriers need to fully consider different aspects like how advanced the technology is as well as its functionality and security before they decide to buy. Huawei is very confident in these areas.

When carriers choose which partner to work with on 5G, they may take several factors into consideration.

Price is one of them. They may even be influenced by the US government, because the US has turned cyber security into a political issue. Carriers may also have concerns over a company from a particular country. We are understanding the decisions that carriers make, whatever their reasons. As a tech company, the best we can do is to come up with technical solutions to address technical problems.

According to my understanding, what Mr. Ren said in the interview was that as long as a customer chooses Huawei, we will give them our best technologies and our best services.

04 **So if you look at where we're at today, from a technical perspective, do you believe that Huawei has a lead on its competitors? Would you say that you are better than the competition? I'm talking about 5G, because that's where we're standing, right? Let's leave 4G behind for now and look ahead and talk about 5G. I know that 5G is still developing of course, but if you look at where we are, right here and now, today, would that be a correct description?**

Catherine Chen: Actually it is not a question of whether Huawei believes so or not; that is the general consensus in the industry, including among carriers. That may not

sound humble, but it's true. Looking back at the histories of Huawei, Ericsson, and Nokia, we all feel very proud. Without these companies, five billion people around the world would have been unable to make calls on their mobile phones, access the mobile Internet, or enjoy broadband services.

Of course we also need to look into the future. It's true that Huawei may be a little ahead of the competition in 5G, but when it comes to future technologies like 6G, artificial intelligence, and cloud, we need to work harder. We still have to wait and see who will be the next leader. In fact, Huawei has not always been the leader, when you look at the past decades.

It's true that Huawei performs slightly better than other companies in the commercial deployment of 5G and uplink and downlink speeds. However, other companies have made equally important contributions in areas like papers, standards, patents, applications in various industries such as automotives and manufacturing, and the overall ecosystem. So rankings are not that important. All we need to do is to work harder.

05

Could we on a global scale end up with two different and divided ecosystems, I mean two different

ecosystems in the East and the West, if Huawei equipment is indeed banned in Western countries?

Catherine Chen: I don't think this will happen.

No?

Catherine Chen: No. Times have changed. Most Chinese people and Europeans, including Norwegians, and even Americans support open collaboration. Most people now are not like the generation before us, who thought everything was very black and white and every person has to be either a friend or an enemy. As I said, times have changed. For one, people's way of thinking has changed. Technological development has also changed as well. A split in the ecosystem would be a step backwards, and I don't think this will happen. In fact, Huawei has secured the largest number of 5G contracts from Europe.

06

So if Huawei equipment is being banned from Western countries, we will still have a global ecosystem. If it's true that Huawei is, at least in certain aspects, better than its competitors, then shouldn't this just be a matter of quality? I mean, even if we're able to maintain a global ecosystem, would we perhaps see some differences in terms of the evolution of the technologies? If we imagine Asian countries, for

instance, being able to use Huawei equipment, and the US and European countries not able to use Huawei equipment, and then if Huawei is number one, would that lead to some kind of difference between different continents?

Catherine Chen: If that hypothetical really happened, it's possible we would see the result that you described: Some places having more advanced technologies while other places lagged behind. We can't know which places would lag behind until that came to pass though.

When Huawei was still a small company, our vision was to provide network access to people everywhere. We hoped that everyone would have the most advanced network technology available and that technological collaborations would be available to all. This is the vision that we have always had, so I don't believe what you described will come to pass.

The US government has been the strongest opponent of Huawei's. However, the US media has shown there are actually many different voices in the US. Many people say that if they don't have access to Huawei equipment, costs will increase by 20 to 30 billion US dollars. Others question whether it is right to use taxpayer money to lobby against Huawei around the world and whether that is a waste of money or even in the best interests of the country.

As we can see from what is being published, Huawei was criticized over 600 times by more than 160 different American congressmen and senior government officials in the first nine months of this year. But some people have started to rethink their positions.

I think that the culture, institutions, law, and innovation mechanisms in the US are some of the best in the world. I believe they have a self-correction mechanism that will help them find the right way forward.

07

Apart from the US, does Huawei's top management feel that it's being treated fairly by different countries around the world?

Catherine Chen: Yes, we feel we are being treated fairly by countries other than the US. We truly understand why some customers do not choose to work with us. Over the past 30-plus years, there have been occasions when customers didn't choose Huawei or didn't buy certain products from us. It's natural to see different businesses make different decisions. I think that we have been treated fairly overall. What really matters is to work harder and do better. If a customer doesn't choose us, it drives us to work even harder and win the customer over next time.

The same can be said of most governments. You might have noticed that both Germany and the EU have released reports about how to manage 5G and how to mitigate cyber security risks. Huawei fully supports such initiatives, because we agree that higher standards should be set to better manage 5G. That means while embracing advanced technologies, we should also develop effective risk mitigation mechanisms. We really appreciate and support these initiatives.

Given the current situation, I would say we have been treated fairly at the very least. I am also hugely grateful to our customers who have given us great support. Despite the US government's ongoing campaign against us and despite our addition to the US Entity List, we've achieved stable growth during the first three quarters of the year.

In fact, every customer who has bought Huawei's equipment or smartphones voted for us with their own money. They've showed that they trust us and they understand us. I think that this is testament to our efforts over the past 30 years. It's all been worth it.

08

Now, Norway is obviously just a small player in this big picture and we're finding ourselves caught in the crossfire between two superpowers. We have the

US on one side, China on the other, and there are trade talks going on between Norway and China as we speak. How do you think a small country such as Norway should act when being caught in such crossfire? Do you see a plausible way out of this mess for the Norwegian government?

Catherine Chen: I am not in a position to advise the Norwegian government on what to do. However, I think that as long as the Norwegian government focuses on the interests of its own country and its own people, it will make the right call. Honestly, I can put myself in your shoes, because Huawei is now being dragged into the same situation as Norway.

Huawei is just a small company compared to a superpower like the US. What should Huawei do? What we can do is make every effort to continue to develop better products. That's all we can do.

09

Now I was referring to the trade talks going on between Norway and China. These have been going on for quite some time. Just to understand how this works out in China, would a company such as Huawei get reports from Chinese officials regarding these talks? Are you receiving any information about all these meetings taking place both here and in China?

Catherine Chen: No.

Not ever, no?

Catherine Chen: No. Any of the meetings and engagements that we have with the Chinese government would only be related to industry policies. Any proposals we make to the Chinese government are about industry policies. For example when it comes to discussions on spectrum for 5G, all industry players can voice their opinions.

But then something like spectrum would be a national matter in China, wouldn't it?

Catherine Chen: Not just that. These matters also need to have huge impact on companies in specific industries. Then all relevant players need to be engaged in such conversations.

10 **Now I have to ask you, what practical consequences will Huawei face, if the company is indeed prohibited from selling 5G equipment in Europe? Let's put it in terms of, for example, downsizing the organization in countries such as Norway and other places in Europe.**

Catherine Chen: I don't think this will become the case. Many carriers have begun to build 5G networks with Huawei, and some of them, including Vodafone, BT,

and Sunrise from Switzerland, have already launched commercial 5G services. So we don't think the scenario you just described will ever happen.

11

Okay, you were talking about growth earlier on, and how Huawei has been able to keep growing although it's under tremendous pressure from the US. Could you elaborate a bit more on that, and tell me where this growth is actually taking place? Because, I mean, at this time in Norway, you're obviously facing some obstacles. You just lost the 5G window, or opportunity, with Telia, and you are still waiting for Telenor's decision. We know that your latest series of smartphones probably won't be sold in Norway. So, I'm thinking the growth is not coming from Norway at the moment.

Catherine Chen: We have seen growth both inside and outside China. But for particular countries, I don't have any specific numbers for you, since our company has never disclosed these statistics on a country-by-country basis. I can't even say whether or not our revenue in Norway has increased over the past three quarters. I can only say that Huawei's total revenue increased by 24% in the first three quarters.

Additionally, our smartphone business is also

growing. As of last week, we had shipped 200 million units this year. That's two months earlier than when we reached this number last year. I'm truly thankful for our customers, because even though they now have numerous choices for smartphones, they continue to support Huawei.

12 **Do you regret having relied to such a huge extent on American products? I mean, obviously, when you're no longer able to use Android for instance, that is going to have implications for your business, as well as other components you need that came from American companies. Is there any regret inside Huawei that you took part in the American ecosystem as I'd like to call it?**

Catherine Chen: We don't regret it at all. If Huawei hadn't used US components, we would have never been able to develop the leading technologies we have today in such a short period of time. If we hadn't learned about management processes from successful US companies such as IBM, it would have been simply impossible for Huawei to grow from a small startup to the global corporation it is now. So what regrets could Huawei have? We don't have any.

We are only able to say today that our 5G technologies no longer rely on US components or

software, but that doesn't mean we didn't rely on them at some point over these past 30 years. If the US hadn't sold products to us from the very beginning, Huawei wouldn't have become what it is today.

Over the years, Huawei has collected about 1.4 billion US dollars in patent fees to let others use our technologies. At the same time, we've paid six billion US dollars to use other companies' technologies, mostly to Americans. Would you ever question this six billion US dollars is a bargain? Well, it absolutely is, because without using these licensed technologies, we would never have been able to become who we are today.

13 That's very nice. Thank you! I think that was my last question. Is there anything you would like to add?

Catherine Chen: You are welcome to visit us whenever you have time. I think no words can be more convincing than what you can see with your own eyes. We have been working hard to extend invitations to people from around the world since January this year, and over 3,000 journalists have already been to visit us. When journalists visit Huawei, we give them access to our whole campus. They can walk around freely and interview any employee they meet there. Of course, we can also help arrange interviews with our executives. Because Huawei is an

employee-owned company, we also have an Exhibition Hall for Virtual Restricted Shares. In fact, when our own employees visit the hall, they are only allowed to check their own share information, not other's, because the information is confidential internally. However, all journalists who come to Huawei are given access to this exhibition hall to check whatever they want. Huawei has nothing to hide, and so we invite you to have a look with your own eyes.

Since you follow this industry closely, I think you may be more familiar with us. Huawei only sells 5G equipment. The data of Norwegian consumers, as well as all the information related to Norway and Europe at large, is solely in the hands of carriers such as Telenor and Telia, not Huawei. How could Huawei do any harm? How could we install backdoors in our equipment? That's impossible. If we did install backdoors, someone would have found them by now. So many professionals keep a close watch on us, from government officials to customers, and none of them have found any backdoors in our equipment. How could Huawei be so good at hiding things? If Huawei was that capable, we wouldn't need to work so hard in such a fiercely competitive industry.

You are smiling. Does it mean that you've accepted my invitation?

We will have to go and come back to that at a later date, I think, but thank you very much.

Catherine Chen: Great. Whenever is good for you, we'll help set it up.

Thank you.

Catherine Chen's Interview with Norway's E24

October 23, 2019

Oslo, Norway

01

As I understand it, you've been working for Huawei since 1995, which obviously represents a long career at the company. And you've had many different roles. How would you describe the situation in which the company finds itself today? You've obviously grown a lot since 1995 and become a global player, but also faced some challenges, so I was wondering how you would describe the current situation.

Catherine Chen: Yes, how time flies. I have worked at Huawei for 25 years, although it seems to have flashed past in the blink of an eye. When I first joined Huawei, the company was still very small and just started trying to sell its own switches to urban areas. Prior to that, our products were only sold to rural areas and small companies.

Looking back at Huawei's development over my 25 years here, we have overcome one challenge after another. It took a great deal of effort to start selling our products to urban areas in China. Following that, we embraced a new challenge: selling our products to markets outside China, like the rest of Asia – Japan in particular, Africa, Latin America, and Europe. We've been through so much throughout our development. It seems that every time we feel we are about to enter a smooth stage of development, we hit another rough patch. This time, it is represented by the US cracking down on

us. So throughout my career at Huawei, the company has consistently overcome difficulties and addressed problems. I do not feel this pattern will end, even after my retirement.

02

Given that you've obviously taken time out of your schedule to come to Norway and will visit other parts of the Nordics, what are your messages to the industry and politicians here? Your company has met with many accusations. So I'm sure you must have a message you want to get out there.

Catherine Chen: Most of the accusations against Huawei come from the US government and we have denied and clarified all of them. In addition, we are still going through legal procedures, hoping that the transparent process of the US judicial system can prove our innocence. As far as our messages to Norway, what I would like to say is that Norway should have confidence in Huawei.

We have maintained a strong track record in security. Over the past 30 years, we have served over three billion people in over 170 countries and regions. We have operated in Europe for nearly 20 years. During this period, we have maintained open communication and collaboration with the EU and the governments and

industries of its member states, helping Europe build advanced and secure ICT infrastructure. We also have strong partnerships with carriers and other companies in Norway. Consumers here will also know what kind of company Huawei is from using our phones. So all in all, Huawei is a credible company.

03 They allow ongoing tenders for 5G contracts in Europe, including the Nordics. I'm sure you've seen that Telia has chosen your competitor Ericsson. What is your expectation of what the rest of the tenders will do going forward, in both the Nordics and the rest of Europe? How confident are you that you'll be able to win against your competitors?

Catherine Chen: For now, Huawei has secured slightly more 5G contracts in Europe than in other regions. I think it's perfectly normal that Telia did not choose us. It is impossible to win over every single carrier in the world. Today, there are three suppliers of 5G equipment. No matter which supplier a carrier chooses, the supplier must do its utmost to roll out 5G networks. When these networks are finished, then you can compare their performance. As we see it, this will support healthy competition and drive improvements.

04 **We've just heard from people in the telecom industry in Norway that the trade war – I'm not talking about the national security aspect of the debate, but just the trade war – has already created some problems with supplies, given that you have American components in Huawei products. Obviously it's coming from China to the West where there have been tariffs and so forth. So I was wondering, have you experienced any problems with the trade war, either delays or tariffs or other challenges?**

Catherine Chen: So far we haven't seen any significant impact. Take 5G for example. We have taken out all US components and other controlled items from our 5G equipment. We fully comply with all US export controls. In fact, Huawei's production and shipments have never been suspended, not even for a single day, and we have never stopped fulfilling customer contracts or installing equipment for our customers, even for a single day.

05 **Given both the trade war and the national security debate going on, have you had to cut your prices or give discounts to win these contracts that you're referring to in Europe on 5G?**

Catherine Chen: No, we cannot cut our prices or offer random discounts for several reasons. First, this will

hurt the entire industry, including our peers. We don't want to destroy the market order. Second, we have to earn money. We are still facing many difficulties. Third, cutting-edge products must generate reasonable profits that can be used to reinvest in R&D. In addition, we're not just looking at 5G. We also have to invest in the future, which means investing in next-generation technologies like AI and cloud and also our partnerships with universities. If we don't make these long-term investments, it's very likely that we will lose our competitiveness 5 or 10 years from now.

06

Given what you said about ridding your 5G equipment of their American components and also in relation to the export controls, you've also launched your own mobile operating system Harmony. It almost seems like you're working to make yourself completely independent from Google or other suppliers. Can you talk about that and is that your plan to make Huawei a sort of fully independent company, so to speak?

Catherine Chen: No, we are not looking to become fully independent. Instead, we want to work with European and US companies to develop better products and technologies and bring superior services and experiences to our customers and consumers. Our stance has always been very clear. As long as the US government allows

US companies to sell us their products, we will always be ready and willing to buy from them. We don't feel we have to make everything ourselves, even though Huawei is fully capable of developing certain components itself.

Over the past 30 years, the ICT industry has been developing much faster than other industries, which would not have been possible without the open collaboration between companies from the US, Europe, and China. Such collaborations allow companies to use each other's technologies and components. If every company developed everything on its own, it would be impossible for them to stay ahead of the competition. This would simply not work from a technology perspective. Huawei cannot do this, and I don't think European or US companies can either. Huawei does not plan to become fully self-reliant. However, given the US export controls against us, we have no choice but make backup plans in order to survive.

07

But you are already making backup plans in terms of Harmony and other solutions in case you have to survive on your own?

Catherine Chen: We have put a system in place called business continuity management, or BCM. This system was designed to deal with extreme situations, which

do not just cover US sanctions, but also include severe natural disasters and other supply issues. That's the goal we had in mind when we established the BCM system more than 10 years ago.

We have a business presence in over 170 countries and regions, serving more than three billion people, and we have built 1,500 to 2,000 mobile networks worldwide. It's our responsibility to ensure the security and stability of these networks. That's why we have worked hard to build a robust BCM system, which takes various situations and contingencies into consideration to avoid any potential effects they may have on our customers.

The HarmonyOS you mentioned was not developed to replace Google's operating system. It was intended to be used for the Internet of Things. IoT operating systems require higher levels of security and lower latency compared with mobile operating systems. We have already finished developing HarmonyOS.

08 **But as far as I understand, you are planning on using HarmonyOS on mobile devices, TVs, and consumer products in addition to IoT, correct? So you are preparing for a world where you could, if you needed to, run your software on your own phones basically?**

Catherine Chen: We still want to use Google services on our phones. Currently, Huawei is still working with Google while complying with all relevant laws and regulations. However, whether or not we can continue working with them in the future depends on what the US government allows. So we haven't switched our phones to HarmonyOS yet.

You are right. If the US government prevents Google from working with us in the future, then we have to switch to HarmonyOS. The operating system is already running on Huawei's smart screens.

09 **If you look at the technology base now, obviously you have a lot of cooperation, like you say, between American, Chinese, and European companies, but you also have some distinctive differences. For example, in China, you have some large Internet platforms and social media that are very particular to China. And in Europe, in the US, you have Facebook and Instagram that are more popular, and local variety of course. Can you succeed in the West without integrating with services like Google or other popular local services?**

Catherine Chen: It will certainly take time to build an ecosystem around HarmonyOS. As for whether our operating system will be popular among users, I think

it depends on how much time has passed following its launch. In the short term, the things that you mentioned might happen. But in the long term, Huawei is confident that we can build our own ecosystem by displaying an open attitude, making it open source, and providing better technologies. For example, we have very strong phone camera technology and communications technology, and we can use these technologies to attract more partners. Why can't partners work with both Huawei and Google? This might be possible in the future. So I think we should just wait and see what happens. For example, we don't necessarily have to install Google Maps on our phones. Europe also has two very good map companies.

10 **But my question also relates to if European and American companies, either because of law or pressure, sort of reject cooperating with you, can you succeed in the West on your own, without companies like Google or a local European company on your platform?**

Catherine Chen: I don't think this will happen in Europe. In terms of 5G, Huawei has won the most contracts from Europe, which means Europe has chosen us as their 5G partner. This has already happened. In terms of legislation, no European countries have passed any such

laws, or waged any such campaigns against Huawei like the US has. This is evidenced by the EU's telecoms guidelines and the security catalog recently released by the German government. These efforts have shown that Europe is developing non-discriminatory, high standards for the telecoms industry, placing equal requirements on all companies. I think these are very positive measures, allowing consumers to use networks more securely.

Europe and the world on the whole, including the US, have become aware that cyber security should be addressed through concerted efforts, not by excluding a single company. For example, the US doesn't use our network equipment, but their networks have still often been paralyzed or attacked. This shows that cyber security should be addressed through technology and management methods, not by excluding a single company.

Perhaps the US will become more cool-headed after a certain period of time. The country seems a little anxious and is perhaps overreacting at the moment, because they suddenly realized that there are no leading 5G companies in the country. But they don't have to be anxious, because whether 5G is provided by companies from Europe, China, or the rest of Asia is not that important. 5G is just an information highway, and what really matters is what kind of cars are running on

that highway. 5G also needs various kinds of consumer applications, enterprise applications, and many others. Who builds the highway is actually not that important.

11

And I'm wondering, given all the discussions now, both with the trade war where you say you haven't been affected so far, and the political situation, has your mobile phone business been affected differently than your network business? Is there a difference between your businesses as you see it now? Do you think they will be equally affected, if say a law is passed? Will both your phones and your networks be equally impacted?

Catherine Chen: The impact on the two businesses has actually been the same from a control perspective. Both our mobile phone business and 5G business are subject to this US decision. In terms of where we have faced a larger impact, I think neither of these two businesses have been significantly affected. According to our Q3 performance numbers, both businesses saw growth. Overall, we achieved 86 billion US dollars in revenue during the first three quarters of 2019, an increase of more than 24% year-on-year. In addition, our smartphone shipments have already reached 200 million this year. We hit this number two months earlier than we did last year. We are very grateful that consumers

and customers are still choosing Huawei.

I'm afraid though that I cannot make any forecast at this time. I don't want to give you any inaccurate information, since even our founder's forecasts have proven to be slightly off. During a few interviews earlier this year, he predicted that Huawei would suffer a loss of around 30 billion US dollars. But we later saw that our losses were much smaller, so he had to change that number to 10 billion US dollars. I don't want to give you an inaccurate forecast now, so please don't ask for one. I don't want you to tease me about giving you an incorrect forecast next time we meet.

12 Norwegian carriers have been quite open about meeting frequently with our recent government. This is not just because of the current situation, but because of the ongoing discussion about 5G standards, about how they should handle the infrastructure backup systems and so forth. Obviously everybody understands that Huawei is a part of those discussions. Are you having meetings with Norwegian politicians during your visit to Norway?

Catherine Chen: Not this time.

13 **Can you talk about your meetings with journalists while you're traveling in Europe? Are you also focusing your time on carriers and clients? Is that what your trip is about mostly?**

Catherine Chen: Meeting with journalists is the top priority of this trip, and government stakeholders are my secondary focus. Our customers already have a deep understanding of us because we've been working together for a long time. However, media outlets, the general public, and government officials are less familiar with us. So from this year on, Huawei's executives are taking more time to engage with different media outlets.

14 **Last question. When do you expect to be able to, hopefully, take a breath? When do you expect the situation related to the decision from the US to be resolved?**

Catherine Chen: It's pretty hard to predict that, particularly with the Trump administration. We are not in a position to decide when the situation will be resolved.

Perfect. Thank you so much.

Catherine Chen: Thank you. I hope you can come visit us at our headquarters in the future.

Liang Hua's Interview with Al Arabiya in Saudi Arabia

October 25, 2019
Shenzhen

01

Huawei has been blacklisted by the United States and been accused of spying for the Chinese government. How do you respond to that? And what kind of guarantees do you give to your clients on that issue?

Liang Hua: The US added Huawei to the Entity List without providing any facts or evidence, which was a very inappropriate move. Our internal operations are continuing as usual, despite our addition to the Entity List.

We are currently redesigning our core products by using our own chips as well as our partners' chips, and we can ensure the supply of our core products to our customers. In particular, we have patched up all the holes in core products in our network product domain to satisfy our customer needs.

You toured our production lines and labs earlier today, so you must have seen that our production is business as usual. Our shipments have not been interrupted for even a single day. Our business continuity management and production capacity can help ensure our supply to customers.

02

You import 11 billion US dollars worth of American products every year. How will you replace this?

Liang Hua: We have maintained excellent long-term

partnerships with US suppliers, and we have been working with many of them for the past 20 to 30 years. The Entity List has restricted part, but not all, of the American products we need. US suppliers can still supply us with some products not restricted by the Entity List. For those restricted by the list, we have been developing backups for years. Following the Entity List incident, we have been switching some products to ensure our supply to customers.

As I just said, US suppliers can still supply us with some products. We have alternatives for chips and components that are restricted by the Entity List, so such restrictions don't affect the design and manufacturing of our existing products.

Thus far, the Entity List has not significantly impacted us. Actually, it has had a larger impact on US suppliers. We hope that Huawei can be removed from the Entity List.

03 **Starting from next month, that is November, US companies are required to gain pre-approval from the US government in order to sell their products to Huawei. Do you have any idea how many companies have applied to the Department of Commerce in the United States to get pre-approval? We have heard that**

there are hundreds.

Liang Hua: All suppliers can submit their applications to the US Department of Commerce. However, we don't know the exact number of applications that have been submitted. It's reported that the US Department of Commerce has received over 200 applications, but approved none.

We can now ensure the supply continuity of our products without relying on US chips or components. If the US resumes supply to Huawei, we will continue purchasing chips and components from our US suppliers and using them to design and manufacture our products.

Even if the US doesn't approve any of the applications mentioned, we can ensure the supply of our network products, from access networks and core networks to base stations, without relying on US components or chips.

I think the bigger impact relates to our smartphones, in terms of accessing Google Mobile Services and Google's ecosystem. We are working to proactively make breakthroughs in this regard. No impact has been seen regarding our smartphone sales in China. The major impact has been on our sales outside China. We are now working to ensure Huawei Mobile Services and

its ecosystem can support the sales of our smartphones and post-sales services outside China.

04 **So I know you have your own operating system for your smartphones, a substitute for Android. But building an ecosystem around this new operating system will take time. How much time will it require?**

Liang Hua: Our top priority is to build up Huawei Mobile Services (HMS) to provide ecosystem services for about 500 million active users. We have maintained a good partnership with Google. However, the US Department of Commerce is blocking Huawei from using Google Mobile Services. We have no choice but to develop our HMS and the corresponding ecosystem. It does take time to build an ecosystem. We expect that in two or three years from now, we will have a mature ecosystem through which we can provide services to our customers.

Huawei smartphones excel in many areas, such as photography, and can deliver a good experience to customers. With great mobile application services, we will be able to better serve our customers outside China.

Our phones that will be launched outside China next year may support HMS and related applications. But it may take us two or three years to develop a relatively

mature ecosystem that delivers good user experience.

05 **Due to the recent American sanctions, do you think you can still achieve your goal of being the top provider of smartphones by 2020?**

Liang Hua: It's not our goal to become the top provider of smartphones. Instead, we aim to deliver better experiences and services to our smartphone users, while ensuring our smartphone business is profitable.

Three days ago, we announced that we had shipped 200 million smartphones this year, and we expect this to reach 240 to 250 million units by the end of the year.

Our smartphone business has been impacted by the US sanctions imposed on Huawei. However, this doesn't affect our commitment to providing a holistic, intelligent experience across all devices and scenarios for our consumer business. We will improve on our weaknesses and continue developing better smartphones and other smart devices.

I believe our smartphones, and other devices that can enable smart lifestyles in different scenarios, will remain popular among consumers. That is because we provide superior products, services, and experiences to our global users. This will enable us to maintain a strong position

in the market. However, we are not proactively trying to gain the largest share in the smartphone market.

06

We have seen impressive results for the first nine months: 24% growth in revenue and 26% growth in smartphone shipments. These are excellent numbers. However, some would believe that the real effect of the US blacklist will only be seen in Q4, because you are currently using inventories of components, and you are not yet really being affected by the US sanctions.

Liang Hua: I think that during the first nine months of this year, our business has been doing well. Our company has maintained robust operations, with good financial results. From January to May, before the sanction was imposed, we maintained rapid growth. After being added to the US Entity List on May 16, we continued growing due to the momentum we'd built up previously. That's why we have achieved such good business results in the first nine months.

There may still be challenges and difficulties as we move forward, but they won't hinder our business development or the achievement of our business goals.

We began developing our business continuity management system a long time ago. This system was originally designed to ensure we could cope with

unforeseen impacts on our supply chain, such as natural disasters and conflicts.

Several years ago, we realized that the US attacks against Huawei were increasing in intensity. Therefore, we were not caught unprepared by the US Entity List. On the contrary, we have been bracing ourselves for such a situation. In Q4, our business will continue developing as planned.

We have found alternatives for US chips and components for our core products, ensuring these products are no longer affected by the supply of US chips and components. We can redesign our products by using our own chips, as well as components from other partners. We have also switched the versions of some of our products, and we can supply new versions of products to our customers.

Some say that Huawei's production and supply now depends on our inventory of components. This is simply not true.

We believe that the US's ongoing campaign against Huawei will continue for a long time, and we will work hard to ensure we can survive and thrive, while continuing to operate and better serve our customers under continued pressure from the US.

07 **Do you think that Huawei's removal from the black list is directly related to the trade discussions between the United States and China?**

Liang Hua: I don't think Huawei has anything to do with the trade talks between the US and China. We barely sell anything in the US, and it's unlikely the US will remove Huawei from the Entity List for a considerable period of time. Our top priorities are to ensure that our internal operations and management continue as usual and that we produce better products and deliver better services to our customers.

08 **Don't you think the United States is using the Huawei issue as a bargaining chip during the discussions with China? Especially when we have heard comments from the American president that they could perhaps reach a deal with Huawei, if they reached Phase 2 of negotiations, or that a deal could be signed upon the conclusion of Phase 2 of the trade negotiations?**

Liang Hua: I don't think the US campaign against Huawei has anything to do with the trade talks between the US and China. The two countries have been discussing much bigger matters. Our focus will be on how to survive and thrive under the pressure from the Entity List.

We focus on our own business development, both short- and long-term. Specifically, we will focus on how to ensure the supply continuity of our products, how to make more competitive products, and how to better serve our customers. We must resolve issues threatening our current survival and long-term development. If we cannot address these issues, we will be unable to build the foundation for our sustained, future development after making it through the difficulties we currently face.

Our R&D investment is set to reach almost 17.4 billion US dollars this year. This investment will go to two major areas. One is the development of existing products, including the design of new versions. The other is research and development of new, future-proof technologies and products.

At Huawei, we focus on how to survive and sustain long-term development. After a short-term adjustment, we believe will be able to embrace a better future, and we are already working toward this.

09 Are you negotiating directly with the US government?

Liang Hua: No. We haven't held any negotiations directly with the US government. What's more, we don't have the channels to do so. We simply focus on what we are doing.

10 **What I understood up until now is that the company can continue operating completely normally without using any American products.**

Liang Hua: Under the current circumstances, we are indeed able to provide core products to our customers without US components or chips. If the US government allows US suppliers to supply us, we will continue working with them. After all, we have maintained long-term partnerships with US suppliers and they have given us strong support.

Huawei will continue adopting open collaboration to achieve shared success. We won't succumb to insularity or close ourselves off from the outside world.

11 **Correct me if I'm wrong. There are currently four countries that do not deal with Huawei – Australia, the United States, New Zealand, and Japan. Are you worried that this number will increase, especially since the United States is actively telling its allies not to deal with Huawei?**

Liang Hua: Only the US and Australia have outright banned Huawei from participating in their 5G rollout. All countries select equipment vendors based on their own national interests and requirements for telecom

networks. Many countries have chosen to use ICT infrastructure to boost economic growth, and carriers select equipment vendors based on the quality of products, technologies, and services.

The US has been pressuring other countries to ban Huawei products, but in reality, many carriers from many countries in Europe, the Middle East, Africa, Asia, and Latin America have chosen us to build their 5G networks. Therefore, we have nothing to worry about whatsoever regarding what you've just asked about.

12 **So currently you have more than 60 contracts around the world for 5G. What are your expectations for this number? How much is the potential growth and what is your market share in 5G?**

Liang Hua: This figure will definitely grow, because we have cutting-edge 5G products and technology. We have a full portfolio of cutting-edge 5G solutions for network planning, design, construction, and operations, as well as 5G devices like smartphones. So I believe more and more customers will choose Huawei.

As for our market share, this is the result of customer preferences and market competition. We are not proactively going after a larger market share. As long as

our customers have chosen us, we will serve them heart and soul. 5G features high bandwidth, low latency, and massive connections, and is set to bring tremendous application scenarios for ICT infrastructure in the future. As the large-scale commercial deployment of 5G begins worldwide, I believe Huawei will win more and more commercial contracts for 5G.

13

You didn't give me a number for your market share.

Liang Hua: I really don't know the exact number. It changes every day.

14

Some telecom operators have said that if they had to switch from Huawei to another 5G supplier, this would delay their launch of 5G services by a year and a half or two years. Do you agree with that statement and why?

Liang Hua: Huawei is certainly ahead of its peers in terms of 5G products, solutions, and customer services. 5G is already here, and many carriers already have plans to build their commercial 5G networks. Without Huawei, a carrier's entire business plan could be significantly affected, especially those who have worked with us for a long time and are really familiar with us.

Rolling out 5G is not just about the equipment. It actually involves a whole process including network planning, design, construction, and operations, as well as devices and subsequent services. We are capable of providing superior 5G network construction and technical services for our customers.

It's up to carriers to decide whether or not they will work with Huawei, and they are keenly aware of which vendors provide the best 5G solutions on the market. So I think it makes sense that some carriers say that their launch of 5G would be delayed by a year and a half without Huawei.

15 **Let's discuss something that we have heard recently from the company. You are willing to sell your 5G technology to companies in the United States. Why would you do this? Have any companies brought up or showed any interest in this issue, and at what price might you sell this technology?**

Liang Hua: Both China and Europe have their own 5G equipment vendors, but the US does not, so we are willing to license our 5G technology to a US company. Then the US will have its own 5G equipment vendor to build its own 5G networks, so that they will no longer have to worry about cyber security. We will license our

technology on fair, reasonable, and non-discriminatory terms. Through such licensing, the company in question would get our software source code, hardware, and manufacturing technology, and they would be able to directly use our technology to develop and produce their 5G equipment.

In doing so, we actually want to make another competitor in 5G technology, which would drive Huawei to work harder and stay competitive in the market. In addition, we would be licensing our 5G technology for a fee, which would be used to help us develop 6G and other technologies and further improve our future competitiveness.

We don't really know yet how many companies are interested in this, and we have not been directly approached by any large companies. Licensing our 5G technology would indeed be very complex, and I believe those who are interested will need some time to make their decision. We cannot predict the price of this licensing deal at the moment.

16**Are we talking about billions of dollars?**

Liang Hua: We don't have the specifics yet. That all depends on the actual deal.

17 **You have 12 contracts in the Middle East. How do you evaluate the readiness of this part of the world in terms of rolling out 5G networks?**

Liang Hua: The Middle East has always been among the pioneers in terms of network construction and is among the world's first wave of 5G adopters. All Gulf Cooperation Council countries have already started 5G rollout. The Middle East has always taken ICT infrastructure investment and construction very seriously, which has led to the boom of e-commerce across the region. For example, Saudi Arabia's Vision 2030 has a schedule that coincides well with its 5G network rollout cycle.

I think the Middle East has a real demand for 5G. Its large number of young people and widespread Internet adoption provide a strong impetus for carriers to build 5G networks. 5G gives strong support for the development of broadband services, which are the very foundation of economic growth and higher living standards. With the ultra-high-speed broadband services that 5G makes possible, more entertainment services like 4K, 8K, VR, and AR will become available. In addition, 5G networks will empower other industries like oil and gas, healthcare, tourism, and smart cities.

18

So how much of your total revenue comes from the Middle East, and what is the potential for growth? Can you give any figures regarding the number of 5G contracts that you expect in the Middle East? Growing from 12 to what?

Liang Hua: The Middle East is a very important market for Huawei. We have worked very well with our customers in the region by providing them with superior products and solutions. We want to leverage cutting-edge digital technology to bridge the digital divide, bring more convenience to people's lives, and drive economic growth in the Middle East. We will remain committed to this market over the long term and deliver the best possible services.

Huawei is "In the Middle East, for the Middle East." We are working hard to make continuous contributions to the Middle East and we have an important role to play in the region. Our digital technology can help carriers and our partners in the region build cutting-edge digital platforms and robust ICT infrastructure. The infrastructure can be used to develop a wealth of applications, empower various industries, and greatly improve peoples' lives.

We have secured 12 commercial 5G contracts in the Middle East. Given our solid track record with many carriers in the region, I believe this will also be the case

with 5G.

As for the exact number of 5G contracts we will sign, I can give you an update if you visit us again next year or the year after next. I believe this number will keep increasing, but I really don't know the actual number at the moment.

19 Your company is now discussing 6G. What is that exactly? We are talking about 5G that is a hundred times faster than 4G. So what should we expect from 6G?

Liang Hua: In wireless communications, each generation of technology lasts for about 10 years. 6G is the next generation, and it is still at the very early research stage. We have assigned a research team that is focusing on the spectrum it will use, the technical issues to be addressed, its unique features, and the socioeconomic benefits it will bring. 6G will not be commercially available for another 10 years, so it will not arrive until around 2030. Research for 5G started in 2009, but commercial deployment did not begin until 2019.

Huawei is now a leader in 5G because we invested heavily and early on. Our investment in this area totaled around 4 billion US dollars from 2009 to 2019. This heavy investment led to our leadership position in 5G,

but this position is only temporary. It's still too early to predict what form 6G will take because it is still at the research and exploration stage.

20 Only 1.14% of Huawei is owned by the founder, and the rest is owned by the Chinese employees. Why do you have this ownership structure and does this mean that the company will never go public?

Liang Hua: Huawei is wholly owned by its employees. We currently have two shareholders. One is the Union of Huawei Investment & Holding Co., Ltd., and the other is our company's natural person shareholder Mr. Ren Zhengfei.

We implement an Employee Stock Ownership Plan under which employees hold virtual restricted shares through the Union. With this plan, all company shares are owned by employees, and we focus on the company's long-term business development rather than seeking short-term gains. This incentive mechanism also allows our employees to share the benefits and risks with the company, which motivates them to focus on their work and the company's long-term development.

We do not have any plans to go public and will stick with this ownership structure. In corporate governance, we follow a model of collective leadership, and we

focus on making ongoing strategic investments in key domains in order to achieve further growth.

As I just said, shareholding employees share the benefits and risks with the company, and our distribution mechanism effectively balances short-term and long-term incentives to drive our company's development. Mr. Ren has given the majority of our company's shares to employees through share dilution in order to share value with them and keep them motivated.

This mechanism was created during Huawei's development process, allowing us to focus more on long-term development without being distracted by short-term changes in business performance. Our ongoing investment in 5G is a good example. We have consistently invested in 5G for the past 10 years even though we have yet to receive any returns on these investments.

21

Before we conclude, I have to ask you about any updates regarding the case in Canada and the United States against the founder's daughter, the CFO of Huawei.

Liang Hua: Ms. Meng is currently on bail in Canada, and she has her own daily schedule. We firmly believe in her innocence, and we have faith in the fairness,

openness, and transparency of the Canadian judicial system. This case is still going through legal proceedings, so I'm not in a position to comment any further.

Catherine Chen's Interview with Austria's ORF

October 25, 2019

Vienna, Austria

01

"When the lights go out in the West, the East will still shine. And when the North gets dark, there is still the South. America does not represent the world. America only represents part of the world." This is what your founder said in an interview with CNN. So how much does Huawei need the European market or what does he mean with this quote?

Catherine Chen: I will share my understanding of his words. Over the past 30-plus years, we have deployed over 1,500 networks worldwide, serving three billion people in over 170 countries and regions. But not every carrier has chosen Huawei. No matter what choices they make, we understand and respect their choices. If they decide to work with us though, we will deliver the best possible products and services we can to help them succeed.

02

And may I ask you how much Huawei needs the European market in this respect or under these circumstances?

Catherine Chen: The European market is absolutely crucial to Huawei. There are several reasons for this.

First, our European customers have many great ideas and demanding requirements that inspire Huawei to develop cutting-edge products. Many innovations in our

industry can be attributed to the great ideas that came from European carriers. For example, Huawei's first 4G LTE network was rolled out in Europe.

Second, Europe has a very open business environment and effective government regulation, which are very important for all businesses.

Third, Europe is an important investment destination for Huawei. Huawei is working extensively with many European companies in R&D, procurement, and manufacturing.

03

You're actually on a Europe tour at the moment. Huawei board members are quite often in Europe at the moment. You have explained that there are innovative customers here in Europe, but what is your special interest in addition to or apart from selling your products? Is there a special interest in Europe?

Catherine Chen: You are right. Huawei's board members often travel to Europe. It's not just something we started doing this year. In fact, our board members have really enjoyed taking business trips to Europe over the past 10 years or so. We even seriously considered setting up our second headquarters in Europe.

In addition to providing quality products to our

European customers, we also focus on our research partnerships with European universities. From a global perspective, Europe is seeing a relative shortage of talent and students specialized in future-proof technologies like 5G and AI. Huawei is willing to work with startups and other small- and medium-sized enterprises and also sponsor training for university students to foster innovation. We want to build a basic platform for 5G and AI in Europe that drives the development of talent and our partners across the continent. Ultimately we want to help develop an industry that produces a wealth of applications here in Europe.

04

Who are your partners in Austria?

Catherine Chen: Many major carriers in Austria are our customers, including A1 Telekom Austria Group, T-Mobile, and Hutchison Telecommunications. We also provide products and services for the Austrian Federal Railways, or ÖBB, and are a major partner of many research institutes and universities in Austria, such as the Austrian Institute of Technology.

Huawei has launched multiple CSR programs in Austria over the years. Every year, we invite 10 Austrian university students to China to gain a better understanding of new technologies and the country in

general. We usually do this during their vacations so that they can meet with other outstanding students from different countries around the world. This allows them to grab a coffee together and bounce new ideas off each other.

05 **You have mentioned that the conditions in Europe, especially better regulations, are an environment where you feel comfortable and where you want to work, but what if the European regulations make it so there will be higher hurdles to enter the market? Are you prepared for even tighter regulations in Europe, which is quite possible?**

Catherine Chen: The policy environment in Europe used to be very ideal. Take the telecoms sector for example. People can now surf on the Internet freely, which was made possible by Europe's long-term commitment to openness and equality. This has allowed countries, governments, and companies to freely engage themselves in standards development if they want. That's why the ICT industry has seen globally unified standards in the 5G era. Globally unified standards mean that consumers can enjoy the best mobile networks and services at the lowest possible cost.

For example, the EU General Data Protection

Regulation (GDPR) is a very advanced policy. It clearly defines the rules, so that regardless of where a company comes from, as long as it complies with those rules, it is allowed to provide the most advanced and most secure networks. I think this is a very good practice.

You asked whether the GDPR will raise the bar for companies entering Europe. I don't think this issue is that important, because a predictable business environment is what companies are really concerned about. Companies don't want to see one conflicting tweet after another, making it unclear what rules exactly need to be followed. I think this is the real challenge for companies. Europe's regulatory policies are conducive to investment and innovation.

06 We Europeans are very proud of having data privacy as an asset. So, many people, not just the US, fear that Huawei's 5G patents could be a security threat and Huawei could misuse its market dominance. How would you respond to these critics, and which additional things could Huawei do to assure Europeans that data is protected, and that there will be no security threats provoked by Huawei as a market participant?

Catherine Chen: Look at major cyber security incidents

that have happened around the world. Has there been a single one caused by Huawei equipment? No. And if we look at governments around the world, especially the US government, have they ever found any backdoors in Huawei's equipment? The answer is also no. I think the answers to these two questions clearly demonstrate our strong track record in cyber security.

It is true that new technologies will penetrate our everyday lives and organizations, which makes it all the more important to raise the bar for cyber security and privacy protection. So what has Huawei been doing to make this happen? Well, we have made it very clear that we are committed to delivering quality products with appropriate cyber security and privacy protection. And we don't just talk the talk. We also walk the walk.

We have been investing heavily in cyber security and privacy protection. It's all in the news. I'm not sure if you are aware that last December we announced that Huawei would invest two billion US dollars to improve our software engineering capabilities, which will ultimately enhance our cyber security and privacy protection. And this was just the initial budget.

Huawei started its 5G investment pretty early. Since 2009, more than two billion US dollars has been invested in this area. In 2019 alone, we will invest about 10 billion yuan in 5G. We have an R&D team comprising

of tens of thousands of scientists, experts, and engineers. That's why our 5G products are slightly more advanced than those of other vendors. It's true that we have won quite a few 5G contracts around the world, but we are far from being the dominant player in the 5G market. It wouldn't be possible for us to abuse our position in the market.

5G is like an information highway, and Huawei is just a company that builds it. What matters most are the "cars" – 5G applications – that run on this "highway" to make lives better and businesses more efficient.

Together with Nokia and Ericsson, Huawei is driving standardization and innovation in applications for a range of industries, such as automotive and manufacturing.

We believe the number of papers and standards proposals produced by companies like Huawei is more important than the number of contracts they earn. Every year, Huawei releases 100 to 200 papers and submits over 18,000 standards proposals. Patents from companies like Huawei are essential as they allow technology to be shared. Patents represent a major way we contribute to the whole industry.

I am thrilled that you brought up 5G and would like to share with you another example. In Austria, there is

a great use case for 5G. Vienna is known as the City of Music and is home to the Wiener Musikverein, which attracts people from all over the world, including China. Current technologies cannot yet allow people from other places to watch real-time concerts held in the Wiener Musikverein. That's where 5G comes into play. When 5G networks are rolled out in China and Austria, Chinese people will be able to watch real-time concerts from the comfort of their home. This will be achieved with fast, low-latency 5G connections, AI, and augmented reality. This is what I am most excited to see.

07

As we are now in Vienna, Austria, may I ask you a couple of questions about your plans for Vienna, for Austria? What do you see as a priority area or research area to develop here in Vienna? Is it 5G or is it the use case you've just mentioned?

Catherine Chen: We are working with carriers on specific 5G use cases. It would be a shame if the 5G information highway was ready but there were no applications to run on it. That's one of the areas Huawei and carriers are working on.

Huawei is also preparing to set up a new research center here, which will mainly focus on magnetic technologies. In the future, this technology will be

applied to networks and mobile devices. Huawei will also collaborate with more universities, research institutions, and SMEs here. Only through more extensive collaboration can we use 5G to benefit both individuals and companies.

Huawei and Austria are very similar in some ways. For example, Austria ranks fifth in the world in terms of the percentage of GDP spent on R&D. Huawei also ranks fifth among global companies regarding R&D investment. While Huawei is very good at building platforms, Austria has many research institutions and SMEs specialized in certain technologies. Integrating Austrian technologies with Huawei's platforms would make Huawei products much more competitive, and at the same time, Austria's technologies would be more easily accessible worldwide. I think this is a solid foundation that Huawei and Austria can use to work with each other and help each other improve.

08 **Talking about this ecosystem, the new ecosystem, or the platform system, your founder talked a lot about the plan to install or create a third ecosystem apart from Google and iOS. It can be a special European ecosystem for smartphones, including Huawei smartphones. Have you talked with European firms about this? Have you talked with Austrian firms? Is**

there a kind of timetable? Is it feasible to create a system within a year or two?

Catherine Chen: Europe may seem to be one integrated region, but it's actually a region of great diversity, with many different countries speaking different languages.

With our technological strengths, I think Huawei is well-positioned to work with local European partners to build local ecosystems. Now, we have plans to make our key technologies, like compilers for our Ascend and Kunpeng processors, open source. We've also begun to engage with European companies and developers, and we hope that they are interested in developing their applications on our platform.

As for your question about Google, our stance and plan is to continue using Google's mobile operating system and ecosystem. The problem we are facing now is that the US government doesn't allow us to do this. That's why we have been developing our own ecosystem, in case the US government continues to block us from using Google's ecosystem.

09**And the timetable, is it possible within one year or two years?**

Catherine Chen: We can complete the ecosystem

in one or two years as you said. But the more important question is whether consumers will accept this ecosystem. We are very confident in Huawei's smartphones, because they have unique advantages, such as a long battery life and fantastic cameras. The latter has attracted many female consumers. The same is true for Europe. There are many excellent companies and map developers in Europe. The key issue in building an ecosystem is not whether it can be built, but whether consumers want to use it. So for now, it's difficult to predict when consumers will accept this ecosystem. We need to wait and see.

10

Last question. If you were to write your own success story in Europe, especially in Austria, what would you tell us in five years? So if we were to meet each other again and have another wonderful interview, what would you tell me about your success story in Europe, especially in Austria?

Catherine Chen: First of all, currently, many people view Huawei as a company based in China. I hope that in the future, people in Austria and Europe at large will see Huawei as a local company, because they'll have recognized the contributions Huawei is making here.

Second, 10 years ago, people had to think twice

before making a phone call in Europe, because it was kind of expensive. Nowadays we no longer think the cost is that high. However, we now think it's still costly to surf the web or download massive files over mobile networks. So I hope that in five years, people won't have to be concerned about price when they access data services or cutting-edge technologies like Augmented Reality.

Catherine Chen's Interview with France's TF1

October 29, 2019
Shenzhen, China

Catherine Chen: Welcome to Huawei. How many times have you visited China?

01 **This is my second time in China. Thank you for hosting us today. Four or five years ago, barely anyone in France or other parts of Europe knew the Huawei brand. Today, Huawei's smartphone shipments have exceeded those of Apple, with a staggering annual growth rate of 25%. What's the road ahead for Huawei?**

Catherine Chen: We definitely want to do better in the mobile phone sector. Our goal is to make the best phones ever. They must provide the highest quality and deliver optimal experience and performance to consumers.

02 **Is your goal to sell more phones, considering you are selling over 200 million phones every year?**

Catherine Chen: We don't just pursue sales volume. What we really want is still to make the best phones ever. The number of phones we sell is just part of the ultimate results.

03

You have worked at Huawei for more than 20 years. What do you think are the reasons behind Huawei's rapid and strong growth?

Catherine Chen: I have worked at Huawei for 25 years. It was still a very small company when I joined, but there were tremendous opportunities ahead of us both at home and abroad at the time. First, demand far exceeded supply in the Chinese market. Back then, it could cost up to 5,000 yuan to install a landline, which was the annual income of a middle-class family at that time. Huawei worked very hard to win this huge market step by step.

We started entering markets outside China in around 2000, and it was very exciting for us. For example, Huawei was, and still is, impressed by the European market. Our European customers had many new ideas that inspired our company to develop cutting-edge products. Our small cells, distributed base stations, and 4G LTE networks were all first rolled out in Europe. We then deployed these advanced products in other developing regions, like Africa and Asia. While expanding our business, Huawei has bridged the digital divide between different communities, countries, and regions. We are really proud of what we have done in this regard.

In summary, I think the most important reason for

Huawei's success is that we let customer needs and market demand guide everything we do.

04 We mainly know about the Huawei brand because of your mobile phones. In which other domains does Huawei expect to achieve stronger performance?

Catherine Chen: Over the past 30 years or so, Huawei has done best in connectivity technology. We started early in connectivity and have the most advanced connectivity technology. Our connectivity technologies, products, and services serve over three billion people across more than 170 countries and regions. Many people actually use Huawei products and services without knowing. The most noticeable connectivity technology of Huawei is 5G, which is now being discussed and deployed in some countries and regions. In the future, we plan to invest more heavily in intelligent computing and other domains in addition to connectivity and smart devices.

05 There are a number of conflicts and issues between Huawei and the US. The US has accused Huawei of using its 5G networks and mobile phones to collect intelligence and engage in surveillance. Is there any evidence to substantiate these accusations?

Catherine Chen: Please allow me to answer this question by asking some additional questions. Has Huawei equipment caused any serious or malicious cyber security incidents over the past 30 years? No. Have the US government, other governments, or third parties ever found backdoors in Huawei equipment or evidence of any wrongdoing by Huawei? No.

So, since the US government has made such accusations against Huawei, I think that they should show the evidence of this to their allies. It doesn't matter if they don't show us such evidence, but they should at least show it to their allies.

06 **So can one emphatically state that Huawei has no partnership of any kind with the Chinese government and that Huawei has never provided any information to the government?**

Catherine Chen: Huawei has never collected intelligence for the Chinese government because this would be illegal, and Huawei does not break the law.

07 **Offering intelligence to the Chinese government is illegal?**

Catherin Chen: Huawei operates in over 170 countries

and regions, and we must abide by the laws of all countries in which we operate. All countries are entitled to protect their own secrets. Notably, the US and European countries have laws that expressly prohibit illegal transfers of information and data to other parts of the world. In fact, the data is not in the hands of Huawei, but in the hands of carriers. If Huawei obtained such information illegally, that would constitute a crime. Huawei will never do something like this.

08 **If the Chinese government clearly required Huawei to hand over sensitive information, could the company refuse?**

Catherin Chen: The Chinese government has never required Huawei to hand over any sensitive information. All data and information is within the networks, which are managed by carriers.

09 **This is an important question. I'd like to ask you again in another way: Does Huawei have any ties, including financial ties, or collaboration with the Chinese government or intelligence agencies?**

Catherine Chen: We have never, ever had such ties at any stage of our development, from when we were a

small company up to the global company we are now.

10 **What you mean is that Huawei is a private company and has received no investment from the government. The US claimed that the Chinese government and intelligence agencies partially funded Huawei. Are these accusations all wrong?**

Catherine Chen: All of our shares are held by our employees. Not a single share has been held or can be held by the Chinese government or any other organization or individual. We are a 100% private company. The US government has to provide evidence to support their accusations. We started releasing our annual reports back in 2000. All of these reports have been audited by KPMG. As our annual reports show, Huawei's development capital primarily comes from its own operations and has nothing to do with government investment.

11 **What do you believe are the grounds for the accusations made by the US government? Like you said earlier, they have made accusations without providing any evidence. But why did they make these accusations?**

Catherine Chen: I'm not in a position to speculate on the thought processes of the US politicians involved, so I can only offer my general opinion.

First, the US government may have a limited understanding, or even serious misunderstandings, about Huawei. In contrast, our customers in Europe, especially in France, have been using Huawei products and services for over a decade, and they have come to understand Huawei. However, the US government has banned Huawei from the US market, making it impossible for US companies and consumers to know who Huawei really is.

Second, I think the US government is overreacting, and is overly concerned because Huawei has become a leader in 5G technology and that there is no US company in the running. The fact is, there's no need to be anxious, because 5G is nothing more than an enabling technology, and any company can develop a lot of other technologies based on it. 5G alone will in no way undermine the leadership position of the US or its companies.

12

In addition to the US, Australia has also banned Huawei from its 5G deployment. Some countries have also started to analyze the risks posed by Huawei's

5G equipment. So the US is not the only country with suspicions. How do you explain this phenomenon?

Catherine Chen: The suspicions are mainly from the US, and their propaganda campaign has been very effective. We actually reviewed the articles written about us during the first half of this year, and found that 600 attacks had been publicly made against Huawei by 150 to 160 US congressmen and other US senior officials during that period. Their criticisms and accusations were all related to those issues and arguments. What they have been doing has been very effective though. We have analyzed this extensively and communicated with other countries. We found that other governments are more rational, and they want to consider what is best for their consumers and their own countries. So I don't think other countries have such a deep misunderstanding of us.

13

As part of the US sanctions, Huawei's mobile phones can no longer access a series of applications such as Google and Facebook. This must be a problem for Huawei, because these applications are frequently used by consumers. How will Huawei solve this problem?

Catherine Chen: Certainly, Huawei still hopes to work with Google, but as you said, the US government has

blocked us from doing so. Because of this, we have to start to look for alternative solutions. Quite a few European companies have reached out to us to see if we can collaborate. So we are looking into these opportunities. If the US government continues to block our collaboration with US companies, then we will have to strive to do better ourselves and give consumers around the world a third choice.

14 **Could you please elaborate? Will these new applications replace Google services and Facebook?**

Catherine Chen: If the US government continues to block us from using these applications, then we have no choice but to work with other companies, including those from Europe, to jointly build the ecosystem. We will have to use other applications as alternatives.

15 **The Trump administration has recently proposed levying a 15% tariff on smartphones. If this takes effect, how will Huawei be affected? What will you do?**

Catherine Chen: That wouldn't have any impact on Huawei, because the US government does not allow us to sell mobile phones in the country.

16 **Is Huawei the only Chinese brand that is not allowed to sell in the US?**

Catherine Chen: As far as I know, the US government has recently imposed bans on several other Chinese companies as well. Huawei is not the only one.

17 **What are your expectations for Huawei's future development?**

Catherine Chen: We will continue to invest heavily in research and development as this is the only way that we can maintain steady, robust growth in the future. Huawei will continue to highly value markets in Europe, such as France. We have worked with European partners, including French partners, for about two decades. This suggests that Huawei will be a trusted long-term partner in Europe and in France.

I can give you a few examples. We can work with European carriers to build the world's highest quality, and most advanced and secure 5G networks. In France alone, we have about 800 people working on 5G. In Europe, we have hired more than 10,000 local people. Our carrier partners in France include Orange and Bouygues.

I can give you a more specific example on how we

can collaborate. We can embed our communications technologies into Groupe PSA's car modules. This will enable their cars to communicate better and allow the car maker to provide better services to its global consumers.

France has a rich pool of advanced technology and outstanding talent, and we hope that we can embed them into Huawei's platforms. In Europe, we have more than 2,000 employees working in this area, and 200 of them are based in France.

Here is another method of collaboration. Europe, and France in particular, has many large enterprises and renowned SMEs. They can put their products and services on Huawei's platforms, sell them to Huawei, or work with Huawei to sell those products to the Chinese market and even the global market. Dassault Systèmes, a great French company, is one of our partners. If you have visited our production lines, you may have noticed that we use their software for production management. We also work with many SMEs. In France, we are partnered with about 200 local SMEs. In Europe, we work with more than 3,500 SMEs. I believe that we will work together even more closely in the future.

18

Considering what Huawei has done, you are saying the public shouldn't be concerned about or fear Huawei?

Catherine Chen: All our partners and customers as well as consumers who have used our products and services know us well. Their experiences matter, and facts will speak for themselves.

19 **Are there any markets that Huawei wants to enter but hasn't?**

Catherine Chen: No. Even the US market has no appeal.

If Huawei was allowed to enter the US market, would you accept customers from there?

Catherine Chen: Yes, of course. Customer needs overwhelm everything.

20 **When exactly did the US start restricting the sale of Huawei products? It seems like this started before the Trump administration?**

Catherine Chen: Yes. The US has been tightening their policies slowly over time. Over a decade ago, they were already pressuring our customers by calling and asking them not to choose Huawei. Later they started campaigning against us publically. Last year was the start of executive orders with explicit requirements.

21

Did the US start doing this before they realized how far ahead Huawei was in 5G?

Catherine Chen: Yes. They started long before that.

So that suggests the US's ban on Huawei has nothing to do with your 5G, right?

Catherine Chen: The recent events are indeed about 5G, but I don't know why they targeted us in the past. There are a few possible reasons, maybe because of lobbying by our competitors, but I don't know for sure.

So the US may be keeping secrets?

Catherine Chen: Possibly.

22

What 5G applications that Huawei is working on could really reshape our lives?

Catherine Chen: Actually, I wouldn't go so far as to say that 5G will reshape our lives. It's better to think of it as an information highway, whereas previous generations of communications technology are ordinary roads.

It will bring tremendous changes to how we work and live. But in essence it depends on how enterprises from different industries create applications – the traffic on this highway.

I'd like to share two examples. First, a number of companies in China are piloting smart mining, which is a very good application scenario for 5G. Smart mining is about using 5G to enable remote control operations in coal mines. This is making mining much safer. Second, TV can be broadcast live, with no delay, with 5G technology. In the future, even if you were to interview me from as far away as Paris, it would feel like we were speaking in the same room.

But that would not be better than face-to-face conversation, which I think delivers the best results.

Catherine Chen: Of course, face-to-face conversation is better. But with 5G, we can have face-to-face conversation even when we are far away. I think it will basically become a reality within two or three years.

But 5G alone cannot make it happen. We may also need development in technologies like augmented reality (AR). AR glasses will become more stylish, not like glasses we've seen before. With these technologies, you will enjoy a more immersive experience. Even if you are far away, you will feel like you are sitting right here on this red stool. And it will make you feel real to me. We can now support very sharp resolution, 4K quality for single-eye resolution and 8K for dual-eye resolution.

23

Thank you very much for your time. I hope we have the opportunity to speak again.

Catherine Chen: It was my honor and pleasure. Thank you very much.

5G, Gear Up

Adapted from Huawei Deputy Chairman
Ken Hu's speech at Mobile Broadband
Forum (MBBF) 2019

We've been holding MBBF for 10 years now. Our first event was in Oslo back in 2010. In those days, our industry was rolling out 4G, and Huawei had just started exploring 5G. A lot has changed since then. Let's take a look at the exciting progress our industry has made in 10 years.

From 4G to 5G, we have made incredible progress.

But I want to talk about next steps. Where do we go from here, and how can we really make the most of 5G?

For me, it's about a shift in mindset. Not just for carriers, but for governments and vendors, too. 5G is a revolutionary technology, and we need to think about it in a different way. First, let's take a look at what's happening in the industry. 5G came much faster than we expected.

5G arrived faster than expected

In just one year after the standards were completed, 40 carriers from 20 markets had launched commercial 5G networks around the world.

We anticipate that, by the end of this year, there will be more than 60 commercial 5G networks.

At the same time, there has been great progress

on the device side, too. By this September, there were already more than 130 5G devices on the market, including CPEs and smartphones.

Consumers really love it

South Korea was the first market to launch commercial 5G. Let's take a look at what's happening there.

In just six months after commercial launch, there were more than 3.5 million people using 5G services.

Data consumption is increasing significantly as well.

It is impressive that data traffic has increased by three times – to 1.3 gigabytes per person, per day. The reason is that new VR/AR applications are boosting data usage.

Just 10 minutes of VR consumes 4 gigabytes of data. One minute of AR takes 600 megabytes.

With VR/AR becoming more popular in gaming, entertainment, and education, we anticipate that traffic will reach 100 gigabytes per person, per month very soon.

5G supercharges user experience

5G is helping to create an amazing user experience.

People love the speed. In Switzerland, we've already achieved speeds up to 1.5 Gbps. This is around 20 times faster than the 4G speeds available on the market right now.

People love the applications too.

In South Korea, you can enjoy a truly immersive experience in sports with 5G-powered, high-definition broadcasting.

You can use your 5G smartphone to watch a live game from any angle you want – 360 degrees. You can even make the camera follow your favorite player throughout the entire game.

This is a truly personalized experience.

New services like VR/AR are attracting more users. 5G-powered VR alone has attracted more than 1 million users in less than 6 months.

At the same time, VR/AR services are encouraging more users to upgrade to premium data plans.

Let's take LG U+ as an example: In 2018, only 3.1% of its subscribers were on premium plans.

After launching VR/AR services as part of the 5G premium plan, in just three months, premium subscribers grew to 5.3%. That's a big jump.

5G for safer mines in China

5G is not just changing our lives. It's changing the world, and it's bringing exciting new applications for all industries.

Here's an example from a mine in Inner Mongolia, China. It's a big mine that uses 30 trucks to transport materials.

The mine has been facing challenges in terms of safety, efficiency, and cost for many years.

The working environment in the mine is very dangerous.

For safety reasons, drivers are only allowed to drive up to 10 kilometers per hour. Efficiency is low. They need four drivers for each truck, so costs are quite high.

Now we can help with 5G technology. In May, Huawei and China Mobile developed a driverless truck solution using 5G.

With driverless trucks, the mine can save a lot on labor costs - \$160,000 per truck, per year. With 30 trucks, that's big money.

Now they can travel up to 35 km/h, not just 10.

Most importantly, because the trucks are driverless, people are no longer exposed to the dangerous working

environment.

This is an impressive use case for 5G technology. This is just the beginning. We can expand this kind of solution to revolutionize all vertical industries.

Real challenges

Ladies and gentlemen, we've made good progress in a short time, but to make the most of 5G, we need to work together to deal with some real challenges.

Today I would like to focus on three of them:

Spectrum

Site resources

Cross-sector cooperation

Better, affordable spectrum

Our industry is facing challenges in terms of supply and cost.

These are serious bottlenecks for 5G deployment, so I would like to make some recommendations.

First, we hope governments can provide more spectrum resources.

We need continuous bands, large bandwidth, and at

least 80 - 100 MHz for each carrier.

Governments can start actively planning to meet new spectrum demand for the next 5 to 10 years.

It's good to learn that some countries are already exploring 6 GHz. I believe that planning ahead will guide industry development and help countries gain advantages as first movers.

Second, cost. Our industry needs more support in this area as well. We hope governments can provide more reasonable cost structures for 5G.

5G will be critical infrastructure for all of society. And spectrum resources are a fundamental part of this infrastructure.

Governments shouldn't make spectrum too expensive, otherwise carriers will be less willing to invest.

In many countries, we're seeing positive examples where governments have helped lower costs and provide more flexible pricing models.

In China, for example, carriers are allowed to pay in installments, not make just huge upfront payments. This reduces their burden on initial CAPEX.

Saudi Arabia is another good example. The government cut spectrum costs by 25%. In return,

they raised requirements for carriers in terms of user experience and coverage.

This is a win-win for both sides – carriers pay less for spectrum resources and the country can enjoy earlier and better 5G services.

Regulatory support for site resources

Our industry needs more support on site resources.

The cost of site resources is still high and site availability always falls short of demand.

Regulators should step up and improve the situation by taking different measures, including opening up more public infrastructure for sharing and providing guidance on site construction.

We have seen many good references across Asia and Europe.

In Shanghai, the city government has set standards for multi-functional utility poles.

By the end of 2020, they will install these poles along 500 kilometers of road, which can be used to support another 30,000 extra sites.

That's 75% more sites than they have right now.

This will help carriers to build a strong 5G network in a big city like Shanghai.

In Germany, carriers worked with seven different ministries to identify public resources that can also be used for 5G sites, such as traffic lights, signs, and bus stops.

Together, they defined standards and released the guidelines in August. This will make co-use easier and more efficient.

In the UK, the government is working on legislation for more flexible planning regulations.

These include allowing taller towers for antennas in rural areas, so carriers can deploy less sites for better coverage.

We can all learn from these practices.

We hope to see more governments taking proactive regulatory measures to help carriers to build 5G networks more efficiently and cost-effectively.

Cross-sector cooperation

Finally, as an industry, we need to spend greater effort on cross-sector collaboration.

Because, in addition to people and households, 5G will also support applications for different industries.

This will open up many new market opportunities for our industry.

But we still have some challenges in terms of vertical industry knowledge, use cases, and business case development.

We can solve these challenges through more active cross-sector innovation.

If we can have an open mind, work together with industry partners to identify real problems and explore what works and what doesn't, that will make it easier for us to unleash the power of 5G.

Huawei is building out platforms to support cross-sector innovation on 5G. We call them 5G Joint Innovation Centers.

In Zurich, we opened the first 5G Joint Innovation Center in Europe together with Sunrise.

Now Huawei and Sunrise are working with local partners on pilot projects for smart farming, smart manufacturing, and smart resorts. All powered by 5G. These are some of the domains where Switzerland is leading.

Obviously every country has its own economic strengths. These are the areas we can focus on and combine 5G technology with industry-specific solutions to enhance their competitiveness.

We hope that these Joint Innovation Centers will help us foster a stronger 5G ecosystem for everyone. We look forward to building more 5G Joint Innovation Centers in Europe.

All for one, and one for all

5G is not just faster 4G. It will play a completely different role in our lives.

It's core digital infrastructure and a key enabler for digital transformation in many different industries.

As an industry, we all need to have a fresh mindset to drive its further development.

That includes a more long-term view from governments to create a more investment-friendly environment for carriers.

It also includes a fresh mindset for carriers to build 5G success on innovation and collaboration.

As you say here in Switzerland: All for one, and one for all!

This is Switzerland's call to action, a way of thinking and a way of life that is built on collaboration.

With this mindset, let's gear up for better 5G.

Ren Zhengfei's Interview with The Wall Street Journal

November 5, 2019
Shenzhen, China

01

Matt Murray, Editor in Chief, *The Wall Street Journal*: Mr. Ren, thank you. It's a real pleasure to be here and thank you so much for inviting us to visit you here to ask a few questions. We're very grateful. So, we just toured your European campus and saw your Russian corridors. It's a grand series of buildings you've constructed. Is there a message in this about the power of Huawei at this point in time? Or the power of China as a corporate presence at this time? It's hard for me as an American not to feel that, coming in here, this grand space and all the things you wanted us to see, is there some message in it?

Ren: To start with, I want to say thank you for this interview. Please feel free to ask me the most challenging questions you have. I will try and be very direct in my answers.

Both the Xi Liu Bei Po Cun on our Songshan Lake campus and the exhibition hall in the Jijia Center were designed by Japanese architects. Each of our product lines has an exhibition hall like this, usually in the basement. After customers tour the halls, we invite them upstairs for a coffee and a chat. These two halls were designed for big meetings. So my point is, all these artistic designs came from these architects. They have nothing to do with the culture that we want to disseminate.

We are also building another new R&D campus in Qingpu, Shanghai that is about 430 acres across. Five world-renowned Western architecture companies are participating in its design. They have come up with a modern but classical design that references the views along Chicago's waterfront. Of course, this design will be influenced by old Shanghai glamor. When it's ready, scientists from outside China will be sent there to get to work. The designs of these buildings have a lot to do with the taste of architects and their bids and nothing to do with Huawei's culture.

While your employee was guiding us down one corridor to the exhibition hall, they said that it was the "Trump Corridor". So no message in the corridor?

Ren: No. But it's very beautiful. Those paintings are the works by over 150 famous Russian artists. Due to US sanctions, they are living a difficult life. They came to paint for us because of the economic difficulties in their country. Otherwise, it was unlikely that they would have come to do this work for us. When they were having a coffee here, they joked that this corridor could be called the "Trump Corridor". They said that we should thank Trump, because even the Kremlin doesn't have such a beautiful corridor.

Do you think President Trump would ever come to see this corridor? Can you imagine him coming here and

seeing it?

Ren: I would really like to have him here. If it's not convenient for him when he's still in office, he's also welcome to come later. We will certainly give him a warm welcome. Many years ago, President Carter visited Huawei after he left office. We will also show our warmest welcome to US congresspersons, other senior government officials, and journalists. The US is a great and innovative nation.

02 Let me ask about the US. Long before President Trump, or even President Obama, there have been difficulties with Huawei in the US, under both administrations. What do you think is the root cause of the long history of complications between the US government and Huawei?

Ren: In essence, I don't think there has been confrontation between the US government and Huawei. Our company has always had great admiration for the US. We have learned a lot from its culture and management.

Since Huawei was founded, the sleepless spirit of Silicon Valley has been engraved in the hearts of all our employees. We've been working so hard to learn from the US. Many startups in Silicon Valley were started

in garages. Huawei didn't even have one of those. We started in a shabby apartment and have become what we are today by taking one step at a time. The experiences of US companies are good examples for us to keep in mind.

Over the past 20-plus years, we have invited dozens of American consulting firms, to advise us on our management. They have a clear big picture of our organizational structure and processes, which are suffused with American culture. KPMG has also audited us annually for over 10 years. If you want to know about our financial position, just check the reports for the past 10-plus years stored at KPMG.

We have been through so much over the past three decades and are used to difficulties. So I never saw being under the Obama administration as a hardship. For us, the Trump administration is also just a motivator that has forced us out of our complacency. To stay afloat, we need to row intensely. Our hard efforts have driven up revenue and profits. If we have higher profits at the end of the year, despite the fact that we are being targeted, I am worried about how the world will perceive us. Thanks to our employees' increased efforts, we are seeing much better results. So I don't feel like there is a true confrontation with the US.

03

Let me try again, how do you explain American hostility then? And for all you have been done, is there more in hindsight that you might have done or should have done given how the US government now seems to view Huawei?

Ren: I think their hostility is largely because they do not know enough about Huawei. Many big US companies started small. Companies like Amazon, Google, and Facebook were founded after us but grew faster. We were a bit conservative, so we have not grown as fast as them and need more time to grow.

If we look at the history of US companies, they have adopted an excellent approach that combines business model innovation with technological innovation, meaning they have a global business plan even before their products are fully developed. However, Huawei was not as visionary. We started in rural areas, and our horizons were not as broad as US companies'. We started with technological innovation, and our R&D staff were extremely confident in themselves. We only started developing our business model once our products were there. As a result, our growth has been slower than US companies' and that's why we do not have real business leaders within Huawei, even today.

We are still focusing on technological innovation, and we often don't know how to sell products even one or

two years after they are developed. So we still have a lot to learn. We still develop products first, and then think about how to sell them.

04 But you are now in more than 170 countries and regions, you are a leading supplier in most of those countries and regions, and you're ahead on 5G as we've seen. Do you threaten the US because of your success? What do you think?

Ren: I didn't think the US would feel threatened by this. They are very strong when it comes to scientific and technological innovation. We published an article yesterday outlining the inventions made by the US over the last 100 years and commending the US as a great country. You could go to our internal messaging board, Xincheng Community, to have a look.

The US has a very strong mechanism for technological innovation, and I don't think they will be stressed about lagging behind in a certain technology for a short while. I saw the remarks Commerce Secretary Ross recently made in India. He said the US can catch up with and overtake Huawei in three years. I believe it's totally possible.

The US has made the wrong call on 5G. They went directly for 6G because they thought it had higher

bandwidth and would be more valuable. They went for high-frequency bands for millimeter waves. They had not thought that 5G would come so quickly, and instead thought that they had enough time to make breakthroughs on the theories and technologies that address the short coverage distances for 6G. But 5G was commercialized in less than 10 years.

Huawei chose intermediate-frequency bands. This was actually also a bet for us. Most countries did not choose intermediate-frequency bands at the time, and instead went for high-frequency bands because they didn't think 5G could be commercialized so quickly.

They didn't realize the mathematical paper from Turkish professor Erdal Arikan would mean that 5G could create an industry in less than 10 years. They thought that they could make breakthroughs with 6G if the development of 5G was slower. When more transmission distance theories are developed and technological innovations are made, 6G will definitely be superior.

However, these theoretical and technological breakthroughs have yet to be made, so 6G just means higher bandwidth. But since transmission distance is very short, commercialization is still not possible. All the while, a wide rollout of 5G has started around the world.

So I don't think the US has lost to Huawei. They just made the wrong bet in the first place. Huawei bet on centimeter wave technology while the US bet on millimeter wave. If the US changes their direction, I believe they could soon catch up with Huawei, and I don't think they would attack us simply because we pulled ahead for a bit.

05 Dan Strumpf, Reporter, *The Wall Street Journal*: Thanks a lot, Mr. Ren, for meeting with us again. We really appreciate your time. On the topic of the US and Huawei and your long history of both cooperation and confrontation, you've talked, quite a number of times this year, about the idea of selling the licenses of your 5G technology to a Western, but specifically an American company. Could you give us an idea of how that process is going? Have you had any interest from any American buyers? Have you hired any investment banks or intermediaries to help you try to sell that technology? Where do you see this process going?

Ren: First, we are completely sincere in our offer to license our 5G technology to the US and are not playing tricks. Why do we want US companies to become stronger? Because the world will be more balanced with three 5G "super powers". If the US lacked 5G, we would face longstanding difficulties and Europe would also

find itself in trouble. Therefore, we really hope to license all of our 5G to the US. We will give the US whatever it wants and will not withhold anything. After licensing, we can move forward side by side with the US, and I believe we can still outrun others. This is our motivation and purpose for licensing 5G.

Second, the US cannot bypass 5G and jump directly to 6G. Every step counts in the communications sector. If one leapfrogs one step, they may encounter huge problems down the road. It would take a long time to develop technologies from scratch. The US has a lot of money, and the biggest challenge for Huawei is that we lack money. If the US gives us money to obtain our 5G license, we can use that money to fund our research and development of 5G and other new technologies and make bolder steps forward. And the US can use our technology to grow faster because they have already established a huge foundation of science and technology. We can then pursue peaceful development and competition.

No US companies have approached us yet. Once there is a need from a US company, we will ask investment banks to help with our deal.

They can call you, right?

Ren: Yes, but they haven't yet. Perhaps they are afraid

too? Afraid of being suspected if they engage with us?

I would just follow up and ask, why do you think no companies have come forth to take you up on this offer? Huawei is widely seen as the most advanced company offering 5G technology. It seems like an opportunity that companies should at least express they are interested in, but it sounds like no one is coming forward at all?

Ren: I don't know why either. They may be afraid of political suspicions if they engage with Huawei. Or perhaps they don't want to enter this market, so they don't necessarily have this need. We cannot proactively reach out to US companies because the Entity List prevents us from doing so.

06

I have to ask, actually, as you know, throughout the history of Huawei, there have been allegations of theft from big companies, from individuals, from Cisco to CNEX. We wrote about it this year, as you probably know. Why have they been so persistent over so many years? And have there ever been any challenges at the company, even in the past, that have been addressed about theft?

Ren: Allegations are not necessarily facts. Trump has received more allegations than us. We have always

respected the intellectual property (IP) of third parties. Although many large US companies pay large sums in IP royalties to us every year, we pay more to the US. If we deduct the amount of IP royalties that we receive from the amount that we pay, we have still paid more than six billion US dollars of IP royalties to the US over the years. In addition, Huawei invests about 15 to 20 billion US dollars in research and development each year, and we have over 80,000 R&D staff. We are not a world leader because of stealing. A good person can still face criticisms. We still believe in decisions made by the US courts.

07

Eva Dou, Reporter, *The Wall Street Journal*: We recently went to your hometown in Guizhou, and we wanted to know more about your background and your experiences. My parents are from Jinan, Shandong. They lived near the Baotu Spring.

Ren: The place where I grew up was rather closed off, and had little impact on my growth. I was a little naughty when I was a child, and grew up free of many restraints. It was impossible for me to develop high aspirations for the latter half of my life in such a closed-off environment. And I had access to a library only after I was admitted to university, so I read extensively, like it was a hunger. That didn't have a big impact on my life

either. Because the political background for my family was not good, there weren't great prospects for me. It was already good that I didn't develop pessimistic sentiments.

In the late 1970s, my old army unit was stationed on Yaotou Road in Jinan's suburbs, near Shandong Normal University. I feel like Jinan is partially my hometown as well.

At that time, many people were in the army. Many members of my family joined the army as well. I was reading some articles you wrote when I saw the name Jinan. You were with Troop 00229 in Jinan from 1979 to 1984. Could you describe your work there? That experience wasn't talked about too much in your official biography. You were born in 1944 but the details after that are a little vague, and there are many years you have not written about in detail.

Ren: After the construction of the Liao Yang Chemical Fiber Factory was finished, the Chinese government decided to initiate 10 big projects, and we were assigned to the construction of the Yi Zheng Chemical Fiber Factory. However, before our transfer went through, that project was terminated due to some political criticism from the central government surrounding these 10 big projects, so I stayed in Jinan. I was then appointed to be the deputy director of a construction research

institute, leading a team of just over 20 people. We were responsible for researching machines used in construction.

It seems that the research institute mainly focused on developing pressure balances.

Ren: I had used my background in mathematics to invent an apparatus for automatic chemical control systems in Liaoyang. While at that institute, I was allowed to continue my previous research, because I was a celebrity then and a heroic benchmark. That was why I could do some research irrelevant to my military unit. Unfortunately, my research proved to be unsuccessful.

When I was younger, I had received a high level of recognition from the government, so I became very ambitious and set even higher goals that were beyond my reach at the time. I was determined to achieve those goals and often worked overtime. However, the results of my research in later years were not satisfactory. That happened around the time when the government decided to downsize the army, so our project ended and I was forced to transfer to a civilian job. That project had lasted five years, and we hadn't created anything useful in that period. At that time, the computer in Shandong University was only 16 KB of memory, which wasn't enough for proper calculations. So we had to give up in the end. Looking back, I'd say we had wasted those

years.

My father studied in Shandong University at that time.

Ren: We were not far from each other. Our unit was stationed nearby in Yaotou, near Shandong Normal University. My kids were enrolled in the Majiagou Primary School nearby.

Didn't you start your career at the Guizhou 011 army base? What did you do there?

Ren: Yes. I worked in a construction company at the 011 army base, where I was involved in factory construction.

But you were an engineer, right?

Ren: I wasn't even a technician at that time. I was an intellectual, one of the "Nine Black Categories", so I had to undergo re-education. I was first a cook for two years. Then I was a worker for several years and was only transferred to Northeast China in 1974. After I had been with the army for a while, I became a technician. It was only after the Gang of Four was taken down that I finally became an engineer.

Guizhou is close to Vietnam which was at war with the US back then. Guizhou was also developing military communications infrastructure at that time, wasn't it? Were you involved in that?

Ren: What I did back then had nothing to do with communications. I was just an ordinary construction worker, just like today's migrant workers in cities. After I moved to the military in Northeast China, I worked in the Liao Yang Chemical Fiber Factory where I was responsible for building automation control systems. It was about simulation control systems, or proportional-integral-derivative (PID) controllers. This had nothing to do with either today's communications technology or computer science. I taught myself automation and control when I was a cook. This turned out to be a useful skill when I moved to Northeast China, because I understood it better than anyone else there. I didn't enter the communications industry until I started my own business in Shenzhen.

08

You talked about five years wasted and different jobs. How did you get from there to founding Huawei, and how did you find investors to back you and start the company based on the record you started?

Ren: China downsized its military on a large scale, leaving a lot of us feeling completely out of step with the times. The country was undergoing a fundamental change in its economic system, moving from a planned economy to a market economy. We had no idea what that transition meant, and we just came to Shenzhen.

We knew nothing about the market economy, either. The monthly pay for jobs at the regimental-commander level was over 200 yuan, which I thought was a decent pay. Then I found out that the average salary for ordinary workers in Shenzhen was more than 500 yuan. So, we asked for compensation from the government for the demobilization without needing to retain the political and economic benefits. The compensation was about 1,800 yuan for each, and my ex-wife and I got more than 3,000 yuan in total. I then worked in a state-owned enterprise (SOE) in Shenzhen. I didn't know much about how SOEs worked and I didn't do a good job there. I made some mistakes, so I had to leave.

I was then left with two options: going abroad or staying in China. My family didn't want to go abroad, so we stayed. This was in 1987, around the time when the Shenzhen government published a document (Doc. No. 1987 [18]) allowing private tech companies to be established. So, I took the risky move to establish a private tech company. You had to have 20,000 yuan in registered capital and at least five shareholders to start a company. So I raised 21,000 yuan with five other investors and founded the company. Though there were six of us, I was the one who actually started the company. Later, the other five investors decided to withdraw from the company and we ended up going to court to settle this. In the end, they all withdrew

with a lot of money in compensation. At that point, the company was wholly owned by me, so I had the freedom to distribute the shares to our employees. That's how the employee ownership structure we have today came about.

If I hadn't distributed shares to employees, Huawei might have remained a small company and might not even have survived this long. Maybe then I would have tried my luck with other sectors such as real estate. We'll never know. Maybe real estate would have been the best choice. I shouldn't have set foot in communications business. It takes a lot of hard work and is not actually that lucrative.

We still have the court rulings pertaining to the withdrawal of the five other investors. They're in the shareholder registry room. You can take a look at the original file if you're interested.

Just a follow-up question on that, Mr. Ren. How did you know the five individuals that helped you found Huawei? We've seen their names in your shareholder registry room. They seem to have very diverse backgrounds. How did you come to know them? Are they old friends of yours? Old friends from the military? Who are they?

Ren: No. I hadn't known them before I came to

Shenzhen. And actually, when I founded Huawei, I wasn't thinking about company ownership or the future of the company. To start the company, I had to raise a certain amount of capital and bring together a certain number of investors. These five people have never worked a single day at Huawei. If I'd had a closer relationship with them, maybe they wouldn't have cashed out so early; they might have come to work at Huawei.

In Huawei's first 10-plus years, we went through thick and thin. We were like a candle that was about to be blown out. Every day, we were struggling to survive through crises. Most people had no confidence in our company, but there was no turning back for me. I had to move on, full of confidence.

Some people, who seemed unwise to some, chose to stick with us. They believed what I told them would become a reality some day. We worked together towards that vision, and in the end it really became a reality. Today many of our employees are very rich. The reason is not that they were speculative, but that they were just not wise enough and chose not to leave.

09

Mr. Ren, I wanted to ask you about a later time at Huawei but still in its earlier days. In 1992, you took a long cross-country road trip in the US, starting in

New York, and I believe, ending in Silicon Valley with American companies at that time. Tell us what you learned from that trip. Why did you take that trip, and who organized it? And do you feel the US is a different place today than it was then?

Ren: A Boston-based company named CP, which sold power modules, invited us to visit them. We wanted to buy their power modules.

We were curious because we didn't know what the US was like. We'd thought things were very expensive there, so we took a lot of cash in US dollars with us. You couldn't get credit cards in China at the time. After we arrived, however, it turned out things were very cheap and we didn't understand why. Cash started to feel like a bit of a burden.

Funny story. One guy in our team offered to take care of our cash, so we gave most of it to him, but later he complained that his pockets were weighing him down and begged us to spend the money. So our first impression of the US was that everything was surprisingly cheap.

While we were taking a Greyhound bus, we marveled at how beautiful the bus was. While the bus was running fast on the expressway, we were thinking that China would never have such beautiful buses and never be

developed to this level.

We then took a train to Silicon Valley, but we didn't know where it exactly was. We asked people around us, but no one knew the name, because we only knew it as "Gui gu" which is how Chinese people know it. We got off the train not really sure where we were. We asked a local taxi driver and he said we were in Santa Clara, which is actually where Silicon Valley is located. After arriving at Silicon Valley, we couldn't find anywhere to visit and we didn't know anybody. Eventually, we found a guy named Zhong Peifeng who could show us around because we needed to buy some components.

We were shocked by how great and advanced the US was. As we were wondering about how large US companies were, we took a taxi and traveled around the IBM campus which produced memory back then. We wanted to know how big that campus was, so we asked the driver to just go straight and not make any turns. We would check the mileage shown on the meter. After we reached the campus, the taxi managed another six kilometers before the driver got lost. We marveled at how large US factories were. We still feel the same now.

Even today, we still admire the US. This has never changed, not even in the face of their campaign against Huawei.

10

As you know probably, The Wall Street Journal reported earlier this year on a Huawei program in Africa that helped a couple of governments spy on opposition political figures. It was part of the smart cities program. Can you comment on that program? Is it something Huawei is still doing? What have you heard since that report came out from governments around the world?

Ren: First of all, what that report said was not true. You at The Wall Street Journal should be taking responsibility for your reporting. We've had our lawyers send you a letter, but I still believe The Wall Street Journal is a great news agency. You should be more conscious of whether what you report is true or not. What you said in that report didn't happen, so there was never any real response to the accusations in those countries you claimed involved.

11

I heard that you really like European culture.

Ren: Not really. I like American culture most, which is very enterprising and innovative. I'm the type of person that is not satisfied with the status quo. I really admire the passion and ambition of young Americans. They like to do grandiose things to impress people. My wife said I am of the same type. Europe has a more conservative

culture and more relaxed lifestyle. My family likes Europe very much. My wife is currently in Milan.

Do you know HBO has a TV series about the telecom industry?

Ren: No, I didn't.

I recommend you watch it. This TV series is about the telecom industry, telling a story about the first transatlantic phone call between the King of Spain and the US President Calvin Coolidge. At that time, the Spanish government supported Telefónica because they wanted to spy on their enemies. As history shows, states often support the telecom industry because they want to spy on others, don't they? Is it like that in China? How will Huawei operate in today's historical and political environment?

Ren: Automobile manufacturers only sell their trucks to their customers. It is the drivers who decide what goods they want to put in the trucks. Manufacturers don't know anything about it. Just like automobile manufacturers, we only sell equipment. Networks are managed by telecom carriers, and we don't manage the equipment after selling it. We have no idea how carriers operate that equipment. Carriers build pipes and ensure information flows smoothly through the pipes, while we produce the iron sheets on top of the pipes. What could we do with iron sheets?

12

I understand the sensitivity, but you have become a large global company with hundreds of thousands of employees. Can you be fully confident that there are no employees affiliated with Huawei anywhere engaging in activities like those we reported?

Ren: Our internal and external compliance systems and Committee of Ethics and Compliance ensure our employees comply with our Employee Business Conduct Guidelines (BCG). We don't allow for violations. If there were any employees that did such a thing, they would be severely punished.

13

Neil Western, Asia Business Editor, *The Wall Street Journal*: On the point of selling iron sheets, I don't think that's strictly true since you spend a lot of money on cyber security and that money has been increasing over the years. Particularly since Edward Snowden revealed a few years back that the NSA has been able to use Huawei equipment to listen in on people. So where do you see the threat and how can you prevent that threat, from Huawei's point of view?

Ren: If we didn't invest in cyber security design, carriers wouldn't be willing to buy our equipment and many countries would ban us from their markets. If we didn't comply with GDPR, it would have been impossible for

us to establish a presence in Europe. Cyber security and user privacy have become integral to all commodities.

It's a lot like a car. All cars have four wheels, so why are big brands usually more expensive? Because they are safer.

I think this is a requirement that all companies today have to follow. Otherwise, it's going to be difficult to sell, not to mention selling at good prices. That's why we must meet customer requirements for security.

Networks are owned by carriers, who are subject to the laws and regulations of the countries in which they operate. Huawei is no different to companies selling trucks.

14

I want to ask you about the future. Huawei has grown into, as Matt said, a company with hundreds of thousands of employees. It's all over the world. What are the biggest management challenges facing Huawei as it advances into the future? And what are the biggest challenges that will face the company in the future after you step down? And what would you like the company to look like after you step down?

Ren: Over the past 30 years, Huawei has grown from a small company into what we are today. We have stuck

to the centralized management model throughout. Because of this, our HQ has become overstaffed and increasingly bureaucratic. If that continues, sooner or later, the company will be overwhelmed and may even collapse.

We held a meeting in Argentina discussing the pilot project for contract approvals at representative offices. One of the key objectives of this project is to delegate decision-making authority to the people who are closest to our customers, and improve the personal grades and capabilities of people in the field.

If many senior managers who really dare to shoulder responsibilities work in field offices, then the processes in back-end offices at the company will be greatly simplified. And we don't necessarily need as many managers as we currently have at HQ. This way, our HQ will become streamlined and less bureaucratic, and the burden of supporting so many staff at HQ will be reduced. We plan to complete the transformation and enable contract approvals at representative offices within around five years.

Then, we will have a smaller HQ. There won't be many senior executives sitting in the office in the future. Most of the people at HQ will be ordinary staff. It's like removing a heavy hat that we used to wear. Our management system has been reversed and turned

upside down so as to revitalize our company.

This is something we've learned from the US. This is the practice adopted by the US military. People assigned to the Pentagon may not necessarily have a bright future, while people working in the field may get promoted much faster. It's going to be the same at Huawei. Otherwise, who would be motivated to work in hardship regions?

So you don't want anybody to be assigned here in Shenzhen?

Ren: Take our employees working in Africa, for example. The value they create in dollar terms is not as high as those here in Guangdong province, but they are paid several times more than the people working in Guangdong.

15

Can any one person replace the founder at a company like this? And I ask because you mentioned American companies and that's a difficult task to pull off in many American companies.

Ren: A reason that some American companies didn't work out is that they tied the company's destiny to one single person. Then the safety of executives in that kind of position is tightly linked with the company's stock

value. So they can't take commercial flights because they think it's not safe enough, and they need to take bodyguards with them wherever they go. People like this are closely tied up in the interests of people on Wall Street. If one of these executives die, it can have a significant impact on Wall Street.

But at Huawei, I am more of a figure head. Whether or not I work in the company doesn't have a big impact on its operations. Years ago, when we wanted to initiate a management transformation, we turned to IBM for advice. IBM's consultants told me that the ultimate goal of the transformation would be to get rid of me, taking away all the authority I might have. They asked me whether I was willing to do that and I told them I was.

Over the last 10-plus years, several hundred experts from IBM have helped Huawei with our management transformation. They have laid a solid foundation for Huawei's organizational structure and management, helping make the company what it is today.

Then where has the authority gone? It is actually embedded in processes. As a result, managers at lower levels have relatively strong authority. For example, a waiter can get a bottle of cola when they want. If I want a bottle but don't have a corresponding e-flow, then I'll have to pay for it.

Therefore, in this management transformation where we incorporated the lessons learned from Western companies, one of the most successful things we've done is leaving me only ceremonial authority. Meanwhile, different parts of the organization have been given different types of authority which flows throughout the organization in a closed loop. That way, whoever takes those positions can shoulder the responsibility to support Huawei's operations.

We are trying to reverse the authority structure within Huawei and give more authority to employees at lower levels in the hierarchy. If this new structure stabilizes, it will be very difficult for future successors to change it back into a centralized one. I believe this will ensure stability at Huawei for a long time.

16 Jonathan Cheng, China Bureau Chief, *The Wall Street Journal*: You have talked about this change in the structure and the Argentina meeting was a big part of this. When you were hearing about your daughter's arrest, you decided to go to Argentina anyway. Can you talk about how important this meeting was to you? Because a lot of people would look at this decision and feel that is rather callous to just go about your business and go to this meeting when your daughter had just been arrested.

Ren: Argentina is undergoing economic difficulties, including serious inflation. Huawei's former President of the Latin America Region had started a pilot transformation project in the Argentina Rep Office. When he was transferred back to HQ, we asked the new regional president to continue the project.

The goal was to approve contracts at the rep office. In the past, these decisions were made by HQ. But the transformation has given the rep office the authority to make such decisions and also to distribute incentives. That has substantially motivated the team. As a result, the business results of the Argentina Rep Office were very good despite the unprecedentedly challenging environment there. This proved the transformation was a success, so now more than 20 rep offices are learning from Argentina and implementing this same transformation. We also expect that a large number of rep offices will undertake similar transformations next year.

With this transformation, efficiency will be improved and a smaller workforce will be needed. Therefore, in order to avoid large-scale layoffs, I approved a document only a few days ago to allocate a budget of one billion US dollars and headcount of 10,000 to our Strategic Reserve as a buffer for those employees who will no longer be needed in their current positions.

They won't be laid off. Instead, they'll be given training and take exams within our Strategic Reserve. After they become qualified for new responsibilities, they will have the chance to take up new positions and work on new projects. In this way, we want to ensure stable transformation and transition in the company, and avoid excessive layoffs.

17

Why did you choose to have that meeting in one of the areas that is so close to the G20 Summit?

Ren: That meeting didn't have anything to do with the G20 Summit. Even if we wanted to have it next to the G20 venue, we'd never find enough hotel rooms. And our meeting was held sometime later, after the summit was over, because the weather was nicer then. We had it in an upscale hotel called Llao Llao Hotel in a remote, scenic part of the country.

Once your daughter was arrested in Vancouver, what were your thoughts about the personal risk of being arrested making that journey?

Ren: It was risky, but if I acted scared, everyone else would too, right? I had to go ahead. I transferred flights in Dubai, which I think is very open.

Were you in communication with your daughter

around that time? I mean this meeting was obviously so important for you to attend that you did it just days after the arrest of your daughter, who is also your CFO. What was going through your head at that time? Did you feel anguish and were you in touch with Meng Wanzhou?

Ren: I forgot what my thoughts were back then. I was only focused on the meeting going well.

Talk a bit about Meng Wanzhou being called "Piggy". You can see it from the birthday letter she wrote to you the other day. Why that name?

Ren: When she was young, Meng was a chubby girl who could really eat, just like a little pig, so she got the name Piggy.

My younger daughter also likes stuffed pig toys, and she calls herself Piggy too. She calls me Daddy Pig, and her mom Mommy Pig.

It's such a coincidence that both of my daughters call themselves Piggy. I had never thought about why they both do this. But it's just a coincidence.

18

Huawei's problems this year have been inextricably linked to the trade fight between the US and China. Could you describe what conversations you have had

with President Xi Jinping or Negotiator Liu He over the past year, in terms of resolving Huawei's problems with the US?

Ren: The trade talks between China and the US have nothing to do with Huawei because we have virtually no business dealings in the US, and it wouldn't matter to us if the tariff increased to 1,000%. The China-US trade talks are not something I'm concerned with.

Huawei is just a bargaining chip.

Ren: If the US thinks we can be used as a bargaining chip, I'd say they probably have the wrong idea. Huawei will never be a bargaining chip, and we can live without relying on the US.

19

I can attest as I heard directly that the government, in talking about the US trade talks, took up Huawei's cause and asked me and other journalists about other things, why is the US pressing Huawei, what is the issue? The Chinese government says it's unfair, and the government does take up Huawei's cause.

Ren: I didn't know that, and I haven't seen reports on that. We don't need the US to remove Huawei from the Entity List. They may as well keep us there forever because we'll be fine without them. Having said that,

we will still embrace globalization and welcome any US company that supplies us. But even if they can't supply us, we can still survive.

To clarify, you've actually had a great year. You've been doing well and decoupling from the US supply chain through the year, and now you're saying Huawei doesn't need the US for the foreseeable future. Does Huawei plan, whatever happens in US-China relations, to proceed without the US, even if they become open to you again?

Ren: We'll never decouple from the rest of the world, and we'll continue to unswervingly embrace globalization. But this is only our ideal. If the US continues to block us from their supply chain, we'll have no problem surviving on our own. We are already not using American components in our 5G base stations, or our transmission, access, and core networks. Of course, we still have a version that can use American components.

20

There was a question related to Huawei's history. Some customers in Europe and the US are skeptical of Huawei's government background and investment coming from the government. I noticed that in the 1990s Huawei had a subsidiary called Mobeck, and it received a lot of investment from provincial and

municipal companies of China's telecom bureau. Several years later, as Huawei's business grew, those companies were kicked out. Since then, there has been no investor in Huawei. So why was Mobeck set up in the first place? And why was it closed afterwards?

Ren: First, Mobeck was a power supply company, and power supplies were a marginal product for us. Second, in 1992 China started to impose stricter financial controls. Why? China suffered from very serious inflation after the financial bubble burst in the late 1980s, so the central government implemented stringent financial policies in 1993. Banks were prohibited from offering new loans. For the loans already issued, the banks were made to recover them, even if they weren't due yet. At that time, if we wanted to run a power supply company on our own and sell it later to earn some money, we wouldn't have enough money to develop Huawei. That was why we sought investment from "tertiary-industry" companies, or labor service companies, which were governed by the telecom bureaus. These companies were all under collective ownership, and they were unique to China during that specific period of history. Such companies were set up because there was no other place to go for staff that had been deemed redundant by state-owned enterprises at the time. So they were moved to these companies just to stay employed. A few years later, when the power supply company grew bigger

with the raised funds, it was sold to a US company called Emerson for 750 million US dollars. That money was distributed to the staff and the company was disbanded. Actually, some of the staff wanted to continue running the company, but I said I couldn't shoulder that burden anymore, so it was disbanded.

21 Mr. Ren, you've seen remarkable changes over your career. Your 5G rollout is now picking up steam dramatically. What will we see in the world of technology in the next 10 years? What comes after 5G and how many more transformative changes lie ahead in the next decade?

Ren: I cannot imagine what society will look like in three years' time, not to mention 10 years. Not that many years back, very few people could have imagined that we would be able to use our mobile phones to browse the Internet. Steve Jobs, with his iPhone, basically changed the entire world. I think the Internet took off because the iPhone made wireless networks a reality. After 5G, I think the biggest opportunity will be centered on artificial intelligence (AI). What our society will look like is still something we cannot imagine at this point in time.

You've already had a tour of our production line. It

is just a little intelligent. AI is only used in several steps along the production line. Yet still, you don't see many people. In the future, there will be even fewer people after AI is more widely deployed.

We have hired many mathematicians and doctors of mathematics for our production systems. Because of their efforts, we've seen great progress in the way we approach planning, management, and scheduling. Now, scheduling takes place in the IT system to ensure production activities are non-stop, 24/7. We also have robots delivering materials to specific locations at given times to ensure that we can keep feeding the production line. This is constant production. That is the change we are seeing in our own environment. But we still don't know what society will look like 10 years down the road.

Currently, AI is used to its utmost in chip production. Right now, the US is still the most advanced when it comes to scale or the level of sophistication for chip fabrication.

If other industries follow suit and introduce AI to production, productivity will significantly increase. To adapt to future society, the most important job of every country is to improve the level of education.

Because workers will be displaced by AI, Mr. Ren?

Ren: Yes. Or they will not be skilled or knowledgeable

enough to manage AI systems.

Mr. Ren, thank you very much for your generosity and for taking all our questions. I want to thank your entire team for their hospitality and all they've done. I also want to commend the interpreter who is going to have a bad hand cramp. But thank you very much for hosting us.

Ren: I would welcome you back again the same time next year to see whether we are safe and sound. You're welcome anytime.

Ren Zhengfei's German Media Roundtable

November 6, 2019
Shenzhen, China

Ren: Good to have you here at Huawei. It's a pleasure to see you all. I am more than happy to take your questions.

01 *Der Spiegel:* So, first of all, thank you very much for having us. It's a pleasure to be here. And thank you very much for taking an entire hour for us. We appreciate it a lot. Maybe I'll start with something about these surroundings that intrigued me when I came in here. In the hallway with the staircase leading up to this room, you have a large oil painting of the coronation of Napoleon, the French Emperor. And in the back there's a large photo of the reenactment of the battle of Waterloo that basically is the demise of Napoleon. That brings me to ask: Is Huawei a rising or falling empire? And are you at war?

Ren: Those two paintings don't have anything to do with the situation Huawei faces today. They are just works of art for decoration. I saw the painting for the 200th anniversary of the Battle of Waterloo in a Belgium museum. I found it striking and bought it for decoration here. The coronation painting is a work by a family member of one of our employees, who took four years to finish it. He gave it to me as a gift and wanted me to hang it in my house. But my house isn't big enough for a painting like this. So he instead gifted it to the

company and we hung it here. These paintings do not have anything to do with our current business situation.

***Der Spiegel:* Just one follow-up. So, how would you describe the situation that Huawei is in currently? Would you describe it as a war? Because the term trade war is being tossed around a lot. And if not, how would you describe the situation the company is in at the moment?**

Ren: I would say Huawei's growth is like an exponential curve, an upward spiral. Overall, its current development is very healthy.

02

***ZDF:* I want to show you the picture, and I don't want to focus too much on simplification, but I want to show you a picture which I found on the campus. This is your picture from your company, if you can take a look. This is an old warplane during World War II which took many hits. Why did you choose this kind of picture to symbolize the situation of your company right now?**

Ren: I just happened to see this photo online after Huawei was added to the Entity List. As you can see, the plane in the photo is riddled with bullet holes, but is still flying. I feel as though Huawei is currently in a similar situation. We have also been riddled with numerous

"bullet holes", but we are still hanging in there and our airplane is still flying. We are working very hard to patch up the "holes" in our business so that our plane can continue flying and make it home safely.

We have brought together many scientists and experts responsible for working on Huawei's long-term development over the next five to ten years to patch up the "holes" in our business. We are patching up those "holes" in order to survive rather than lead the world.

We have fixed most of the "holes" in our business, so our plane is still flying. However, there are still some important "holes" that will take us the next two or three years to fully patch up. We have put together thousands of scientists, experts, and engineers who are working hard to fix those holes. I believe we can accomplish that task and turn our broken plane into a brand-new plane over the next two to three years.

ZDF: Just one more question, sir, who is shooting at you? Are these Americans who are shooting at your company?

Ren: Yes, the US government is shooting at us.

ZDF: The Americans are shooting? In which way?

Ren: They are shooting at us by adopting various means, such as adding Huawei to the Entity List and

banning us from buying and using US components and software.

03

***DPA:* The German government is debating right now if Huawei should take part in the construction of the country's 5G network. Some politicians still have doubts and say Huawei may not be trustworthy because they could pass on information, or could be forced to pass on information to the Chinese government. How do you respond to those fears?**

Ren: The catalog of security requirements recently released by the German government raises the bar on the security of 5G vendors, and equally applies to all vendors. We strongly support this approach. Facts must be used to prove vendors' security and reliability. The German government will perform evaluations, in which Huawei will happily be an active participant.

***DPA:* The Foreign Minister Heiko Maas has cast doubts that this catalog is inadequate, so the discussions seem to be not ended. And at the moment, there are many fears about Huawei. How could you stop those fears?**

Ren: We should leave that discussion to politicians. As a technology provider, our responsibility is to make good products. We are not in a position and don't have the capacity to engage in political discussions. We believe

that the German government will make policies that best serve the interests of the German people.

***DPA:* Can you ensure you won't pass on information to the Chinese government?**

Ren: We can, absolutely. We will sign a "no backdoor" agreement with the German government, representing our promise to Germany.

04 *DvH Medien GmbH:* You offered Europe that you would like to work together with Europe. Why did you offer this? Because you're so strong already. Or to put the question in a wider perspective, how important are the Western countries still for your business?

Ren: We certainly want to sell our products around the world. The more products we sell, the more profit we can make. We have to offset our R&D costs and other costs, and we need sizable markets. Europe, Africa, the Middle East, and others are all our target markets, and we should actively serve people in these markets. The African market is challenging because we cannot make much money there, but we are still striving to serve Africa.

We believe that the German government will make policies that serve the interests of the German people.

We also believe that Germany can make the best decisions based on facts, evidence, and full discussions.

If a small number of European countries decide not to choose us, we won't have any issues with them and will simply stop selling in these markets.

DvH Medien GmbH: Why do you want to work together with Germany and Europe in the area of research and development? You're strong already.

Ren: We are in an age of globalization and openness. Closing ourselves off won't lead to success. We are working with European scientists to research future-proof products. We also help Europe develop its software, applications, and industry capabilities. We should collaborate to contribute to an intelligent world. Have you visited our production lines? We use software made by Siemens, Bosch, and Dassault in our production lines, and most of our production equipment was made by Germany and Japan.

DvH Medien GmbH: Is the software good?

Ren: It's pretty good. We increased our production efficiency by integrating our AI technology with the software we got from Siemens, Bosch, and Dassault. We are open, not only to researching new products in Europe, but also to providing services to Europe. For example, Huawei has the most advanced AI-backed

autonomous driving and intelligent car technologies, and we are willing to work more closely with European companies in this area. When it comes to intelligent computing in vehicles, we can collaborate with them on every aspect of this field, or just on a few targeted aspects, like specifically on chips. We want to grow together with European companies, so we will contribute more to Europe.

DvH Medien GmbH: Why are you so strong in autonomous driving?

Ren: Since the very beginning, we have designed our chips based on level-4 autonomous driving standards. Europe, Japan, and China all followed the same standards, while the US adopted different standards. Huawei is a leader in terms of intelligent computing, so we are strong in autonomous driving.

05 ***ARD German Radio: A lot of the questions regarding Huawei in the past weeks in Germany have been not only dealing with technical details, but also with the question of trust and with the rule of law. Do you understand that in Germany there are more and more politicians who doubt that the level of rule of law in China is not equal to the level of rule of law in Germany and that's why there is a lack of trust***

towards companies from China?

Ren: If people make political judgments simply based on the country or region a business comes from, how can they tell who their friends are? How can they tell which countries are the most credible ones? The US? They don't offer products equivalent to ours. Germany should be one of those most trusted countries. But if Germany is the only country that is being trusted, how will German companies be able to go global? All companies want to go global, but they have to subject themselves to the choices made by global customers and assessments by world governments. They need to hear critical voices. Ultimately, countries and carriers will make independent choices in line with their own interests.

***ARD German Radio:* Just a follow-up, do you think that China and Europe are comparable when it comes to the level of rule of law? Because this is actually the main debate right now in Germany and this might be the reason for the decision in whichever way for your company.**

Ren: China is making progress every day in terms of the rule of law and is advancing the rule of law and the market economy. Some may argue that China is not doing enough to promote the rule of law and therefore we should not allow Huawei products to be sold in our

country. But if you are selling your cars to a country that you think is not doing good enough in terms of the rule of law, doesn't that suggest that you support the status quo in that country?

We should come together and try to reach a consensus on an approach that benefits us all. The most important thing for a company is to abide by the laws and regulations in countries where it operates.

ARD German Radio: Is there a danger that Huawei will pull its investment out of Germany if the decision is not in your interests?

Ren: We will not pull out our investment, because investment has nothing to do with sales. If you say our products don't meet your requirements and thus you won't buy from us, we can choose not to sell. We won't take it personally.

Even though the Canadian government has, at the request of the US government, detained a member of my family, I don't bear a grudge against Canada, nor have we cut our investment there. This year, we have invested heavily in Canada. We have hired more than 200 additional scientists and experts to work at our facilities in Canada. We want to help Canada develop into an innovation hub, like Silicon Valley.

People in Canada and the US have a shared heritage

and similar lifestyles, and they're geographically close to each other. So it is easier for Canada to attract some of their friends to join in with their innovation. In addition, many scientists cannot get a US visa. In this case, many international conferences can be held in Canada instead. When sufficient conferences are held in Canada, innovation there will boil over.

We separate our personal emotions from corporate development. Even if Huawei is not selected to build 5G networks in Germany, it won't affect our development in the country. At the moment, we are in the process of building a large industrial campus of around one million square meters on our Songshan Lake campus. We will buy a lot of industrial equipment from both Japan and Germany to expand our production capacity for the next year. If we don't consider our own business interests, but only consider political interests, that would be too naïve.

The way I see it, Germany really needs Huawei, technically. This is because artificial intelligence is extremely important to Germany's Industry 4.0 initiative. The precision manufacturing industry in Germany relies on data transmission systems that have a high bandwidth and low latency. That is an area where Huawei is unrivaled, and I believe customers know that and they will choose us.

DvH Medien GmbH: But you shouldn't buy from Japan.

You'll get a better price elsewhere.

Ren: Not necessarily. Japan is our strategic partner. Why not buy from them? The Japanese approach to management is different from what you have in Germany. In Germany, people are very confident. They test products only at the end of the manufacturing process. But in Japan, people are meticulous. They conduct a test at almost every step of the manufacturing process. That's why we have built one factory in Weilheim, Germany and one in Funabashi, Japan. These two factories can help us combine the strengths of both Japan and Germany and make high-quality products. Then it will be impossible that customers don't buy from us.

The challenge for Huawei, though, is that we may not have enough capacity to meet customer demand. That's why we are asking our customers in China to buy less from us at this time, so that we will have enough capacity to supply international customers. As you know, it takes time to expand the production capacity of new products.

***DvH Medien GmbH:* How do you convince them to buy less? That's very difficult.**

Ren: It is difficult to persuade them, but there's no other choice. We don't have enough capacity to meet customer demand. In a few days, China's Double 11

Shopping Festival is going to start, so I advised our Consumer Business Group to further reduce the price of our devices to lower our profits. Our profits for this year are already very high. The Consumer Business Group's CEO agreed but their supply chain department didn't. They said they had only prepared to sell 10 million units during this festival. If the price was further reduced, then demand would soar. If we can't deliver the devices to consumers, then we are just offering them empty promises.

DvH Medien GmbH: Big problems.

06 TAZ: Recently there were some positive signals from the Trump administration to try to de-escalate the trade war and reach the first steps towards a pre-trade agreement with China. What kind of hopes does Mr. Ren have if that deal should be achieved? Could that help fix the holes of Huawei?

Ren: We almost have no sales in the US, so the trade talks between China and the US have nothing to do with us. I don't pay attention to the news about it, so I am not able to answer this question.

In addition, we can solve our supply issue without relying on the US. We will survive even if the US keeps us on the Entity List. I don't know if you took any

photos when you visited our exhibition halls. When the Associated Press came here, we allowed them to take pictures of every one of our circuit boards. There is not a single US component or chip on them now. Adding us to the Entity List has not harmed us, but it has harmed US companies. They can keep us on the list or remove us as they like. But they should make that decision based on the interests of US companies. They don't need to take us into account.

07 *ARD German Radio:* **How is your daughter doing in Vancouver? And how often do you talk to her?**

Ren: I don't talk to her over the phone very often. Her mother is with her, and I think she is doing well. She is in good spirits, and she's very strong. I believe she will be able to ride this out.

08 *ARD German Radio:* **You must have a special relationship with Europe because the environment we are currently sitting in is totally European. Even the porcelain is from Germany. There is also Chinese porcelain. Why do you like this?**

Ren: I also have wine glasses, as well as hard knives and forks from Germany. I once said that if there were

no labor laws in Germany, all knives and forks in the world might have been made in Germany. With artificial intelligence, Germany will be able to shake off the constraints of labor laws, and embrace explosive growth in the future.

09 *Der Spiegel:* You have a very good sense of humor, but I would like to move to a more serious area of what you said previously, because supply is a problem. I understand that the US is not an important market for you in terms of selling, but it's an important market in terms of sourcing. I would like to know how Huawei plans to overcome the shortage in sourcing and especially the problems with Google and Android.

Ren: I can tell you for sure that Huawei will continue its rapid growth even without US supplies. But Huawei will always be willing to work with US companies. We will always embrace globalization. We will never close ourselves off from the rest of the world and seek independent innovation or self-reliance.

10 *Der Spiegel:* How do you want to deal with the fact that you may not be able to access Google products or the Google Play Store within 14 days? I understand that you're developing your own operating system, but

it's a huge environment and infrastructure, so it will take time to set that up. How do you plan to bridge that gap?

Ren: We'll see on November 20. You're welcome to come back and interview me again then.



ZDF: I want to ask you a personal question. I have read a little bit about you and you're clearly the embodiment of the rise of China. You grew up in an average family. You were hungry and you didn't have enough money. And now you're sitting here and you really have made it. In many ways, it's just like how China has risen to become a superpower. So let's look at Europe. You're talking about your wonderful products that nobody else can produce and saying how essential these products are. Then you have these dishes from Europe, knives from Germany, and these kinds of museums which only have cultural things, but you don't have any high-tech products from Europe. If you look at Europe and Germany maybe, do you have some feelings that Europe, compared to China, is a continent which is in decline, and China is a continent which is rising to become a superpower?

Ren: Actually, many high-tech products come from Europe, but many of them are not out in plain view.

For example, we use SAP software in our human resource management. We also use software from Siemens, Bosch, and Dassault in our product design, manufacturing, and supply systems. So we certainly have used lots of advanced high-tech products from Europe. Besides, in our devices, we have applied much mathematical, physical, chemical, and aesthetical knowledge from France, Germany, Italy, and other European countries. So we do use a lot of high-tech products from Europe.

Europe may need to change some of its business rules. Europe should be bolder in selling its products to China. Will Europe and China go to war? Of course not. Then why is Europe still sticking to the old rules of economic blockade? Since the US doesn't sell these products to us, it's a great opportunity for Europe to rise. Why don't you seize this opportunity and fill the gap left by the US?

Since we have enormous demand for chips, why can't Europe make a big investment in advanced chip manufacturing? Why don't you make more money when you have the opportunity? Europe has some big chip manufacturers. If you increase investment in chip manufacturing, Huawei will certainly buy more. But of course, Europe needs to ensure that no more than 25% of investment in this area comes from the US;

otherwise, you'll be subject to US rules. If you don't want investments from China, you can turn to the Middle East.

Clearly, ICT adoption is accelerating, but we may not have the capacity to meet the rising demands. I hope to see European companies like Infineon, NXP Semiconductors, and STMicroelectronics invest more to increase their production capacity. Chip production equipment is also made in Europe, and you can try to persuade these European companies to invest more in building new factories. If they don't have enough money, we can make advanced payments to support their development.

Opportunity is rare, and once it appears, European companies should seize it to speed up their development. If they miss out on this opportunity, they may fall behind.

12

***DvH Medien GmbH:* What are the differences between Western enterprises and Chinese enterprises? Are there any?**

Ren: Western companies are more outstanding. Germany and Switzerland are bywords for quality, but Chinese companies don't have that kind of brand influence yet.

***DvH Medien GmbH:* Except Huawei.**

Ren: Even Huawei is not there yet.

13 ***Der Spiegel:* The numbers that you published in mid-October for the first nine months of the year were excellent. Your business revenue was up almost 25%. How did you pull that off despite the global economic conditions as they are?**

Ren: Our growth rate already dropped to 17% in October. We have achieved growth this year because all our employees have a sense of urgency, and we have been working harder than ever before to row our boat to increase revenue and profits.

14 ***ZDF:* What I've learned after coming to Huawei is that it seems like Huawei is always considered part of national pride. The Chinese are buying more Huawei smartphones to support the company during these very hard times of the trade war. My question is, if the political decision is to reject Huawei, will there be repercussions on German cars and other industries, just like the Chinese government has done before? What are people's feelings about that?**

Ren: First, I've already criticized some of our staff, asking

them not to take advantage of Chinese consumers' enthusiasm for Huawei. We should continue to be customer-centric and give top priority to improving customer experience. Second, will there be repercussions on the automotive industry, whether it be for German or Japanese cars? I think facts speak for themselves. There are numerous German and Japanese cars still on the road in China.

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