

IN HIS OWN WORDS

DIALOGUES WITH REN

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VOLUME VIII



Entering the ICU of Wuhan Jinyintan Hospital to ensure smooth videoconferencing

In 2020, COVID-19 has turned the world upside down, posing unprecedented challenges to public health systems. On the evening of February 8, 2020, Huawei received a customer request, asking us to rapidly deploy a video communications system in the Intensive Care Unit (ICU) of Wuhan Jinyintan Hospital. The Huawei engineers that covered this area accepted the task and moved quickly. It took them just three hours to complete installation preparations and receive the training required to protect themselves against the outbreak. At 2:00 a.m. on February 9, the engineers entered the ICU, and successfully installed the video communications system after an entire day of hard work. This was critical to ensuring the success of the video conference held between the hospital and Beijing the following day.

Emerging digital technologies are playing a crucial role in the fight against COVID-19. As communications technology engineers, our job is to do whatever we can to ensure fast and stable network operations and guarantee the smooth transmission of information.



Seeds for the Future

Started in 2008, the Seeds for the Future program seeks to develop local ICT talent, and promote a greater understanding of and interest in the ICT industry.

By the end of 2019, the Seeds for the Future program had participants from 108 countries and regions. To date, over 30,000 students from more than 400 universities worldwide have benefitted from the program. Through this program, a total of 4,700 top college students have been able to visit and study at Huawei's headquarters in China.



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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A Coffee with Ren III: Digital Sovereignty, From Words To Action

November 6, 2019 Shenzhen, China

Stephen Engle: Good afternoon, friends. My name is Stephen Engle. I am Chief North Asia Correspondent for Bloomberg Television. And thank you very much for joining us for this Coffee with Ren. Again, we also welcome the international media, domestic media, and also some invited guests from various parts of the world. We'd also like to welcome to this simulcast, Bloomberg users who are on live-go on the Bloomberg terminal and who will be listening around the world to this in-depth conversation, with Ren Zhengfei and the others here on the panel.

Let me introduce them before we get into it. Here on my left we have Kishore Mahbubani. He is the former President of the United Nations Security Council. He is also the founding dean of the Lee Kuan Yew School of Public Policy at the National University of Singapore, and he was with the Singapore Foreign Service for 33 years. Thank you very much for joining us, Kishore. Also Detlef Zuehlke, he is known as the spiritual father of the Smart Factory. Like to know a little bit more about what a spiritual father is of a smart factory. Many years I believe as well at Lufthansa, the German airline. He is also a professor emeritus of the Technical University of Kaiserslautern and the retired director of the German Research Center for Artificial Intelligence at Kaiserslautern. And of course, Ren Zhengfei, the CEO and founder of Huawei Technologies, and to his left, Liu

Fei, head of 5G security research at Huawei, a scientist here for security at Huawei.

Now we are finally in the digital age, and 5G is finally upon us with China, just at the beginning of this month officially launching commercial services, and the world shall soon follow. 5G is definitely here. So my car and my coffee maker can finally talk to each other.

Billions of devices are going to be able to talk to each other. It's a platform in which commerce of the 21st century and beyond is going to be built, and, of course, we all know the geopolitical battle lines are going to be drawn if they have not already been drawn. Now as I've been promising, we can talk about every subject today for the next hour and a half. So, I want to invite all of you, when I open up the floor to questions, to please raise your hand and ask a question to our distinguished panelists. They are here for all of you.

01 Stephen Engle: Now the US-China trade war of course is not just about soybeans and saving face. It raises many questions about sovereignty, digital sovereignty, which is the title of this panel, as well as survival. We have to decide who is going to survive, who is not going to, right? My first question to all of the panelists, and firstly, to Mr. Ren – what's most at stake in this new digital battleground?



Ren: I think the digital economy will definitely go global, because there aren't any geographical borders to restrict its development. This trend of globalization is irreversible, and there is no way to split up the global digital economy. Only through globalization can the digital economy create wealth. Only through globalization can we find a way to monetize the digital economy. Looking ahead, the digital society will grow faster and be bigger than the industrial society.

By that time, people will hold all different kinds of views. Standpoints will vary from country to country, from group to group. This is understandable. It will be impossible for us to predict the future development of an emerging technology, so there will definitely be disagreement in this regard. The breadth, depth, or brilliance of an emerging technology will be completely beyond our imagination. For example, when the train

was invented, there was suspicion surrounding it. But how the train itself would develop was still predictable.

To us, how will this information society evolve in the future? It is beyond our wildest imagination, particularly with the emergence of artificial intelligence (AI). This concept was proposed some 70 or 80 years ago. But why had it never been intensively applied until today? It's because we still don't have the underlying infrastructure in place yet. Such infrastructure includes supercomputers, ultra-large storage, and super-fast connections. Fiber has managed to connect the whole world, but fiber connections are not all that convenient. The emergence of 5G might accelerate AI's application and penetration. What will happen when AI is applied extensively? It's totally beyond my imagination. But I believe one thing is for sure: It will greatly boost productivity and help people create more wealth for the global community.

But of course, it will cause some problems, and some people have brought up problems such as how AI will replace jobs. But as long as we are able to increase the total wealth of a society, it will be beneficial to the society as a whole. A lot of these problems have solutions, and the problem of how to fairly distribute digital wealth to different countries is also something that can be addressed.

Today, the whole world is talking about these problems. Here at Huawei, we are also exploring

solutions. As we still don't have an answer for this question, we have invited two gurus here today to share their views with us. I myself don't have deep insights into technology, so I've brought an assistant with me today. This scientist will use her expertise to help me answer some sophisticated questions about technology. Thank you.

02 Stephen Engle: Detlef, maybe I can come to you. Ren Zhengfei talked about increased productivity. You are an expert in automation in factories and smart factories. Can you quantify how much more productive this world is going to be? And who's going to be possibly left behind?

Detlef Zühlke: Well, first of all, I cannot really quantify it. It's too early to bring numbers for a value here. But you're absolutely right. The world is changing in that sense. There are several views on this topic. On the one hand, some people say, "Well, 5G is as fast as 4G." Why is there so much trouble surrounding it? The more important view is that we have completely new challenges with 5G, because we now have the ability to send a lot of data with a low latency back and forth, and this offers us a high degree of mobility. So, our future systems will become more and more mobile. And this is not only true for our private lives, including for riding our

bicycles, driving, or whatever else, but more for factories.

5G is now a game-changer for industry. This makes it on the one hand interesting for industry; on the other hand, it brings a possible vulnerability against threats from the outside. And this is why we have this talk here and we have several problems around the world addressing this. And I think it's very important that we have a deep discussion on this and finally, we end up with trust, so that everyone is happy with this new technology and can use it.

03 Stephen Engle: Kishore, from a former diplomat's perspective, is there a huge trust deficit right now globally, which is exacerbated by the uncertainty that the trade war has caused and uncertainties surrounding the prospect of security violations, potentially in 5G?

Kishore Mahbubani: Yes, there's a trust deficit, but the question is why. And here, there is a very remarkable coincidence. On the one hand, clearly we're seeing this remarkable technology arrive on the scene. 5G is going to transform the world, improving the human condition. But it arrives at a moment of history where we're entering a tremendous new geopolitical contest between the world's number one power, which today is the United States of America, and the world's number

one emerging power, which is China. And as we know, this is a theme that stretches back thousands of years. Whenever an emerging power is about to become bigger than the number one power, there's a moment of extreme tension. We are walking towards that.

And in some ways, Huawei has become an accidental victim. It's caught in the crossfire between these two great powers. And while in theory, we should be rushing to embrace this new technology, this distrust between the two powers means that whenever China puts forward something that's positive, the US will see it as negative. And that's why, as you know, a major campaign has been launched against Huawei. It's a bit sad, because the world may be deprived of the wonders of this new technology, because of these geopolitical competition. But I hope, after our discussion today, we will try to find ways and means of building more trust between these two powers, so that at the end of the day, new technologies like the one being produced here today at Huawei can actually continue to help the world improve.

04

Stephen Engle: Liu Fei, you're a scientist. You are an expert on security. Are those fears unwarranted? There are many worries that too few carriers and too few vendors have channels that basically move all

of our data and all of our sensitive information and, potentially, put sovereign nations at risk.

Liu Fei: I agree with you. We only have a few carriers and vendors out there and still have a huge responsibility to guarantee the security of data, hardware, and software. So this is a very difficult task. But we are only one part of the telecom value chain. We only provide equipment. The whole industry needs to fully comply with the regulatory requirements of every country and be able to meet the needs of users.

The security of the whole network goes both from end to end and throughout the lifecycle. We are doing our job to ensure security every day. As security researchers, this is what we do every day to achieve higher levels of security.

05 Stephen Engle: We all promised that we would get right to the heart of the matter. We are going to do that. I have to put out a disclaimer as the only American on this panel. Bloomberg Television and Bloomberg are impartial, so my questions are not born of any bias. I have to ask directly about some of the accusations that the United States and others have made against Huawei and potential backdoors and security threats. Mr. Ren, can you again categorically deny that there are any built-in loopholes or backdoors

in your equipment? You told me I can ask you anything.

Ren: Yes, please feel free to ask me anything. Information security will always be a very important issue. As long as there is information, this issue will exist. But information security is a relative rather than an absolute concept. For example, currently it would take a supercomputer hundreds of thousands of years to crack the most secure encryption key in the world. However, when a quantum computer is developed, this will be doable in a matter of seconds.

Many people are commending blockchain as a great technology, but its encryption may be quickly cracked by quantum computers. If there are counterfeit banknotes, their impact would be 100 euros or US dollars or several hundred euros or US dollars. But with digital currency fraud, the amount that will be at stake is unknown. It could amount to billions of dollars.

Information security and encryption issues will be around for a long time. Can we address these issues using technology? I think, ultimately, they need to be addressed with laws and regulations. We all know that fake banknotes cannot widely circulate in the market. Why? Because people who use them will get caught. The police will track down the sources, and the people who make them will be put in prison. So fake banknotes

won't widely circulate in the market since the law prevents this from happening, and we can feel good about the security of banknotes. Information security is a technical issue, but we also need to rely on the law instead of technology to ensure information security. I don't think we should blame all of our security issues on technology, just like carmakers should not have to take the blame for car crashes.

Huawei is just an equipment manufacturer, and it's our responsibility to make sure that what we produce and sell is secure. We can make this commitment to governments around the world. However, just like selling cars, after our equipment is sold to carriers, it's the carriers who manage the data on their equipment, and the data must be managed in strict accordance with the laws of relevant sovereign states. We abide by all of the laws of the countries where we operate. This is how we ensure information is secure and reliable. At Huawei, we have two responsibilities. First, we will never do anything that is out of line. Second, we support the oversight of all governments in regards to security.

06 Stephen Engle: How do we then reconcile the fact that there are concerns out there? Whether it's Chinese or American concerns about trustworthiness. I know the German government is looking at their security catalog

and possibly putting in a test of trustworthiness. Is that necessary? Or is that imperative because of the amount of data that is being transferred around the world and will be transferred around the world? Data is now said to be the new oil, so it's sensitive and there are sovereignty issues.

Detlef Zuehlke: You are absolutely right. I think we are discussing all these because we recognize the value of data. This is why we look for security issues in that specific case. On the other side, I think we are looking now into the future and we see just one side of the problem. We always had security problems. We have security problems each day, with Windows, for example, and with browsers. So, one can attack all systems already and especially those hackers from states around the world which are highly equipped with knowledge to intrude our systems. So, what we're discussing here is just to ease or just to prevent such security problems from a new technology coming up. This is necessary but also I think in the future we will always have to face this situation that somebody tries to get into the systems – not only related to the Huawei equipment but to the complete system of hard- and software and everything else that is there. So, we should always see the complete system when we want to improve the security of the system.

On the other side, we now address new application fields where the vulnerability is much higher and perhaps much more dangerous. Like in autonomous cars or in telemedicine applications, for example, we require a much higher level of security than perhaps just when exchanging personal data with Google or Facebook or something like this. So, this is why we must have this discussion and this is also why we have to have these rules which we developed in Germany, and which hopefully would be also applied all over Europe.

So, let's wait for it. I think this will help us to develop trust into this technology. But trust also needs checking the compliance with the rules given permanently.

Stephen Engle: Kishore, do you believe that there needs to be and it's possible to create global standards?

Kishore Mahbubani: Yes, but I think it's important to understand that this is not a technical discussion. What we're having is a political discussion. And, for example, you're right, there have been allegations that Huawei, through its equipment, is creating a backdoor, and through the backdoor, the Chinese intelligence agencies can go in and gather information. That's one allegation that is made. Like you, I'll try to be fair to both America and China, and it's also a fact, we know this, and what's known to us all is this: The National Security Agency of the United States can listen to every phone conversation

in the world. It's public information now.

So, clearly you have, you know, not just one power that may be spying on countries, lots and lots of powers are spying. So, if at the end of the day, that's the core issue, then frankly, the best way to resolve this is not to have a headlong clash between the United States and China, which is what's happening now. We should try to have a kind of global discussion. And I, as you know, having served as ambassador to the UN for 10 years, actually believe that multilateral rules and processes are the best way to resolve this, and the best way is to engage the whole world in the discussion. Because the whole world, all 7.5 billion people, are going to be affected by these rules and regulations and the consequences.

I want to mention here that I believe actually that Europe has a very critical role to play here, because Europe has got the advantage, on the one hand, of clearly being trusted by the United States, as many European states are allies of the United States. But on the other hand, Europe is big enough and strong enough to, in a sense, pass independent judgments. I'm actually quite impressed that even though Australia and New Zealand have all joined the United States and said "no, no, no" to Huawei, Germany is still open and Germany is saying "yes, let's see whether this can work or not." But if we can all agree on a set of rules on what

we can or cannot do with this technology, let's all abide by these rules and we'll have a better world. I think it can be done.

But at the same time, there's one hitch about multilateral rules. It ties all countries, including the most powerful countries like America and China. They have to be bound by these multilateral rules too. That's why the United States is a bit wary of these multilateral rules and processes. Even though I actually believe that it would be in the long-term interest of the United States to strengthen these multilateral rules.

Stephen Engle: We've seen the undermining of these multilateral bodies, whether it is the World Trade Organization or others, by current administrations, which shall go nameless. But the end result of this kind of protectionist or super competitiveness in 5G is a bifurcation of the next evolution of the Internet. You can have a Western Internet, and you can have a Chinese Internet. But it's very difficult to establish a global body for privacy, standards, and data protection. Would you agree?

Liu Fei: I think we cannot allow a bifurcation of the Internet. Global standards are very important. During the process of data flows, we need to have the same protocols. But different services have different requirements. This is like you and me, who have different

tastes when it comes to food, houses, or colors. So, we cannot make unified standards for all applications. The same is true for security. We need to make connections secure based on global standards, but we can provide diversified and personalized security solutions for different service scenarios.

07

Stephen Engle: Mr. Ren, some in Europe, including under this *GDPR*, General Data Protection Regulation that was enacted in May 2018, seem to be calling to avoid monoculturalism on equipment purchases, on gear. So, not to put all the eggs in one basket, or have one particular vendor, because that could occur, even if it's not currently a fact, there is at least the perception that there could be malfeasance going on. What are your main strategies when you're trying to sell gear to a particular country and they are saying, "No. We're going to buy from many different vendors, not one," even though you might be the cheapest?

Ren: We believe the German government and parliament will choose the policies that are best for the German public. We also believe Germany will discuss and analyze the situation based on facts and evidence, and make significant decisions that are in the country's own best interests. We understand that the German government wants multiple vendors to participate in

network construction. If there was a wall built with bricks that came from multiple countries like the US, Japan, China, and some Arab countries, and those bricks made by different countries were placed in parallel to thicken the wall, then if an attack destroyed a brick, it might not be able to destroy another brick behind it, and the wall wouldn't be brought down. This is why I support the German system favoring multiple vendors. It helps ensure cyber security.

Germany has released their proposal concerning digital sovereignty. I think the proposal is reasonable. When something new emerges, there is always someone who is the first to figure it out. We believe we live in an open society, but certain protections are required. Germany has proposed that data should remain within national borders and proposed this idea of digital sovereignty.

In the past, we focused on physical boundaries, or what we call borders. Anything inside those borders, the land, the crops on the land, and mines below, they all belong to owners inside those borders. However, unlike physical assets, digital assets aren't bound by borders. Therefore, how will we allocate these digital assets? How will we determine which country should or should not benefit from them, and exactly how much each country should benefit? We need to discuss these issues. Discussion doesn't push us backward. We should

work together on these issues. Germany has proposed a solution that treats multiple vendors equally. This morning, Professor Zuehlke told me that security means following rules. I was impressed. We operate in different countries, and we need to comply with regulations in those countries. Different countries have different regulations, and compliance is a must wherever we operate. Otherwise, we wouldn't have survived.

Germany has proposed an information network jointly built by multiple vendors, and that sovereign states should have the right to manage the information in that network. I agree with this idea.

08

Stephen Engle: In the six months or so since the blacklist was released, how have you adapted and built your business and not necessarily relied on the United States?

Ren: First of all, I would like to extend our gratitude to our US suppliers for their support and help over the past 30 years. We wouldn't have achieved what we have today without them. We are always willing to work with US suppliers to explore the future and serve humanity. We will always embrace globalization.

We are able to survive on our own even if US suppliers are not allowed to supply us because of the Entity List. We don't want to operate this way though,

relying on only ourselves to survive. I don't support completely independent innovation or complete self-reliance. Given the current situation, we have to rely on ourselves, but this is just a short-term measure, not a long-term policy. Currently we don't see any problem in our development. I suggest we all meet again next year, and then we will be able to see whether Huawei is truly robust.

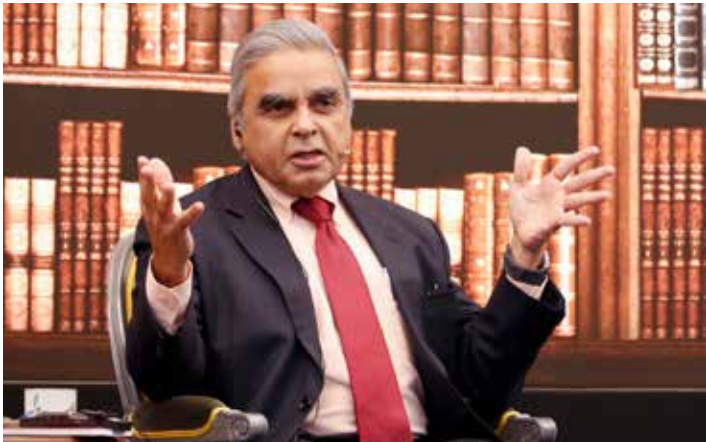
During the first half of this year, we hadn't been subject to any sanctions, so of course we developed fast. Because of that foundation, we continued developing well even after the sanctions were imposed. At this point, we have basically finished our transition to different product versions that don't need US components. Next year will be our first complete year under US sanctions. If Huawei continues developing well over the course of the next year, it proves that we've overcome the risks and survived. Of course we want to remain a world leader in our field in the next three to five years, but we just haven't got a theoretical foundation powerful enough to ensure that. We are still adjusting and improving our capabilities. We hope we can still be a leader in the future.

The US sanctions have taught us a lesson and reminded us that we can't be complacent, and that we must work hard. After we doubled our efforts, we eventually found that our revenue and profits grew more

than we had expected. We will make some reasonable adjustments so that our development will be more stable in the future.

Kishore Mahbubani: The decision on the Entity List you could say was a technical decision, but it was more of a political decision, wasn't it? As you know, I just finished a book on US-China relations.

Stephen Engle: This one *Has the West Lost It?*



Kishore Mahbubani: No, no, no, that's my previous book. And the next one is *Has China Won?* The decision to put Huawei on the Entity List was part of a broader, in a sense, geopolitical decision that was made by the United States. "China is becoming too strong too quickly, and we should find ways and means to slow down China's rise." And there are some people in Washington, D.C., some policymakers, who genuinely believe that the

best way to slow China's growth down is to have a kind of decoupling between the US and Chinese economies, because if you have a decoupling, the US, the stronger economy, will keep growing, and China, the weaker economy, will go down. That's the strategic calculations, I think, behind the Entity List. But I think those people who made that decision are very unwise. It's hard to imagine, if you look at where China has come from. In 1980, in purchasing power parity (PPP) terms, at that time, China's GNP was 10% that of the US. Today in PPP terms, its GNP is bigger than that of the United States. So, having come such a long way, it's hard to believe that because you created an Entity List, China's growth is going to slow down. So, I think that was a strategic mistake on the part of policymakers in Washington, D.C. That's why I think they should reconsider their strategy, and ask themselves, "What is really going to work in this new world? Will isolating China work? Or will cooperating with China work?"

Another critical thing is this: The rest of the world isn't going to be passive bystanders. They'll do their own calculations of what's in their interests. We toured Huawei laboratory this morning. There are amazing breakthroughs. The rest of the world wants to embrace them. I can't imagine the rest of the world walking away from Huawei or walking away from China because of a geopolitical decision made in Washington, D.C. That's

why I hope through a discussion like this, people in Washington, D.C. will begin to think again. "Is it wise to adopt this strategy? Why not try something else?"

Stephen Engle: You seem to be dismissing the security concerns.

Kishore Mahbubani: Well, there may be security concerns, but why not discuss them openly? My understanding is that Huawei is ready to talk to the US and say, "Okay, come to tell me what your concerns are and what can be done." And why not, in a sense, have a three-way discussion between Europe, Huawei, and the United States? Then we can try to figure out what the real concerns are and what can be met. But remember my earlier point, we do know that the United States is also picking up all of the information. So it's not just the Chinese. The question is, why don't we agree on a common set of rules which will restrain all countries, including China and United States, equally?

09 Stephen Engle: We'll talk about surveillance capitalism. It's already happening in the United States, whether it's Google or Microsoft mining your data. You tick the box that you allow them to collect your data. Where is that data and how is that data used? You lose your individual digital sovereignty. But on the security front, I want to bring you back in, Detlef and Liu.

When we're talking about the robustness of security in building, say, factories, we know 5G will create this platform for critical industries to communicate and to be more efficient, whether it's energy, transportation, banking, or other very critical sovereign interest industries. When you say setting up a smart factory on a 5G network in a critical industry, how do you make it safe?

Detlef Zuehlke: Look into our airplanes. You need redundancy to reduce risk. So this is I think the only way how you can convince people of real security in high risk systems. So you will use 5G for primary communications, but you may have perhaps other technologies like cables as a redundancy. Nevertheless, also when you use cables you will face the same problems, because you will always have the possibility of having security leaks somewhere.

We have learned how to deal with all these risks over the last couple of years. We have to accept that we will never have 100% security, and I'm pretty sure that we will also not have 100% security in the future. But we have to gather experiences with these new technologies. Now we're just at the edge of introducing 5G. I think, perhaps in two or three years, we'll have much more confidence about the level of security of the system. Not at 5G itself but in the complete environment of a factory, for example. And finally as I said already, we also need

trust, we need rules, and we need confidence when we collaborate.

So, we have a very close collaboration for years already with Huawei in Germany, especially with their research lab in Munich. They do research in Germany. They send us their newest versions of their software and equipment, for example, so that we can test them in our factory testbed. By such an intensive collaboration we develop trust. And based on this trust we can make our decisions in the future and support the decisions of our industrial partners as well. I think this is very important. Not just ban one company and say "this one is bad and the other is good", but really try to develop trust in the network of partners. I think this is one of the major advantages of our smart factory network with our 53 partners.

Stephen Engle: Liu, from a security perspective, how do you generate that trust through verification and, you know, also opening up your equipment, whether it's open source, to show that there are no backdoors, and that your equipment cannot be hacked by other parties.

Liu Fei: All vendors are subject to equipment verifications, not just Huawei. Take Common Criteria, or CC, for example. It has set different security levels, and each of the levels is clearly defined with regards to how to

conduct evaluations and security audits at both the code and process levels. For production processes, for example, there are higher level security checks such as penetration testing. So the security requirements vary with each security level.

For example, the security level of the SIM card in your mobile phone can be EAL4+ or EAL5, which are high security levels. If carriers purchase SIM cards that reach EAL5 or even higher security level, subscribers like us won't need to worry about our SIM card being cloned. Even if it is stolen, our personal data won't leak. There are different levels of security, depending on what security level vendors need for their products and services. Nevertheless, all vendors need to pass verifications. In addition to CC, there are new security review schemes in the telecom industry such as GSMA's Network Equipment Security Assurance Scheme (NESAS) and 3GPP's SeCurity Assurance Specifications (SCAS). All equipment vendors must pass relevant verifications or reviews as long as users demand it.

10 Stephen Engle: Ren, can you talk a little bit about the consumer side of the business and where you hope to take that business? I know you're going to have a folding phone coming out momentarily if that hasn't already hit the market. As part of this blacklist, your

Mate 30 newest phone can't have the Google suite of applications. How does that affect your sales globally? And how does that spur you to do more R&D into your own operating system, HarmonyOS?

Ren: It will definitely have an impact on us. Huawei and Google have an agreement, under which we have been working together to create a global ecosystem. Being cut off from US suppliers does have an impact on us, but our smartphones have other functions. There are many other features that are also valued by consumers. Though Google Mobile Services are not pre-installed in our Mate 30 smartphones, we have still sold these phones in large numbers. This shows that consumers value what we offer. The Entity List will have a greater impact on our overseas markets and we surely will see a certain degree of decline in our business there.

In order to fight back, we have brought together thousands of outstanding scientists, experts, and engineers who were originally tasked with exploring the future of our world. They are now fixing the holes in our bullet-riddled airplane to restore our competitive position. We are still working hard on that.

Stephen Engle: Your president of corporate strategy told Bloomberg yesterday that your smartphone shipments in 2020 will grow 20% and that you could get up to 50% of the market share domestically in

China for smartphones. Is this evidence that the Trump measures against Huawei are not working?

Ren: I haven't been briefed on the 20% growth, but this year we will make 240 million to 250 million units and our Consumer Business Group hopes to see significant growth next year. It may not pan out, though. We don't know what will happen next year, so we cannot accurately predict the growth of our consumer business for the next year.

Stephen Engle: Worst-case scenarios? Best-case scenarios?

Ren: The worst-case scenario is what we have now. We are now in the most difficult period, and things will get better.



Stephen Engle: Wilbur Ross, the US Commerce Secretary, told Bloomberg Television over this weekend that new licenses for Huawei could be forthcoming very soon. So we'll have to wait to see if that comes out. Now, maybe I'll open this up, the further conversation here. Because of the situation that Huawei finds itself in, whether it is with Android and some of the licensing there, or on the chipsets and software side, companies like Cadence and Synopsys, in the tech world right now, is there too much reliance on these US vendors? And will this, if it is a bifurcation,

will it do the opposite, maybe spur domestic creation of these kinds of software and products?

Kishore Mahbubani: I'm not the technical expert on this panel. But I do think that if you take a long-term view, is it wiser for the United States to have a China that is completely independent of the United States, or a China that still continues to rely on the US in many areas? And the result of having a lack of strategy in Washington, D.C. is that the United States is pursuing a course of action that may be damaging to long-term American interests, if you see yourself as a long-term strategic player. So, it is actually in America's interest to see a continued Chinese dependence on American technology and American companies, because at the end of the day, that gives you some degree of leverage. If China is completely independent of the United States, you have little or no leverage. This is why I was actually very puzzled by the decision not to allow Google into Huawei phones. Because, if I may be politically incorrect, Google at the end of the day is an American Trojan horse. Because once you are hooked onto Google, you're now hooked onto an American information ecosystem. And that delivers to you not just American information, American values, and American perspectives. You see the world through Google's eyes. And here is Huawei, offering the United States the opportunity to put an American Trojan horse into a Chinese phone and

America is saying no. That doesn't make sense. It's not logical. But that lack of logic shows the lack of long-term strategic thinking. That's what puzzles me about the people in Washington, D.C. Because you're really shooting yourself in the foot when you say, "Don't take Google".

Stephen Engle: Ren, you're smiling, I think you agree?

Ren: I very much agree with what Mahbubani said. The US is at the top of the global tech sector, or let me put it this way: The US is at the top of Mount Everest – the highest mountain in the world – while China is lagging behind and is at the foot of the mountain. When the snow on the top of Mount Everest melts, the water will flow down the mountain and irrigate the crops and pasture at the foot of the mountain, and sustain the cattle and sheep. In Mahbubani's view, the melted water flowing down the mountain will be ultimately shared at the foot of the mountain. Mahbubani said there are values involved, while I believe that there are at least interests at play. This is globalization, where all parties share benefits. If the US doesn't allow the water to flow down the mountain, people at the foot of the mountain may dig wells to irrigate their crops. In that case, no money will be paid to the US. When the US does not allow its companies to supply us, they will definitely be replaced by others. Other countries should work hard

to replace the US in the supply chain. This is a great window of opportunity for them, but why are so many countries still taking this wait-and-see approach? They must take action now!

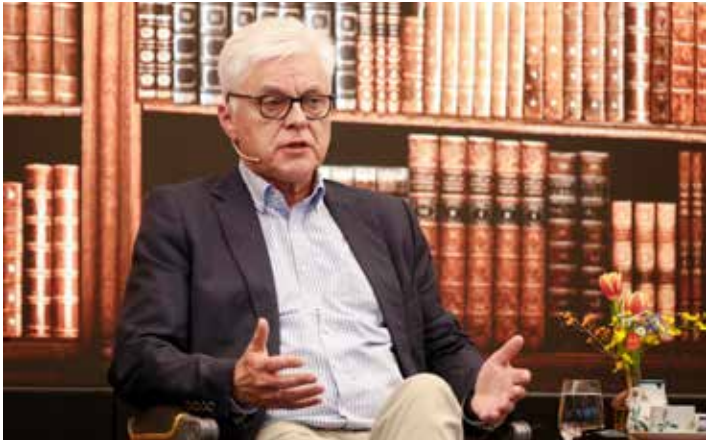
Whether China can take action is still an open question, because China has a weak industrial foundation. Though it has a large industrial GDP, it is mostly made up of low-value-added products. This is not the case in Japan or Europe – Germany in particular. So why don't they dig wells to get the water now? If the water doesn't flow down Mount Everest, it will freeze because it is cold up there. Then Wall Street will not earn any money!

Stephen Engle: Is that an agreement? Is there a surveillance dividend paying out to people mining the data and selling it onwards?

Detlef Zuehlke: Actually not what I think. We are, in some ways, squeezed between these two fighters right now and we have to think how to get out. I think no one is really happy about what's developed over the last years. Ultimately the US industry, I guess, they are more for open borders. We were all benefiting from such open borders and open markets and customers were able to buy the best phones around whatever they want, whether they buy an Apple phone, a Huawei phone, or a Samsung phone. Now, when we close these borders,

we will all lose. So, we have only losers. My hope is that within the next week or so – and the first signs look quite nice and the stock market is going up, already – there will be an agreement between China and the US, and I hope that the agreement will also cover the problems about Huawei. Perhaps also setting up rules, and checking these rules by independent organizations. I think as soon as we have such an agreement, we can solve the real problems and not discuss this stuff.

Stephen Engle: That phase-I agreement though might not include Huawei.



Detlef Zuehlke: Maybe not in phase-I, but it's the beginning. So I think it's more a trade war, a nonsense trade war. And I think it's completely wrong to expect that it's easy to win a trade war. It's not. All will be losers of a trade war. So we need a solution in order to prevent this. This is now, especially before the elections in the

US, the right time to move forward into the direction of having an agreement that is beneficial to all parties. Perhaps not a final agreement in the next two weeks or so, but to have a first agreement and everyone is recognizing we're moving again towards a collaboration. Everyone will benefit from this and this will be good for the world economy.

12 Stephen Engle: Now Kishore, earlier today you asked a question directly to Ren about how to deal with perception and reality. There's a reality that they've been blacklisted, but the perception is they are potentially a security threat. If I may ask your question to Ren Zhengfei, how do you combat that perception gap?

Ren: People form their perceptions based on their own experiences. Over the last 30 years, Huawei has been committed to our value of being customer-centric. This has helped build up customers' trust in us. Even though the US has imposed harsh sanctions on us and US politicians have been flying around the world to pressure other countries to ban us, individual carriers continue to buy from us. This shows that, although the US uses its power to suppress us, the trust our customers have placed in us is even more powerful.

Stephen Engle: Focus right now is on security. Where

are you putting most R&D in and where should Huawei be putting most of its R&D on in security?



Liu Fei: All of us security researchers are doing objective research on topics such as very detailed protocols and parameters. Standards organizations in the telecom industry are responsible for setting standards, such as 3GPP. They have a group focused on security called SA3. This group usually has about 60 delegates and has had seven meetings so far this year and last year. Sometimes, this group discusses 200 or more items at these meetings. As I just mentioned, we need to work together to find the best solution to solve security issues. All delegates in this group, equipment vendors, carriers, and us are all working very hard on this aspect. We are not politicians. We are focused on making the telecommunication network more secure.

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Stephen Engle: I want to ask you, generally speaking, how damaging to global trade and to the perception issues has this trade war between China and the US been? And Mr. Ren, are you an optimist or a pessimist that this can be resolved?

Ren: I haven't looked that deeply into the China-US trade war or paid any attention to the news about it. We have been focused on mending the bullet holes in our airplane. We have virtually no sales in the US, so no matter how the trade war evolves it will not have an impact on us. We don't really care about how the trade war is solved. We are instead focused on customer demands and thinking about how to provide our customers with the best services during this difficult time.

We've actually seen an increase in customer visits by 69%. What is the main purpose for their visits? They come to see if we are still alive. First, they want to see if there are still employees taking the company shuttles to work in the morning and to home at the end of the day. Then they want to see whether our canteens are full during lunch and dinner time, and whether our employees still have enough money to buy good food. Then they want to see whether our production lines are still running 24/7 to meet customer demand. After customers visit and talk with us, they learn more about

our current situation and come to understand that our products, even without US components, are very good. This encourages them to buy more goods from us. That is why the crisis hasn't ended up being what some people had imagined. Before they visit, customers don't fully believe us when we say everything is fine, but after their visits, they are more confident. "Why is Huawei strong enough to survive?" We have proven we can survive even without US components. Because we have dug many "wells" at the foot of the Himalayas, and used the water from the "wells" to irrigate our crops, we believe that we can survive. However, "digging wells" is not our ultimate purpose. We still hope there will be snow water coming down from the Himalayas, because the Yellow River and Yangtze River still need it to irrigate the crops in China. Counting on our own is only a short-term solution. In the long run, we want to work with the US to achieve shared success.

14 Stephen Engle: If the United States does not issue licenses for you, you have 28% of global network gear sales, can you maintain that and build that without the United States or its allies? If it convinces Germany, the UK, and other Western economies not to purchase your gear, is 28% something that is sustainable? Or can you cope with that?

Ren: I think these allies all need to consider their own national interests. The US adopts an America First policy, which means they will take all money for themselves while keeping other countries, say Germany, waiting. Germany won't just wait while the US is making money. I think every country has to consider their own national interests. It's impossible for them to blindly follow the US without considering their own national interests.

If the US does not supply us, we will figure it out. But I cannot tell you the details until the time is right. I cannot tell you at the moment because I'm not authorized to do so. So, when I am, you can come and interview me again, and I will tell you.

Kishore Mahbubani: On the trade war, I think it's important to understand, as I said at the beginning, that the trade war is just one small part of a much larger picture of the geopolitical contest. You have the economic dimension, the political dimension, the military dimension, the cultural dimension, and the primacy dimension. It's a multidimensional struggle. Each has got its own dynamic. I do agree with you that the likelihood is that there will be some kind of temporary truce or trade settlement between the US and China.

But that's not necessarily driven by reason and logic. It's driven by the political logic of the fact that President Trump has to go for reelection in 2020. To go

for reelection in 2020, he needs a good economy and a good stock market. To get a good stock market, he wants a good deal for the US. That's the kind of political logic that's driving this.

But your question, the larger long-term question is whether Huawei can survive if indeed the United States sustains its campaign and gets its allies to join it and so on and so forth? I'm sure, and I think Mr. Ren has admitted this, it will create some shocks and difficulties for Huawei. But I cannot imagine China will allow Huawei to collapse in the face of a dedicated American onslaught. There's too much at stake here. So, clearly, a tremendous amount of resources would be poured to make sure that Huawei doesn't fail. Because at the end of the day, this is not just about Huawei; it's about the larger contest going on between the two. And Huawei, in some ways, unfortunately, I feel like it's a chicken caught between two elephants. Here are the two elephants jostling and this chicken is trying to run around and get away from the two elephants. So, I wish Mr. Ren success, but I did tell him that he should be careful. These two elephants are jostling a lot. And Huawei has got to be agile and careful as it manages a very difficult environment.

Detlef Zuehlke: Well, I think it's not only a threat for Huawei; it's also a threat for the worldwide economy. Because when the market leader and so their equipment

is no longer available, the others will not be able to bring their products on the market to serve the market demand. Nokia and Ericsson are too small to take over all supplies for the world market. So we will not have enough equipment to build up 5G networks over the next years. This will deeply influence our economy. So I think this will be really a "Black Friday" again, if such a thing will come up.

Stephen Engle: It's more than the issue of cost. They're more scalable and cheaper. For some of the regional carriers in the US and elsewhere, they've relied on more affordable equipment.

15

Audience: I am from Munich Germany, from a company doing artificial intelligence. First of all, thank you for having us here and also your interesting talk about the two elephants. Very impressive. I have a bit of an old-fashioned question. You are sitting in front of a wall of books. You're writing the book of the future, but what old books would you read to do your strategic deep thinking?

Kishore Mahbubani: I'll tell you what book I would read. Apart from this book [*Has the West Lost It?*], I would read Machiavelli's *The Prince*, because we are in the middle of a remarkably complex, and long-term competition between two great powers. And managing

such situations, having been a student of geopolitics for 48 years now, there's a certain logic in geopolitics. You can sometimes predict things that are happening. Because it's the logical thing that could happen. That's why it's important to understand that geopolitics has been around a long time. A man who actually understood the wisdom of geopolitics very well was Machiavelli. And even though many European leaders deny that they have read it, if you go to their bedrooms, underneath the pillow, you will likely find Machiavelli's *The Prince*.

The answer to my question: Everyone thinks the answer to 'has the West lost it?' is yes. The answer is no, the West has not lost it, or more accurately, not yet. I suggest that we are entering a new era of human history and this is staggering. Very briefly, from year 1 to year 1820, for the last 2,000 years, the two largest economies in the world were those of China and India. It's only in the last 200 years that Europe and America have taken off. So, the past 200 years of world history, when you view them against the backdrop of 2,000 years, have been a major historical aberration. Now all aberrations are coming to a natural end. So it's perfectly natural to see the return of China and India.

When this happens, it's important for the West to adjust strategically to this new environment. So that's

why, in the book, I suggest what I call a "3M" solution. Minimalist: the West should interfere less in other countries; Multilateralist: which is what I have been emphasizing, using the global multilateral system in the UN; and the third "M" is Machiavellian.

16 Audience: Mr. Ren, you've talked about licensing Huawei's 5G technology to American companies. There are reports saying that Huawei has started negotiations with many companies on this. Has there been any progress? How much will it cost for an American company to get this license, and when will you announce the result?

Ren: So far, no American company has started to negotiate this with us. We've talked about this with some intermediary agents, but they cannot make decisions for big American companies. This is a very big decision, and also a very difficult one. Big companies must think about it very carefully. When there is a suitable American company that wants to discuss with us, we will find an investment bank as the agent to help us negotiate contract terms and the details of the license, but there's no progress to speak of for now.

17 Audience: In a recent interview, you said that you had never used your veto right. Based on Huawei's history

and the current situation, under what circumstances would you exercise this right to veto a decision by your team? To put it another way, we know that you believe in the philosophy of *huidu*. But I believe that you must have your own red lines. Like I observed just now, every time the host asked a sharp question, you never answered it directly, but talked about it in a flexible way. But in the end, you always firmly stated your own opinion and answer. So given Huawei's current situation, what would be a red-line issue for you?

Ren: My media manager is sitting right there. She will give me gestures to tell me what I can say and what I can't. Although I have the veto right at Huawei, it is actually a Sword of Damocles hanging over managers' heads. This sword must be used very carefully, as it has the potential to badly hurt many people.

So I always communicate with my colleagues when I have opinions. When we communicate, they can oppose me and refuse to accept my opinions. There are many posts criticizing me in our Xinsheng Community online forum. Huawei's Blue Team, an adversarial wargame team within the company, once wrote an article called *The Ten Sins of Ren Zhengfei*. After I read this article, I posted it to the Xinsheng Community right away. It was a very good article, so why not share it with all our employees?

The one-vote veto right cannot be used casually. This right was set to expire at the end of 2018, after which I would no longer be able to use it, and our executives could manage the company based on their respective authority. However, some events outside the company made us aware of the risk that a vote by all employees might end up accidentally setting the company down the wrong path. We must prevent this risk through an appropriate mechanism. So we decided to keep my veto right.

This veto right can be passed down, but not to any of my family members. Instead, it will be passed down to a Core Elite Group consisting of seven people who will be elected from former board members, supervisory board members, and senior executives. They will exercise the veto right together and can only serve limited terms. They cannot serve in the group for a long time because they would be quite elderly then. They cannot exercise the veto right if they are not of sound mind, either. In short, this veto right will not be easily exercised, but its very existence will ensure a balance in the company's internal management. So generally speaking, we have a sound management system.

Stephen Engle: You're not hinting at retirement, are you?

Ren: No, I'm not hinting at that.



18

Audience: New Zealand is a very small country, but we're going through a very difficult period, because the government of New Zealand has decided that 5G is not on their agenda and not acceptable, which is very disappointing I have to say. My question for Mr. Ren is simple. It's not Machiavellian. It's more Marcus Aurelius. Why doesn't Mr. Ren speak directly to Trump? Trump is a bully and it seems to me that bullies actually can be confronted face to face better than negotiations in secret rooms. Why don't you just go to Washington and have it out?

Ren: We've lent three 5G base stations to help broadcast a sailing competition in New Zealand. Later, our PR department will give everyone a CD. This CD is a recording of the performances at China's National

Day Evening Gala, which involved about 60,000 performers. The filming and broadcast of these fast-changing performances went off without any freezing or smearing. You all work in the media sector, so you'll know that 5G's low latency is also of great significance to the media.

As for having a conversation with Trump, I don't have any channels to do that. I don't know his phone number, and I don't know how to contact him. Of course, if you can help me to contact him, I'd really appreciate that.

Stephen Engle: Would you meet him and talk to him?

Ren: Of course.

Stephen Engle: Donald Trump, if you're on live, go right on Bloomberg.

Ren: He has a big airplane and can fly to China anytime from anywhere. I don't have that. My airplane is made of paper, and it may fall down when it rains.

19 Audience: A US institution recently said that China's 5G dominance could lead to an Internet split with the US. The moderator just expressed similar views. This US institution also observed that the rise of companies like Huawei has increased the reliance of their Western allies on Chinese services, and that this could cause an increasing number of security threats. As 5G

commercialization gathers steam, the US has become more anxious and felt more pressured about the need to vie for 5G leadership. Will this create new pressure on Huawei in terms of securing new 5G orders? Just now you kept saying that Huawei has been patching up the holes in its airplane. Which holes are still not patched? What's your opinion about the split of the Internet?

Ren: The role of 5G has been exaggerated. In my opinion, 5G is like a tiny toolbox, but some people portray it as if it's an atomic bomb or a global threat. I don't think this is the case.

Our 5G technologies are based on a math paper released 10 years ago by Turkish professor Erdal Arikan. Once we found out about it, we had several thousand experts, scientists, and engineers analyze it. During this period, the US was doing the same thing, but instead they were analyzing a math paper published in the 1960s by a professor who had once taught Mr. Arikan.

In terms of 5G, we pursue joint development and friendly cooperation.

The US has chosen millimeter wave technology as their 5G standard. Compared to centimeter wave that we have chosen, millimeter wave has a much larger bandwidth. However, it also has some weaknesses. For example, its coverage is very short. The US didn't expect the 5G era to arrive so quickly, and they might have

thought they could develop theories and technologies to fix the coverage problem for 6G. The reality is that 5G has created an industry in less than 10 years, and large-scale deployment has already started.

Huawei has chosen centimeter wave technology, which uses intermediate-frequency bands. In the past, when companies were determining which technologies to choose from, Huawei actually made a bet by choosing intermediate-frequency bands. Few other companies made the same choice.

Huawei chose centimeter wave, but we also worked on millimeter wave. Just two major technology groups predicted that centimeter wave would be the future, and surprisingly, we made the right bet. Millimeter wave technology won't see widespread use in the near future, and neither will 6G. Huawei is also a leader in 6G. We estimate that global 5G adoption will take 10 years. The bandwidth of 5G will be more than enough for its users, so it remains to be seen whether there will really be any need for a new cellular system.

In this 5G race, Huawei wasn't born a winner. We simply made our bet by developing technology along multiple paths. We bet on centimeter wave, which happened to be the right way.

China has allocated spectrum for 5G based on centimeter wave bands, and this is the best approach.

Countries in the Middle East have followed in the footsteps of China in the way they have allocated their spectrum, and they are making aggressive investments in 5G. The Middle East may very well become the pinnacle of 5G.

During this process, though, we were not sure if we would succeed in the end. Sometimes we are a bit like a blind cat that has happened upon a dead mouse. Over the past three decades, we have been very fortunate to stay in touch with the times and meet the needs of society.

20

Audience: China has a vision of being a cyber superpower and influencing governance norms, as well as forging these concepts overseas. Where do you place yourself on the spectrum of a free and open Internet and the China model which places restrictions on flow and infrastructure?

Ren: First and foremost, I think the Internet has driven social progress. Many companies – Google, Facebook, Amazon, Microsoft, and Chinese Internet companies – have driven social progress and narrowed the digital gap. These days, even people who live in dense forests can access the Internet and stay connected with the rest of the world. We need to recognize the benefits the Internet has on our society.

During an interview I had yesterday with *The Wall Street Journal*, a journalist mentioned that she had visited my hometown and my childhood house. I told her it was not my childhood house. After China began implementing the reform and opening up policy, the local government allocated that house to my parents. The house that I really lived in during my childhood was even worse than that. She said the house she had seen was worn down, and the living conditions there were quite poor. Her opinion of my hometown is similar to how we now perceive some African countries, as the living conditions there are often quite poor.

Let me tell you this: When I was young, what I wanted most was to eat a steamed bun. At that time, we didn't know what the outside world was like. Nowadays, children living in rural areas can connect to the outside world. This is one of the many benefits the Internet has brought to us.

Having said that, the Internet has also, unfortunately, aided the spread of harmful content. All countries need to manage such content. Doing so will be good for young people and for social stability and development. If the Internet is left unregulated, it could easily cause problems. I think the Internet itself is neutral, and I haven't heard of the model you mentioned. What matters most is that people are encouraged to work hard and create more wealth. When people become

better-off, they can afford to buy more cups of coffee and enjoy them. And as you have seen, there are many cafes on our campus.

I think the Internet has facilitated a lot of positive progress, and we should recognize that.

Stephen Engle: I have talked to a lot of foreign companies that have done business in China. In June 2017 the Chinese government enacted the cyber security law that would basically require foreign companies and local companies to house their data on Chinese citizens domestically in China. Is that something that sends the wrong signal to the world that the government is not giving your digital sovereignty to the individual or to individual companies?

Ren: We are not an Internet company, so we haven't paid particular attention to the rules and laws related to Internet companies. Different countries may have different understandings about this. I'm not in a position to comment on this matter.

Liu Fei: As a communications network company, we focus on telecom infrastructure equipment. The data is handled at a different level, so we don't know how the data goes through the equipment or where it goes.

Kishore Mahbubani: The regulations in the cyber world are in a very early stage. No one quite

knows how to manage them. If you want an ideal outcome, the ideal outcome is some kind of global multilateral understanding, but the global multilateral understanding, for example, an international convention, has to be negotiated among all 193 countries. And all 193 countries have to agree on the convention, and they have to abide by it, right? Here, as we know, the United States is the leader of the Internet by far. But the United States as we saw it, as a country, is reluctant to accept any kind of multilateral rules that will govern American institutions. Take Facebook for example. Facebook is selling political advertisements in the UK. If you listen to the TED talk by Carole Cadwalladr, you'll find Facebook advertisements led to Brexit in some ways. Now would the United States agree that this should stop, and that you should have global regulations of such things? That's the critical step we have to take. We have to all agree that perhaps given the damage of the influence that these organizations have, they should be subject to global multilateral regulations. And if we can take that first step, it's actually a big step forward.

Detlef Zuehlke: We have the same discussions at home in Germany as well. There is an interest from industry to keep their data in the meantime on European servers. There was just a group founded in Germany and also supported by the government, to have such a German cloud available. The only big difference is it's not

enforced by our government but it's just an offer to the industry and the industry can decide on this. Concerning the other part of this discussion, I think as long as we have a democratic government, it's completely impossible to block communication like the Internet. So, this will not work. I'm also sure that perhaps in 20 years, we will have a different situation here in China as well, as people get wealthier and the telecommunication is getting better and becomes more uncontrollable.

21

Audience: I'm a professor of Global Family Business from Munich, Germany. I help families navigate complex times, when they go through tragic or complicated times like almost losing their legacy, which may happen in this case. Maybe an observation and suggestion. In Machiavellian terms, if the prince cannot speak to the prince, send the children to speak to each other. They might have different interests. In the case of the President of the United States, the children run the business. You also have children that run the business. Maybe they can find common terms. And in conclusion to that, what would be your advice, Ren, for all the young people in the room, how should they position themselves as the next generation? What should they read? What should they learn? And how should they think about the world based on your incredible business legacy that you've built? Thank you.

Ren: First of all, I think young people should keep an open mind. They are in a much better position than we were at their age. When we were young, we could only access the information in libraries when we were in university. At my high school, we didn't even have a library. Young people today have access to all kinds of resources online. So I think they should first keep an open mind.

Second, they should learn how to cooperate with others. Individuals cannot achieve much alone, so we need cooperation to advance together.

Third, young people should persevere and work hard. Don't be too clever, jumping from one idea to another without ever finishing anything. In the end, you'll end up squandering your youth without achieving anything. If you are persistent and dedicate yourself to do solid work on one thing, then you'll probably succeed. Don't think you're talented in all areas, and spend too much energy over here and over there. That makes it difficult to achieve any real success.

Stephen Engle: Maybe you should go to Hong Kong and give a speech to the children there. That's for another discussion. Ladies and gentlemen, if you could put your hands together for Ren Zhengfei and the distinguished panelists.



Ren Zhengfei's Interview with The Globe and Mail

December 2, 2019 Shenzhen, China

01

Nathan VanderKlippe, Asia Correspondent, The Globe and Mail: Thank you very much for agreeing to meet me again and speak with me as a Canadian journalist. Today, as you know, is the one-year anniversary of the arrest of Ms. Meng. So I'd like to ask you some questions about what happened a year ago. Because we know some of what happened in Canada, but we know less about what happened in China, and with you personally, around her arrest.

So can I ask first, Ms. Meng stopped traveling to the US two years before her arrest in Canada. Did Huawei know, beginning in 2017, that an investigation was underway and that she was at some risk?

Ren: Meng Wanzhou's case seems to be part of a political campaign planned by the US. Huawei has been excluded from the US market for a long time. As our business shrinks in the US, we have virtually no business presence there. Even if our senior executives went there, there wouldn't be any business to deal with. So why would they go? There is no need for them to be there.

Nathan VanderKlippe: So it was not to avoid an arrest in the US or to avoid legal problems in the US?

Ren: No. It was because there was no business for these executives to deal with there. Several years ago, we started treating the US market like a small market, with all decision-making authority delegated to our local

office there. This was because the sales volume there was too small.

02 Nathan VanderKlippe: After she was arrested in Vancouver, can you tell me a little bit about how you found out about that, where you were at the time, who told you, and how that news came to you?

Ren: When she was arrested, I was in China and hadn't started off to Argentina yet. The legal team of the company reported to me that she had been arrested, but we were unaware that this was all part of a big campaign from the US. We thought the case came from some misunderstanding.

Nathan VanderKlippe: You were supposed to travel to Argentina yourself. Were you also scheduled to fly through Canada?

Ren: No. I had planned to transit from Dubai to Argentina.

Nathan VanderKlippe: So she didn't call you directly; she called the legal team at Huawei. Do you know why that was, why she called the legal team and not you?

Ren: It was a legal issue. So of course, she should reach out to them first.

Nathan VanderKlippe: Do you remember, after you

found out, what your instructions were to the legal team? What did you tell them? What goal did you set for them?

Ren: I didn't give them any instructions because I do not manage them. I only told other members of our senior management that we should get legal counsel for this case and engage with Canada through local legal means. We are determined to take legal measures to address this issue.

03

Nathan VanderKlippe: You said at first you thought it was a misunderstanding, it must have been some sort of legal misunderstanding. At what point did you think it could be a more important event, not just for Ms. Meng, but for your company?

Ren: On May 16, the US added us to the Entity List and started to sanction us. From that time on, we have realized that they are using Meng Wanzhou as a bargaining chip to attack us.

Nathan VanderKlippe: So you thought this was an accident or misunderstanding for five months, from December to May?

Ren: Yes, that's what I thought.

Nathan VanderKlippe: So at that point, how did you think this would be resolved?

Ren: Getting legal counsel.

Nathan VanderKlippe: **And after May, what did you think was the path to resolution? How did that change your thinking in terms of how long this could last and how to resolve it?**

Ren: Ever since Huawei was added to the Entity List in May, we have believed that the US's ultimate goal is to crush Huawei, and that Meng Wanzhou's case is just the beginning. We believe that we must step up our efforts to adjust our internal structure and build a robust product development system to adapt to an environment in which sanctions are imposed on us. We have decided to do everything we can to ensure our survival. This is the only way for us to find solutions. So since May, we have made some changes and worked hard to ensure our business continuity.

04 Nathan VanderKlippe: **Ms. Meng traveled, before her arrest in Canada, to six other countries that also have extradition agreements with the US. After Canada, she also planned to go to Mexico and Argentina, both of which have extradition agreements with the US. In your view, why did Washington pick Canada as the place to arrest Meng Wanzhou?**

Ren: I think you'd have to ask Washington. If we had known Washington made that decision, Meng Wanzhou

would never have gone to Canada in the first place, and we could have avoided dragging Canada into the current difficult situation.

Nathan VanderKlippe: I think there's a belief in Canada that perhaps the US saw Canada as a weak country that will do whatever the US asks it to. Do you think that could be part of the reason Canada was selected here?

Ren: I don't think so. I think Canada is a great country. The citizens of Canada and the US share common ancestry, but I believe they differed in their treatment of the Indigenous peoples. I think Canadians are great and noble people, and being polite and respecting rules does not mean they are weak.

Nathan VanderKlippe: So do you see Canada as having been compliant with the rules in this case? Because Canada has suffered consequences from the perspective of exports, from the perspectives of some Canadian people. Do you think those consequences are unfair for Canada?

Ren: Please allow me to clarify. I am not talking about whether Canada follows rules in Meng Wanzhou's case. I simply wanted to share my belief that Canada and the US have treated the Indigenous peoples differently in previous centuries, and that I think Canada is a noble country.

Nathan VanderKlippe: Do you believe Canada was merely following the rules here or do you believe that Canada was also politically interfering in this case?

Ren: I think the US has clearly intervened in this case, and Canada has suffered losses because of that. I think Canada should ask Trump for compensation.

Nathan VanderKlippe: After Ms. Meng was arrested, can you tell me about the immediate reaction of the company? For example, were her family members immediately taken out of Canada or did they stay in Canada?

Ren: Huawei has never been involved in the arrangements about Meng Wanzhou's family members. We have just hired lawyers for her in Canada in order to protect the rights she has under Canadian law.

05 Nathan VanderKlippe: Huawei has ways to retaliate against Canada. Huawei sells equipment to Canadian telecommunications companies. Huawei employs many Canadians. Yet you seem to have chosen not to retaliate that way. Why not? You have the power to do that. You have the power to lash out.

Ren: First, because we believe Canada is a great country. As the US is closing itself off, Canada should become more open. Being open will present Canada with huge

opportunities. For example, because many scientists are unable to obtain visas to the US, many large international conferences can be held in Canada instead. US scientists don't have to travel a long way or apply for visas to Canada. With scientists from all over the world flowing to Canada, it is likely that the country will rise to become a new hub of science and technology. We have never changed our minds when it comes to selecting Canada as a better place for our development.

Second, Canada is home to the world's three founding fathers of AI, and we are now increasing our investments and efforts in AI. Incidents such as Meng Wanzhou's case won't affect our strategic development and investment in Canada.

The Meng incident will eventually become a thing of the past, but Canada won't. Therefore, we cannot easily give up on our strategic development in any country.

We are aware that during recent deliberations in Canada, some people proposed the idea that Canada should still choose Huawei's 5G. If that were the case, we would do our best to help Canada build high-quality 5G networks. We thought Canada is close to the US, so we once had the intention of giving up on Canada in terms of 5G rollout.

With 5G, Canada can apply AI solutions in various domains, like unmanned mining production in frozen

regions. Huawei is a global leader in autonomous driving. We can first apply this technology in mining carts and agriculture, making unmanned farming a reality and allowing tractors to farm the land 24/7. Farmers, though, will still need to add oil to the tractors. With AI, Canada will see an increase in agricultural and mining production, greatly improving living conditions and material wealth across the country.

Canada has built a solid foundation for AI. If the country positions AI as its national strategy, it is possible to become a global leader in this field.

As we invest in Canada, we can not only learn a lot of theoretical knowledge from the founding fathers of AI, but also use this technology to benefit Canadian society. We will not easily give up on any country. If we give up on one country after another because of one incident, then we will have no business presence anywhere in the world.

06 Nathan VanderKlippe: Obviously, Huawei's problems in America are not getting any easier with time. Last time we spoke, you talked about expanding in Canada, buying real estate in major Canadian cities. I wonder if, number one, you have a sense of the scale of that expansion, how many people you want to expand to in Canada. And number two, if you have given thought

to perhaps, moving the headquarters, making Canada the headquarters for your North American operations and not just Canadian operations.

Ren: The number of employees we have in Canada has reached nearly 1,200, and two thirds of them work on R&D. We will continue to increase our investment there in the future. In North America, as we don't have any presence in the US market, our American headquarters will remain in Mexico. However, we will move our R&D center from the US to Canada.

Nathan VanderKlippe: When will that happen?

Ren: The number of employees in Canada is gradually increasing. In 2019, we have added 300 employees to our local office in Canada. Due to the Entity List, we are not allowed to engage with our employees in the US either by email or phone or get access to technology there. This is impeding our development in the US, so we are transferring our business to Canada.

Nathan VanderKlippe: But for the idea of moving a research center to Canada, is this a big move, or are we talking about moving just a few dozen people, or is this a significant move towards Canada?

Ren: It will be a significant move, and we will move step by step. One issue involved is whether having a US citizen or Green Card holder working for us in Canada

violates the sanctions of the Entity List. This is one of our major considerations when making decisions. If having US citizens and Green Card holders working in Canada is not subject to the Entity List, we will make a large investment in the research center in Canada.

The impact of the Entity List on us includes restricting the supply of components to us and cutting our collaboration with universities and academic institutions. For the next step, we would like to see if the restrictions imposed by the Entity List could be relieved in the future, allowing US citizens and Green Card holders to work for us in our Canadian research center. This is also an important foundation for our development.

07

Nathan VanderKlippe: Looking back on the past year, the Canadian government is now of the belief that John Bolton, who was the national security adviser in the US, was behind the arrest of Meng Wanzhou in Canada. If that's true, and if pressure for her arrest came from outside of the judicial system in the US, how should that affect what Canada does with regard to the extradition of Ms. Meng?

Ren: I read the article published by The Globe and Mail yesterday. This is only something to consider, and we haven't got any proof yet. I feel sorry that Canada is stuck in the middle of the conflict between Huawei and

the US. However, what's done is done, and what we should do now is to find an appropriate solution.

Canada is a great country, where the rule of law is strong, and my view has not been affected by the apparent violations by the Royal Canadian Mounted Police (RCMP) during the arrest of my daughter. Nevertheless, the RCMP officers had taken oaths regarding law enforcement. They should carefully review and clearly describe what happened at the key points because this can help process Meng Wanzhou's case. They shouldn't choose to be silent or pretend to lose their memories.

Huawei has not let this case stop its business development in Canada. We hope that resolving this case could put China-Canada relations back on track. We also hope the tensions between these two countries can be eased, and things can get back to normal.

The US is being closed off. Canada should open its arms to embrace the talent rejected by the US. This talent can help build a Silicon Valley in Canada. Many talented people are leaving the US, and Canada can open its doors to these people. The natural environment and standard of living in Canada are every bit as good as that in the US.

I think Canada should make policies accordingly, and take the path abandoned by the US, since the US

is now taking the wrong path. So Canada can achieve what the US could not achieve. Canada shouldn't blindly follow the US just because the two countries have good relations. Otherwise, how can Canada develop and rise?

08 Nathan VanderKlippe: One of the options available to Huawei regarding Ms. Meng is a settlement in the United States. Many cases in the United States end in settlements. There are legal experts that believe that if Huawei were to accept a settlement in the United States, it would receive a fine and then perhaps the extradition proceedings against Meng Wanzhou would be dropped by the United States. Why hasn't Huawei accepted the settlement? Why hasn't Huawei gone down this path in the United States?

Ren: The US government has never consulted us about the solution you mentioned. I hope you can relay a message to the US government and tell them to talk to us.

Nathan VanderKlippe: Would you be willing to explore such an arrangement with the United States? Is Huawei interested in a settlement in the United States?

Ren: Yes, but it must be based on facts and evidence.

Nathan VanderKlippe: Such a settlement would

typically acknowledge or involve an admission of guilt and then some sort of arrangement, maybe a fine, maybe something else, but perhaps not jail time. So that's a path you're prepared to go down?

Ren: As I just mentioned, everything must be based on facts. We are open to negotiations on these matters as long as they are based on facts.

Nathan VanderKlippe: But you have legal counsel in the United States. Why don't you order them to start exploring this idea or to raise this idea with American prosecutors?

Ren: Our lawyers state our case against the prosecution in court. This is a type of negotiation, which aims to determine who is right and who is wrong. First of all, the US District Court for the Eastern District of New York must disclose evidence and then we can debate in court based on the evidence. The debates our lawyers have with the prosecutor in court is negotiation in a loud voice. This allows both sides to first figure out what the facts are. Then we can negotiate, maybe in a lower voice, quietly, on exchange conditions. This is also a type of negotiation.

Nathan VanderKlippe: But you're right now engaged in the court discussion. At what point do you think it's time to have the lower voice discussion? At what point do you work specifically toward a settlement of some sort?

Ren: If the US government, which fails to find any evidence or justification for their act, decides to lower its voice, we can lower our voices too. Then the discussions will not take place in the courtroom. Instead, they can be held in a café. If we speak too loudly in a café, it annoys other diners, so we will naturally lower our voices. The topic of our discussion will be who drinks one more cup of coffee, that sort of thing. It will be about compensation. If it turns out the US has been wrong, then we would get compensated for reputational damage.

Nathan VanderKlippe: But in fairness, the US has put forth quite a lot of evidence and some of that evidence in particular was with regard to Ms. Meng and what Ms. Meng was doing with regard to some of the banks. When she was representing Huawei's relationship with Skycom or as the US prosecutor has said, misrepresenting Huawei's relationship with Skycom, was she doing that on your orders?

Ren: The US government should present its evidence through the court, if there is any. So far, we haven't seen any evidence presented in court. The US District Court for the Eastern District of New York should disclose evidence as soon as possible.

Nathan VanderKlippe: But the US has released affidavits. They have released copies of the

PowerPoints that Ms. Meng gave, I mean, that is the evidence that has been released through the legal channels, and it shows what the US says as a misrepresentation of Huawei's relationship with Skycom. Was that misrepresentation made on your orders?

Ren: I didn't give any order, but I think the US District Court for the Eastern District of New York should disclose the evidence and start the hearings as soon as possible.

Nathan VanderKlippe: Why did Huawei represent its relationship with Skycom as a divestment when in fact Skycom remained a subsidiary of Huawei?

Ren: We'd better leave this matter to the court to decide.

09 Nathan VanderKlippe: There's a discussion in Canada about its 5G policy. Can you talk about what sort of contacts there have been between Huawei, or perhaps yourself, and officials in the Canadian government, with regard to the Canadian 5G review?

Ren: No. We haven't had such discussions with the Canadian government. Huawei is not the only vendor that offers 5G equipment. Ericsson also offers 5G equipment. Whether Canada adopts 5G is one thing;

whether they choose Ericsson or Huawei for 5G deployment is another. These decisions are all up to the Canadian government. If they choose Huawei for 5G deployment, then we will do our best. Even though they don't choose Huawei, our investment plan in Canada will remain unchanged. We will continue to invest in Canada.

Nathan VanderKlippe: The Canadian government operates what is called a center for cyber security for testing digital products. It's much like the testing lab that is in the UK, that has been in the UK since 2010. That Canadian center has tested Huawei's 4G network technology. Has the Canadian center already begun testing Huawei's 5G technology?

Ren: We currently don't have a plan to establish a cyber security testing center in Canada. However, Canada and the UK are allies. They can have the equipment tested in the UK.

10 Nathan VanderKlippe: In September, you discussed the possibility of licensing Huawei's 5G technology to other countries. Earlier last month, you said there had been no direct interest from American telecom companies. I just want to ask if that has changed and I want to ask how serious you are about this. Have you set up a data room for other companies to inspect your licensing?

Have you set a price for licensing this technology?

Ren: First, no US company has approached us about the 5G license. Second, our license is comprehensive, with no restrictions attached. This is a very big decision, so it is understandable that US companies need time to think about it.

Nathan VanderKlippe: How much would it cost to license it? What would be the price?

Ren: This is hard to decide, because the sum of money involved would be huge. If it were going for a smaller sum, US companies would have made the decision long ago.

11

Nathan VanderKlippe: I just want to go back quickly to ask a follow-up question on the settlement. Do you see a settlement as a way of moving towards releasing Meng Wanzhou from Canada?

Ren: No. Meng Wanzhou has not committed any crime. The right thing to do would be to release her. In the lawsuit between Huawei and the US, the first thing is to find out who is right and who is wrong in court. If we were to plead guilty and pay a fine before that becomes clear, it would be no different from bribery. We won't offer bribes to the US government. They need to make clear in court what's wrong with us and present evidence

to people around the world. After that, we can move the discussion to a café and decide who drinks two more cups of coffee. In the absence of any evidence, I will definitely not compromise.

Nathan VanderKlippe: It doesn't actually sound like you're that interested in a settlement.

Ren: Well, first of all, we need to make clear who is right and who is wrong. After that, we can discuss the possibility of a settlement.

12 Nathan VanderKlippe: Let me ask you one more legal question. You are preparing to mount a legal challenge to the FCC in the US over a decision with regard to rural carriers in the United States. First of all, is that correct? And are you planning other court challenges in the United States at the moment? You had almost no business in the United States. Why are you pursuing all of these lawsuits? It doesn't seem like there is much to gain for you.

Ren: Yes, you're right. We are going to sue the FCC. This is a right that the US Constitution gives us. We have the right to provide services to people in the US. It is up to the US carriers to decide whether to buy from Huawei. We are defending our Constitutional rights to provide services to the American people.

Nathan VanderKlippe: Is there more to come against the United States? I think this is the 6th lawsuit ongoing.

Ren: There may be more to come. It depends on whether we have enough legal counsel to handle those suits.

13 Nathan VanderKlippe: When you first spoke about licensing as an option, it sounded like a fairly new idea for you. And you have been asked many times, what sorts of options you have, from a corporate structural perspective, to try and win trust overseas? I'm wondering if you have given thought to any other options people have been talking about, like splitting parts of the company or relocating some of the company's operations to other countries. Are there any other major corporate structural changes for you to consider?

Ren: First, our governance structure itself is open and transparent already. We don't need investors or capital from outside the company. We have demonstrated that we are a responsible company in the way we serve people around the world. One or two people from outside the company alone cannot prove our transparency. Second, we won't consider splitting our business. We will not accept external capital. Third, as

to whether we will build bigger factories in Europe, we definitely will.

14 Nathan VanderKlippe: Just now you said you would consider a settlement. Are you open to a plea deal?

Ren: I don't think that is possible.

Nathan VanderKlippe: But it would be a way to resolve this quickly. Over 90% of the cases in the United States are resolved through this sort of deal.

Ren: I think this is a matter of principle. We should figure out facts and evidence before discussing settlements.

Nathan VanderKlippe: But for many people in the United States, a plea deal is a way to avoid jail time. This could be a way for your own daughter to avoid jail time. Doesn't that make it an attractive option?

Ren: Why would she go to jail when she hasn't committed any crime? The Canadian judicial system is just. This is simply a way for the US to try and force us to compromise.

Nathan VanderKlippe: And it's not worth it in this case, to proceed with your business and protect your daughter?

Ren: No, it's not.

15

Nathan VanderKlippe: You talked about a factory in Europe, what would you consider manufacturing in Europe, and why Europe? For example, Southeast Asia has cheaper labor, as does Mexico. Why Europe?

Ren: Cost is not our consideration, strategic needs are.

Nathan VanderKlippe: I think there was a report that your Mate 30 phone has no US technology in it. I wonder if you can talk about that. I know that your company has been working very hard this year to try to get rid of all US technology. At what point, how long, from this point, do you think it will be before there is no US technology in your consumer devices?

Ren: This should be a reality next year.

Nathan VanderKlippe: I think initially you thought that it might be two or three years. Is that correct?

Ren: If this year counts, together with the next year, it will be two years.

Nathan VanderKlippe: But is it moving more quickly than you'd expected?

Ren: No, it will have been almost three years by early 2021.

16

Nathan VanderKlippe: Let me ask you just a clarifying question on this idea of a factory in Europe. What sort of things could you envision making in Europe and

how quickly?

Ren: Large-scale 5G production. We are still reviewing the feasibility of this plan.

17 Nathan VanderKlippe: It's been an extraordinary year for Huawei, and you personally, and your role at Huawei has changed very much in terms of how public you have been. I wonder if you can talk about how Huawei's emphasis on government and public relations has changed in the past year. Do you have any sense of how much more you are spending on that now? Do you think that is a much more important task for the company than in the past?

Ren: First of all, I had to come forward since the company was in its time of crisis. Over the past years, our public relations department has made great efforts engaging with stakeholders around the world, and they have helped deepen the understanding of our customers and other stakeholders from all over the world.

For countries that don't understand us, we have just stopped our public relations work there. But for those that still want to understand us, we have invested more and engaged more with them. Our total budget has not increased that much, because the money we're saving from some countries is going towards public relations in others.

18

Nathan VanderKlippe: There have been many questions about how Huawei rebuilds or builds trust around the world given what's happened in the past year. Do you see this as a trust deficit, if we can call it that, or a trust problem? Is that a Huawei problem? Or is that more a China problem, a problem for companies that exist in China?

Ren: Over this past year, I don't think we've had a trust deficit; instead, we have gained a lot of trust, because the US government, such a great power, has been advertising for us, and we've gained a lot from it.

In the past, some countries may have been suspicious about Huawei. However, the US's attack against Huawei has led them to trust us more because they've begun to realize that we are a great company.

This year, we have seen a 69% increase in the number of guests visiting Huawei. When some of them visited our production lines and saw that our new products did not have US components, they took the new versions back for testing. The results showed that the performance was really good, and that helped build their trust in Huawei.

Meanwhile, when they visited our campuses, they saw with their own eyes that the shuttle buses going to and from work were very busy and there were a lot of people getting on and off. They also saw that almost

every canteen on Huawei's campus – we have many canteens – was packed and our employees could still afford to buy meat.

Also, our production lines were running 24/7. That has further strengthened their confidence in us. So we haven't suffered a trust deficit; instead, we have had a strong influx of trust.

When we were added to the Entity List, we estimated that we might see a decline in our financial performance this year. But so far, we have been maintaining strong growth. That's a testament to the fact that we haven't suffered a trust deficit.

19

Nathan VanderKlippe: But has much of your growth this year, which is just very strong, largely driven domestically here in China? Has it not been a form or a sort of state subsidy from state-owned telecommunications players to Huawei?

Ren: The growth of our network equipment business has mainly come from the overseas markets, so we mainly focus on guaranteeing our supply to our overseas customers. For our smartphone business, we have seen a decline overseas, but an increase domestically.

20

Nathan VanderKlippe: I want to just ask you quickly again, and I know your staff quickly pointed out you're

at a feasibility stage, but if you do move so much manufacturing to places like Europe, what are the advantages for Huawei in doing that? What problems does that solve for you?

Ren: AI will be fully applied to our future factories. So these factories won't have issues that are quite common in welfare states in Europe or issues that European companies may have with trade unions. Though the cost may be a little bit higher, we will be able to win more trust, contribute more taxes, and create more jobs there. This will in turn help enhance our collaboration with European countries.

21

Nathan VanderKlippe: Huawei is building up an increasingly large, I believe the proper translation is, "smart surveillance business". Huawei has been, of course, accused by the US, in particular, of being a risk of espionage in terms of the equipment. Why is Huawei moving into the surveillance business in such a big way? Your own manager, Duan Aiguo, has said Huawei wants to be number one in this space.

Ren: We are moving to a cloud-based, intelligent world, which will require huge information networks. The US is also seizing opportunities to move toward a cloud-based society. Our existing telecommunications networks will become cloud-based networks in the future. A cloud-

based world will be far more open than we could ever imagine. Smart cities are just the beginning.

22

Nathan VanderKlippe: Your chief privacy officer, Mr. John Suffolk, was in the United Kingdom. He was asked about Huawei's partnerships with the Public Security Bureau and other authorities in Xinjiang. And he was asked, in particular, does Huawei feel any moral obligation in terms of who it sells its technology to? And he said Huawei feels legal obligations. But many of these technologies that you developed can be used by governments to have a very severe impact on the freedom and liberties of people. Do you feel a moral obligation to assess who you sell technology to?

Ren: I read an article about the Xinjiang issue in The Globe and Mail recently. An in-depth look into this issue would be welcome. Which one do you think is better for the people, the US's solution for the Middle East, or China's solution for Xinjiang? Xinjiang has been gradually stabilizing in recent years, and there haven't been any major social incidents or criminal cases there. Xinjiang's economy is also growing. If a society's wealth increases and its distribution becomes reasonable, many conflicts will gradually subside. The US should help the Middle East stabilize, develop its economy, and get the people there out of poverty. This way, the US will take the moral

high ground.

Nathan VanderKlippe: Were you saying you don't believe the United States has the moral high ground here?

Ren: The US has the moral high ground whenever it does things right. For example, several decades ago, the US contributed to the world by establishing a stable international system, which has helped maintain world peace and development. In return, countries around the world have acknowledged the US dollar's status as the de facto international currency. However, the US is destroying the international order that it established itself. It can regain the moral high ground if it goes back to the previous normal order.

23 Nathan VanderKlippe: You have often spoken about your admiration for the United States. Your staff told me your favorite coffee is the Americano, you watched Star Trek, and you, of course, traveled to the United States. You have talked about the United States being at the top of Everest, and China being at the bottom of Everest. But do you expect within your lifetime to see the end of American dominance in technological terms, and perhaps economical terms?

Ren: I believe the US is a great country. The former

Speaker of the US House of Representatives Newt Gingrich once also recognized Huawei's strength. The US is leading in almost all areas except for 5G.

But even for the 5G industry, I believe the US has also made significant contributions. In the initial stages of 4G development, computer engineers in the US proposed the WiMAX standards. These engineers were young and more daring in their innovations. They proposed many new ideas, but they were too young and lacked expertise of the telecom industry.

The telecom industry is extremely complicated, since it must provide global network coverage and deal with networks from end to end. The documents of global telecom standards formulated by the ITU are probably many times what this room could hold. So it takes a lot of time to become familiar with these standards. Most scientists in the telecom industry are middle-aged and relatively conservative in their thinking. So many core technologies adopted by WiMAX greatly inspired the LTE industry, such as MIMO which can significantly increase capacity. Telecom scientists quickly incorporated many new ideas from WiMAX into the theories of LTE technologies. These innovations were then quickly put into practice, through the efforts of hundreds of thousands of telecom experts and engineers around the world, as well as the strong technological foundations that the industry had accumulated over the years.

A lot of 5G technologies, such as those enabling wider bandwidths, more antennas, and technology spanning multiple generations, were inspired by WiMAX. In the 5G competition between Huawei and US companies, Huawei has taken the lead not because we have unique advantages, but because we've gained inspiration from great ideas of many countries, and have helped realize 3GPP's ideal. So Huawei also shares its inventions and technologies with the world. Huawei has signed many cross-licensing agreements with Ericsson and Nokia, as well as patent licensing agreements with Apple and Qualcomm. Huawei doesn't have a technological monopoly.

The US is still a great country. US Secretary of Commerce Ross said in India that the US only needed two or three years to surpass Huawei. I believe what he said, but humanity cannot afford to wait that long for further development.

24 Nathan VanderKlippe: Just returning to the question that I had about Huawei's moral obligations, or what moral obligations you see Huawei has. I'm thrilled that you've read The Globe and Mail, so thank you for that. But I meant to ask the question, not just in the context of Xinjiang, but your employees have been accused of helping African governments spy on, hack, and disrupt

opposition politicians. Is that the sort of conduct that you accept from your employees or do you have a certain obligation not to do those sorts of things?

Ren: That news story about Huawei's involvement with African government cyber security forces included false statements, and we have sent a legal demand letter to The Wall Street Journal. Also, a court in Lithuania ruled that the Lrytas UAB's report about the so-called espionage on the African Union contained false statements about Huawei.

We are like a truck manufacturer that sells trucks to different countries. Whatever is transported is up to the driver, not us. What path to take and how to manage the equipment is the sovereignty of a country.

Nathan VanderKlippe: But some of the technologies that you're developing as a company, like artificial intelligence, have the capacity to change society. They have the capacity to change the way economies work around the world. You are not building a truck that goes on a road and has its basic tasks. You are developing technologies like artificial intelligence, smart surveillance, and smart cities that actually have the ability to really change the way humans function as a society. Do you not have the responsibility to really think deeply about how those are developed and sold?

Ren: AI is not a weapon. We respect the digital

sovereignty of every country. We must abide by the laws of each country and region we operate in, as well as international laws. On this basis, we use new technologies to benefit humanity. If a country rejects our new technology, we won't take it there. We don't want to create an unfavorable environment for that new technology when it just starts to emerge.

Nathan VanderKlippe: We were not just talking about AI. You have an interesting background. When you started the company, there were many elements in China about the planned economy, and you've been critical about the way it operated and the way it did not seek profit. You obviously did well when you left and entered a private economy. Do you think that AI is powerful enough or going to be powerful enough to bring back some elements of a managed economy in the future? Do you see AI having that sort of impact?

Ren: The macro environment should support market competition, because only competition can benefit users and drive companies to move forward. Inside a company, planning can help improve quality, lower costs, consume less resources, and reduce waste, and it will be conducive to competition. So for the planning you just mentioned, I think it's only related to a company's internal operations.

25

Nathan VanderKlippe: Let me ask a question related back to Ms. Meng Wanzhou. I wonder what your feelings are in terms of how she has dealt with the past year. Do you feel she is suffering or doing okay? What have you told her as far as how long she should plan to be in Canada?

Ren: As parents, we miss our children, of course, and Meng misses her children too. This has had a big impact on her life. Her mother and husband take turns keeping her company in Canada, and her children fly out to see her during the holidays. She also spends time studying and painting to keep her spirits up, and she just leaves all the details of her case to her lawyers.

We believe Canada has a legal system that is fair, just, and transparent. Transparency means we expect all the details of her case to be made public. We just need to wait for the court's decision.

26

Nathan VanderKlippe: She wrote a letter which was posted on WeChat earlier this morning. You may have read it. She wrote a little bit about her thoughts about the past year and about her feelings now that she feels more ready, and prepared to face uncertainty. You said in the past that you do not expect her to succeed you in your role, but I wonder, if you look at what she has gone through and how she has faced her time in

Canada, whether you have re-assessed your evaluation of her character or re-assessed your evaluation of her future in the company.

Ren: I didn't read through the letter, but I saw the title this morning. I don't think it's appropriate, because the Chinese people are busy working, creating wealth, and striving to increase their income. They may not have time to think about what she feels. As shown throughout history, heroes are often born out of hardships. The hardships experienced by Meng Wanzhou will greatly strengthen her will, which will be of great value to her in life.

To be a leader of a technology company like Huawei, you must have deep strategic insight. You may need to have insight into the next 10, 20 or even more years. You should know in which direction a society or company is developing. So it would be difficult for people without insight to lead this company. For a technology company like Huawei, the leader must have a solid background in technology. Meng Wanzhou will assume the same role as CFO when she returns, except with stronger willpower than before.

The road ahead of Huawei won't be smooth, and we may experience major setbacks and even the risk of collapse in the future. However, after experiencing these hardships, she will be able to better support us in

surviving any future disasters. There are no companies in the world that always succeed. There is a book named Huawei: Leadership, Culture, and Connectivity, which says Huawei's growth cannot be always smooth. I think disaster can be like wealth for us. Huawei has made great progress despite the attacks this year, and it seems that the risk will be mitigated slightly.

27

Ren: I'd like to recommend three Canadian "founding fathers of AI" to you. They are Yoshua Bengio, professor of the University of Montreal; Geoffrey Hinton, professor of the University of Toronto; and Richard Sutton, professor of the University of Alberta. Canada should position AI as a national strategy; Prime Minister Trudeau should invite these three "founding fathers of AI" for a coffee, and listen to their advice on how Canada should position AI as a development strategy. The University of Toronto is close to Harvard and MIT, and Vancouver is very close to the University of Washington and Stanford University. The question is, how can Canada attract talented people to support the "founding fathers of AI" in building a large industry cluster? They have led the world since 20 years ago, and they should not be like "flowers blossoming inside but only appreciated outside".

Nathan VanderKlippe: You spoke about the three

founding fathers last time we spoke as well. And I'm curious when you're talking about Canada and the advantages of AI, are you speaking out of your interest in Canada as a country or are you also speaking in Huawei's own interest? Do you see any interest for Huawei as a company in this?

Ren: No, I don't see interest for myself or Huawei, because I separate my personal issues from Canada's national development. I personally have some issues with Canada, but humanity is great. I do not take my personal issues into account when I look at the development of humanity. I once had a coffee with these three founding fathers of AI, and I think they are all truly great people. I suggest that Prime Minister Justin Trudeau enjoy a coffee with them every three months. Canada has a relatively small population, abundant resources, and a vast amount of land, so it is in urgent need of AI.

China, in contrast, doesn't have such pressing needs for AI because China has a very large population. Many people ask negative questions like this, "If a lot of people lose jobs because of the wide adoption of AI, what should they do?" Canada happens to have a small population, so I think the country should proactively develop AI.

I will provide you with the email addresses of these

three founding fathers. They will very likely help Canada develop and rise. When I recommend them to you, I am thinking beyond my own issues. This has nothing to do with Huawei. I just don't want the light of these geniuses to be overshadowed.

Nathan VanderKlippe: So you didn't meet them and offer them jobs?

Ren: They are the world's most well-known figures in AI. If they come to work at Huawei, how can they unleash their potential through a low-level platform like ours? But we would like to provide them with research funds. While doing this, we will apply the US's Bayh-Dole Act. We won't seek to own any of their research results, and we will just provide them with funds with no strings attached. As long as the Canadian government allows us to do so, we will be prepared to offer them large amounts of funding.

The US considers 5G to be like an atomic bomb. Where did 5G come from? It came from a mathematics paper published 10 years ago by Turkish professor Erdal Arikan. I sincerely suggest that Prime Minister Trudeau invite these three founding fathers of AI for a coffee, as this will positively impact Canada's strategic landscape.

Nathan VanderKlippe: Interesting. Do you think it's a question of funding? When they have coffee together, do you think it's a question of Trudeau offering more

national funding or what do you think it is about? I mean, if you're talking about Canada offering more support for these three founding fathers of AI, is it, for you, just a matter of national funding or something else?

Ren: No. I didn't talk about Canada offering funding to them. If Canada positions AI as a national strategic industry, the team working on it will expand, and various applications will be developed, such as applications for unmanned mining and farming in frozen regions. This way, Canada can use AI to develop its economy. If these founding fathers need research funds, we will be happy to provide them, so that the Canadian government don't need to provide the money.



Ren Zhengfei's Interview with The Washington Post

December 10, 2019 Shenzhen, China

Ren: It's a great pleasure to meet you both. Welcome and thank you for coming such a long way to visit us. As Anna Fifield is based in Beijing, you can visit us more often, so we can talk more about your specific areas of interest.

01

Jeanne Whalen, Global Business Reporter, Washington Bureau, The Washington Post: I want to ask you a bit about the entity listing in the US, what the overall effect has been on Huawei, and I have some specific questions about it as well. What has been the overall effect of the US entity listing would you say?

Ren: Overall, the entity listing has had a pretty big impact on Huawei. We may need to work harder for two or three years to get out of its shadow. Based on the current situation, I think there is no problem for us to survive.

US chips are more advanced than ours, but we can still use our own chips. But when it comes to the structural design of 5G systems, we are leading the world. Even though we are using our own alternatives to US chips, there is no major difference in the performance of system equipment.

As you may see, we have stripped US chips from many of our printed circuit boards. Carriers from around the world have taken these boards for testing and found

they work very well. Despite this, we would still like to have continued supply of components from US suppliers.

Jeanne Whalen: By the system equipment, you mean the 5G network equipment, right? That means telecom network equipment, I assume?

Ren: Yes.

02 Jeanne Whalen: One chip that an analyst in the US told me was quite important to 5G equipment is Xilinx's FPGA chip and I wonder how you manage to replace it. A: Did you replace it very soon? If the answer is yes, and B: How did you manage to do that and to do the work as well as Xilinx's chips?

Ren: Xilinx provides the best FPGA chips in the world. We have also designed our own FPGA chips, though not to their level of performance. Despite this, we managed to come up with algorithms for our own FPGA chips, so that they are as good as Xilinx's in real-world scenarios.

Jeanne Whalen: And have you had feedback yet from your customers who have bought 5G network equipment using your chips instead of Xilinx's chips? What did they say about the performance?

Ren: They have given us pretty positive feedback.

Jeanne Whalen: Can you say which carriers? Which telecommunications carriers have received such

equipment from you?

Ren: Over 40 carriers have received 5G equipment using our own FPGA chips.

Jeanne Whalen: Any in Europe?

Ren: Yes.

Jeanne Whalen: Can you name any specific ones?

Ren: There should be many.

Jeanne Whalen: You can't name any? I would like to ask them how it works and if it does work well, perhaps you can name a company, and I can call them.

Ren: Go ask any carrier in Europe. They are well aware of our equipment's performance.

Jeanne Whalen: If we could go back to the FPGA chips, how did Huawei design its own chip to replace the Xilinx chip? Can you talk a little about which team did that? Was it here in Shenzhen or another part of the country? How long did that take? How much did that cost?

Ren: We don't have to put all our people in the same place. Our scientists are working in different locations, and they work together remotely. Our annual R&D budget is around 15 billion US dollars. This number will gradually increase to 20 billion US dollars. About 30% of this budget goes to research, including the design

of FPGA chips. I do not have specific numbers for the amount of money we have spent on specific projects.

Jeanne Whalen: Was that a very big project for you though? Can you give any detail at all about how long it took to come up with your replacement for the Xilinx chip?

Ren: I think the development of CPUs is an even bigger project. Our own Kunpeng CPUs are more powerful than Intel's CPUs in some aspects. We also have GPUs and NPU's for graphics and neural processing, respectively. We have many similar projects.

Jeanne Whalen: So you can't give us much detail? We're just looking for a little bit of color about what it took for Huawei to replace some of the most important parts. Was it something that took a couple of weeks of engineers working all night? Did it take several months? Maybe just a little more detail about how you managed to reengineer some of these US parts.

Ren: I don't think it has been that quick. It has taken us eight to ten years to develop our own components. I have no details about this though.

Jeanne Whalen: But if it's years, how did you manage to do it since May? Have you been working on your own version of CPU and FPGA since several years ago?

Ren: Of course. We have been working on them for more than a decade.

03 **Jeanne Whalen: On your phones, The Wall Street Journal had an interesting story about a week ago where they asked someone to take apart a Mate 30 phone and found that it did not have any US components. I wonder if you could talk a little about what you managed to reengineer. How did you actually eliminate US parts from your handsets, from your phones? How big of an effort was that and what exactly were you able to eliminate?**

Ren: I would say that Huawei should not have had to put in place our Plan B. Not long ago, the US was the only country in the world that could develop CPUs. So you can imagine how difficult it is to develop a CPU. However, we decided to develop our own CPUs because we were concerned that we would not have continued access to CPUs from the US.

More than 10 years ago, Huawei was a very poor company. We had to use US components to develop our products. At the same time, we had to put in place a Plan B, developing our own CPUs and other components. As I just said, Huawei was pretty poor back then. If we had only walked down one path, the cost would have been relatively low. However, we were forced

to walk down two paths, which made our costs much higher.

We did this because we didn't feel safe. If the US had made us feel safe, there would have been no need for us to come up with a Plan B. If Huawei's current situation continues and the US government does not stop their sanctions against Huawei very soon, many other companies will also be concerned about possible sanctions from the US, and some may end up developing their own Plan B, which would be a bad thing for the US.

It seems to me that when the US government added Huawei to their Entity List, their goal was not very clear. Some say that they are targeting Huawei's 5G, but I find that this has not been the case. It seems that they are targeting everything that Huawei needs from external suppliers.

Huawei has been using many low-end chips manufactured in the US. Those chips are not as complicated as CPUs. If US companies are not allowed to supply them to Huawei, it's pretty easy for us to find alternatives from other countries. And even if we couldn't find alternative suppliers in other countries, it would only take several months for us to develop those chips on our own.

So we may find alternatives from other countries or

develop these chips on our own, but either way, what then? Who would those small US companies then sell their low-end chips to? Therefore, the US's addition of Huawei to the Entity List hurts both Huawei and many small US companies.

04

Anna Fifield, Beijing Bureau Chief, The Washington Post: Mr. Ren, officials in the Trump Administration talk about wanting to decouple from the Chinese economy, but many analysts say this is impossible. But it sounds like what you're describing is Huawei decoupling itself from the United States. Would you agree with that characterization?

Ren: No, I wouldn't. Economic globalization was first proposed by Western countries, primarily the US. Globalization was hard won through decades of efforts. So I don't think it's realistic for us to go back and divide the world into two.

We are now in the Internet era, where information travels incredibly fast and papers written by scientists can go viral online soon after being published.

In addition, US companies have developed many great products. If they don't want to sell these products to other countries, how would they survive?

The approach we are currently taking is not of our own choice, let alone being the company's long-term

goal. We will not be so narrow-minded as to pursue self-reliance and independent innovation. We are just taking a makeshift approach in order to survive the Entity List.

Anna Fifield: So then you are at odds with President Xi Jinping who continually talks about the need for self-reliance in China?

Ren: I don't think self-reliance and openness are contradictory. I am an advocate of self-reliance as a kind of spirit, but not as a kind of system. If self-reliance is referred to as a kind of system, there will be defects. A huge amount in costs would be saved if China is able to use great products made by the US, and vice versa.

05

Anna Fifield: The Chinese government has obviously publically given you a lot of support during this period where you've come under fire from the United States. What have they been doing privately to help Huawei weather this storm?

Ren: Nothing. Like any other Chinese company, we pay taxes and we don't receive special subsidies from the government. We rarely take loans from banks; 90% of our working capital comes from ourselves and we used to borrow the other 10% from foreign banks. We have not taken loans from Chinese banks until recently.

Anna Fifield: Has the China Development Bank

extended you a bigger direct line of credit?

Ren: I don't think so. Because the China Development Bank mainly lends to infrastructure projects, while Huawei takes commercial loans as our working capital. We used to borrow from international banks, which asked for relatively low interest rates, and we have only recently begun issuing bonds to Chinese banks. Our financial statements are audited by KPMG, and I can show you our annual reports over the past decade.

Anna Fifield: Which international banks are giving you credit or helping you these days?

Ren: Few at the moment, because they are all afraid of the Entity List.

Anna Fifield: So, you're saying that this year international banks have cut off funding or lines of credit for Huawei because of American pressure? To clarify?

Ren: Not exactly. They are not actually using the word "cut off", but are being very vague in their position towards Huawei. They just don't lend and we don't borrow. The average interest rate of China's bank loans is 2% higher than that of international banks.

06

Jeanne Whalen: There is a long running perception in the US that Huawei has received subsidies from the

Chinese government over the years. Have you ever received government subsidies that helped you lower your cost and charge less in the international market?

Ren: The subsidies we received from the government are for basic research. The total research funding we received over the years adds up to less than 0.2% of our revenue.

Catherine Chen: All these R&D projects supported by the government are public projects that are open to all companies, including foreign companies.

Jeanne Whalen: Can you clarify what sort of subsidy that is? Sorry, I don't understand.

Ren: The country may set up some workgroups for basic research. At times, we acted as a workgroup leader for some of them, and the government distributed some funds to us. We worked with other workgroup members to do research and publish papers, and many of these research papers were not for commercial use. In addition, we have also worked together to draft standards and convene conferences.

Catherine Chen: I would like to add that these R&D projects supported by the Chinese government are in nature the same as projects initiated by other governments such as those in the EU and Canada. For example, the EU's well-known and well-funded Horizon 2020 project. Both Chinese companies like Huawei

and foreign companies like Ericsson and Nokia have participated in these projects and received subsidies.

Ren: I would like to address a common misperception. Huawei's products are expensive; our prices are higher than Ericsson's, but a bit lower than Apple's. We've earned a lot of profits, but we didn't eat them up and get fat. Instead, we have invested them into strategic research.

Jeanne Whalen: So your products today are more expensive than Ericsson's. Is that what you mean? What about in the past? We have always heard that Huawei's products were considerably cheaper than Ericsson's or Nokia's in the network.

Ren: Our products were also expensive in the past, or we wouldn't have become what we are today. However, compared to other vendors, we provide many more functions and features in the same system. So after using our products, customers conclude that our products are cheap considering everything they get out of them.

Jeanne Whalen: For example, I recently wrote about a rural carrier in the US in Oklahoma that bought Huawei's equipment about five or six years ago, and they said they did so specifically because Huawei was significantly cheaper and had good quality products as well. But the main consideration for them was

the price, which was a lot less. And we've heard that repeatedly over time. So, it's strange to me to hear that your products have always been more expensive.

Ren: Our products are priced high in many countries and regions such as Europe, the Middle East, China, Japan, and South Korea. For the US, the biggest problem is that many vendors who are used to working with large carriers are reluctant to provide services to small carriers in remote areas, so they usually charge high prices. Therefore, small carriers in the US find that the equipment used by large carriers is expensive. Our consumer devices, however, are priced lower than Apple's; about 5% lower.

07

Anna Fifield: How often do you talk to Chinese leaders like Xi Jinping, Li Keqiang, and Liu He? How often do you meet with them in person or talk to them on the phone or WeChat?

Ren: I hope you can give me their phone numbers, because I don't have them. Perhaps you can introduce us to them one day, because we don't know where we can meet those Chinese leaders. We believe Huawei has the capacity to deal with the impact of the Entity List. We don't need help from the Chinese government. The Entity List is about components, so it's a matter of technology and only scientists can help us with

that. Whether or not these political leaders place their confidence in us, it won't turn the tide of the battle. It's ultimately a technical issue and we need to address it through technological means. Politics is not the solution to our problem with the US.

08

Anna Fifield: As you know, there's a presidential election coming up in the United States and the campaign has already started. Across the board, Democrat or Republican, China is almost a unifying issue. Everyone has taken a hardline position on China and how to deal with China's competitiveness. President Trump has obviously also taken a hardline and has put that into action against Huawei in particular. But a few Chinese political scientists that I've talked to say they hope President Trump is re-elected because he's a known quantity and he is somebody who is seen as very transactional, somebody who is willing to cut a deal on issues. We have seen that with regards to your daughter and Hong Kong. He's put all these issues on the table as something that can be bargained in terms of a trade deal. So I'm wondering how you view President Trump. Do you think he is somebody that you would like to see re-elected, because you have gotten to know him for better or worse over the last couple of years and you can predict how he will operate?

Ren: I used to think President Trump was a great president, because he reduced taxes so quickly in a democracy like the US. That is quite an accomplishment. But he also messed up with one thing: trying to crush businesses and intimidate countries around the world. The idea behind his slogan "America First" is also wrong.

It's like looking at a big family. If the eldest brother is unselfish and willing to share things with his little brothers, then the brothers will follow him faithfully. But, if the eldest is selfish and thinks "Me First", then the little brothers will go their own ways. Similarly, what Trump has been doing will also harm the US's allies.

This isn't just an issue about Huawei. In a lot of ways, the US government is scaring off many investors. So how are they going to make up for the lost tax revenue? The purpose of the tax cuts was to attract investment, but attracting investment is only one side of the equation. On the other side, the US government is using a big stick to scare the whole world. No one is daring to invest in the US. People are even becoming less willing to travel to the US.

Just now, you described Trump's style as transactional. That means he wants to get things done. I see from the news that both China and the US want to mitigate the current situation so that each country can overcome their own challenges. Each time the two countries

seemed to be on the verge of a deal, the US suddenly raised additional requirements, and as a result, no deal has been reached so far. As a matter of fact, many issues can be dealt with phase by phase. This is just like walking upstairs – you can take one step at a time. I saw on the news that Trump has said he wants a fundamental solution to the current issue. It's very difficult to climb all the way to the top with just one big step. In fact, China is facing some economic difficulties. And as I see it, China is ready to make a phased compromise. If both China and the US back off a little bit and then aim to reach a deal for the future, it will work better.

Trump has done a great thing, which is cutting taxes to attract investment. But he has also made a big mistake: He has made the US an enemy of so many countries and so many companies around the world, and as a result, no one dares to invest in the US. Take Huawei, for example. We are now on the blacklist, but our US subsidiary is on the whitelist. We cannot engage with each other. If we cannot even manage our US subsidiary, then what's the point of increasing our investment in the US? So if the US wants to develop its economy and address its difficulties, they should be trying to attract large amounts of foreign investment into the US.

Luckily, right now it's only Huawei that is subject to the US campaign. US companies should sell their

components to other Chinese companies as fast as they can. In that way, the market that we currently don't have access to can be filled by other companies, and there will be still a large market in China for US components. The US should also try to attract companies from around the world to invest in their country. In the US, natural gas, electricity, land, all kinds of housing from apartments to mansions, and commodities in supermarkets are all quite cheap, and taxes are lower. There may be only one challenge in the US, which is the high cost of labor. However, with AI being adopted in many factories, businesses don't need as many people as they did in the past. So why not make full use of the US resources to boost the economy?

Why do entrepreneurs hesitate to invest in the US, despite the attractive conditions there? Because they are concerned that they might one day be arrested by the US government. Huawei is probably one of the companies that best comply with the laws and regulations wherever we operate. And yet, we still have to experience so many difficulties. Looking at what is happening to Huawei, companies that have a poor compliance record will certainly think twice before making investments in the US.

Anna Fifield: Mr. Ren, if you hopped into an elevator and President Trump was there, you had 30 seconds with him. What would you say to him?

Ren: I want you to time me to make sure that I don't speak for longer than 30 seconds. I think collaboration for shared success is a global trend. The US is the most powerful country in the world. They should have the confidence to play a leading role in globalization. Right now the US chooses not to sell their great products to other countries, so how can they cut their fiscal deficit? The US has no low-end products. They only have high-end products. So they need to collaborate with others for shared success.

Anna Fifield: 32 seconds. That was pretty good.

09 **Jeanne Whalen: President Trump obviously has taken a tough stance against China and Huawei. But actually it's a very bipartisan feeling at the moment in the United States. It's quite rare to find something so bipartisan as the sense in the US right now that China has treated the United States unfairly. Where do you think that comes from? Can it be entirely the misperception of people in the United States that China has played unfairly? Or has China made some mistakes over the years in its dealings with the West and the United States?**

Ren: First of all, I'm not a politician, so I am not in a position to analyze politics. However, I can give you my inexpert understanding of the situation. I could

understand if the US was scared of China 40 or 50 years ago, because the ideology China followed back then was so radically different than the US's. At that time, China was a very weak country. Since then, China has undergone tremendous changes. If I saw you on the street 30 or 40 years ago, I would turn around and walk away as fast as possible. I wouldn't even dare to walk past you, in case someone reported to the authorities that I had been near a foreigner. If that happened, they would start asking what I had said to you. That would have put me in a very dangerous position back then. But now, we can sit here together for as long as we want and talk as much as we like. You can tour our campus and take whatever photos you want. When the Associated Press came here, they filmed our exhibition halls and took pictures of our circuit boards. All of this shows how open China is now and how much progress China has made over the past few decades.

From your point of view, China should be even more open. But in our opinion, we need to keep moving down this path step by step. China is making progress by opening itself up gradually. The US should acknowledge the changes China has made.

The US always says that they keep ending up on the losing side in trade deals with China, but I don't know whether it is true or not. The recent China International Import Expo in Shanghai has explicitly shown that China

would like to purchase from other countries. The US didn't attend the Expo though. Does the US really want to do business with China? The US seems constantly worried that China will replace it as a world leader, but I don't think that will be possible any time during the next 50 or 60 years. The US is a great country, but even it hasn't been able to solve the problems in the Middle East. The former Soviet Union couldn't either. Can other nations solve the problems there? In truth, the US's position as a world leader remains unchanged. It is all a lot of worry about nothing.

Because of this, I think the US should sell its great products to the whole world and earn money to grow its economy. This is in its best interest.

10

Jeanne Whalen: Where do you think the deep mistrust and anger at China comes from in the US then? As I said, it is very bipartisan at the moment. Where does that come from?

Ren: The US made significant sacrifices 70 or 80 years ago during World War II. People around the world began to put a lot of trust in the US, and the world's financial hub was moved from the UK to the US. The US has greatly helped maintain the world order and facilitated the world's peaceful development. But the US didn't suffer losses throughout this process, as the US

dollar was used as a settlement currency worldwide.

Over the last several decades, however, the US has been at war in many countries around the world. The US itself has destroyed the very international order that it established, and the US dollar-centric economic order is being destroyed as well.

Without a stable macro environment or a stable financial instrument for transactions, the world economy is certainly heading for a recession. No one in the world can replace the US in maintaining world order. No one is trying to take the US's place at the table. I think the US needs to reflect on the mistakes it has been making these past years and rebuild international trust.

Jeanne Whalen: But that didn't really answer the question though, I'm sorry. Why is there mistrust of China in the US right now?

Ren: I think it's the US's own problem. I still put a lot of trust in the US at this point. A large number of Americans do not understand Huawei very well, so I think we need to engage more with them to understand each other better.

11

Anna Fifield: Mr. Ren, how many times have you visited the United States?

Ren: Countless times.

Anna Fifield: When was the last time you went?

Ren: I don't remember exactly. But each time was for business, so I mostly went to big cities. I regret that I've never been to many of the beautiful scenic spots in the US.

Anna Fifield: Do you feel you cannot go to the United States now?

Ren: I don't feel the need to go there.

Anna Fifield: Can you please explain? You're concerned that Trump will have you arrested if you go to the United States?

Ren: Not like that. What would be the point of me going to the US? Huawei has been blacklisted by the US, and we cannot engage with any American individual or business. So, what's the point of going?

After Huawei is removed from the Entity List, I will rethink whether or not it is worth it to go to the US.

Anna Fifield: Has the arrest of your daughter affected your own personal travel schedule, like you deliberately not going to countries with extradition treaties with the United States?

Ren: No, because there is no reason for the US to arrest me.

Anna Fifield: Have you been to see your daughter in

Vancouver?

Ren: That would need Trump's approval.

Anna Fifield: So it has affected your travel schedule?

Ren: No, there's no need for me to be physically there to see my daughter. I think making a phone call is the same as seeing her in person.

12

Anna Fifield: Your daughter Meng Wanzhou is under house arrest in Vancouver. She's been away for a year now. But during that period, she has been able to live in a fancy mansion, take phone calls from you, see her husband and her daughter, consult with lawyers, do her painting, go to restaurants, and whatever else. There is a transparent legal process going on in relation to your daughter. Whereas exactly one year ago from today, two Canadian men Michael Spavor and Michael Kovrig were arrested and detained here in China. They were held for the first six months in solitary confinement with the lights on 24 hours a day, and for the second six months in a prison cell. They have no access to lawyers, and no access to their families. There is no transparent legal process for them. What do you say about that? Is it unfair for them to be treated in this way? Shouldn't they be accorded the same judicial rights that your own daughter is enjoying in Canada?

Ren: Unfortunately, I don't know anything specific about this incident, so I cannot answer this question.

Anna Fifield: **That's my point. Nobody knows any specifics. The process is not transparent. They have not appeared in court. They have not seen lawyers. There have not been any public details about the charges against them.**

Ren: I don't really know anything about this either. You may know their names, but I don't.

Anna Fifield: **You don't know their names?**

Ren: I don't, because I'm not concerned with this and it has nothing to do with me. What I care about is patching up the holes in Huawei's "bullet-riddled aircraft", so we can land safely despite the US's attacks.

Anna Fifield: **Their names are Michael Spavor and Michael Kovrig. I actually know both of them personally through my work. I have professional relationships with them. I know through their representatives that they both claim their innocence in the same way that your daughter does. So I'm just interested to know since you think that China is a developed country. As you have been saying that China has been through many reforms and has opened up, do you think it's fair for China to treat anybody in this way, when your daughter is not being treated in this way?**

Ren: I'm just a businessman, and I'm really not familiar with many social issues, so I have no knowledge of this matter.

Anna Fifield: So you think it's just a coincidence that they were arrested 10 days after Canada detained your daughter?

Ren: I don't know.

13 Anna Fifield: Chinese people will not be able to read our interview with you on the Internet because The Washington Post along with most other foreign media outlets are blocked in China. You talked about China's reform and opening up. In October this year, we saw the amazing celebration of the 70th anniversary of the founding of the People's Republic of China and all of the things China has achieved. Do you think it's right for a country like China to have this Great Firewall and cut off the Internet? Can Chinese people not be trusted to read the open Internet?

Ren: Huawei is neither a media outlet nor an Internet company, so we are not sure how the things you mentioned should be dealt with. You'd be better off asking an Internet company.

Anna Fifield: You're a tech company, though. You can't put The Washington Post app on your phones.

Your phones can't use Facebook. This is something that concerns you as the founder of a huge telecom company.

Jeanne Whalen: Would you like Chinese people to be able to use Facebook and read The Washington Post app on your phones?

Ren: Just like the US is keeping Huawei out of its market, China has shut you out of the Chinese market. This is a two-way street, isn't it? Huawei has no ideological issues, but the US still pressured and blocked Huawei. It's like the US is hitting us with a stick. What China has done to The Washington Post is not as bad as that.

Anna Fifield: But take Germany as an example. It is open to Huawei and Chancellor Angela Merkel has said Huawei will not be blocked. But German media are also blocked in China. My point is, should Chinese people be able to access the open Internet and make up their own minds?

Ren: You should ask Trump if Huawei should be allowed in the US, and ask Chinese media authorities if your stuff should be allowed in China. By throwing the question at me, you are asking the wrong person – someone who has been wronged and banned from the US market and whose family member has been arrested at the request of the US on unfounded allegations. How can I answer

a question about whether or not the US was treated fairly?

Anna Fifield: This is not a question about the United States. This is a question about domestic China. The Chinese government deliberately stops Chinese citizens from accessing any website they want, no matter what country, including Chinese websites. As a founder of a tech company and as a leader in China, how do you view this? Should Chinese people not be able to choose for themselves what they read on your devices?

Ren: I want to ask the US a similar question. Why have they shut Huawei out? I want an explanation for this. The US is not just shutting us out of their market, but also imposing harsh restrictions on us.

Anna Fifield: So then I can conclude that you support the Great Firewall of China?

Ren: We didn't build the Great Firewall. We offer connectivity to the world. So my point is, for any questions about the US, you would need to ask Trump; for questions about China, you should ask the relevant Chinese authorities. Openness should be mutual. The US was the one that closed its door first and launched a campaign that aimed to crush Huawei. They even banned Huawei's access to minor components. So how can the US prove they are a great country?

Anna Fifield: The Great Firewall went out many years

before Trump was elected.

Ren: Huawei has been denied access to the US market for many years. This has not only been an issue since May 16 this year when Huawei was added to the Entity List. Since the US is such a great, open country, why should they resist advanced technologies?

Anna Fifield: Okay. I think that's our questions. Is there anything you would like to tell us?

Ren: I have nothing to add. I would just like to welcome you back to visit often. Not just you yourself but feel free to bring your friends as well. I think this is important to enhance our mutual understanding.



Ren Zhengfei's Roundtable with Media from Latin America and Spain

December 11, 2019 Shenzhen, China

01

Pablo Díaz, *ABC*: Thank you for giving me the opportunity to ask the first question. Mr. Ren, my question is about the Chinese government. How can you make it clearer to the public that the Chinese government does not interfere with Huawei? Would going public be a good solution? I also wonder, in an environment like China, how you can ensure a company operates independently.

Ren: If going public is a good way to address this problem, why do Wall Street firms often collapse? Huawei was founded in China, so of course, we follow the law here. In addition though, we abide by laws of all other countries and regions where we operate. That is to say, we are committed to complying with all applicable laws, including international law. The basis for judging whether Huawei is a great company should be the actions we take and the results we deliver, rather than whether we have gone public or not.

Pablo Díaz, *ABC*: The second part of my question: Is it possible for a company to operate independently from the Chinese government and the Chinese Communist Party?

Ren: The answer is yes. China has laws that guarantee this. Within the boundaries of the law, private firms operate independently, with clear-cut ownership.

02 **Natacha Carla Esquivel, *Clarín*: I am a journalist from Argentina. My question is about my country. As far as I know, Huawei has chosen Argentina as the first among all overseas offices to pilot a new program. Why Argentina? Is it because my country has experienced financial turmoil, such as the recent currency devaluation and high inflation?**

Ren: Why did we choose Argentina as the country to pilot our Contract Reviews and Conclusions at Representative Offices program?

First, the former president of our Latin America Regional Office first piloted this program in Argentina, and the current president suggested that we continue with the pilot there. Argentina is facing many challenges during this pilot period. We believe that if our transformation can stand the test of such a complicated economic environment, its success will be even more convincing. That's why we have sustained such efforts in Argentina. Today, we can say this pilot program has been successful. We have started duplicating the practices of the Argentina pilot in over 20 countries around the world.

Second, I myself am a big fan of Argentina. Of course, this is not just because of your tango dancing. Your beef is also amazing. Your barbecue is so delicious that I would want to go to Argentina just to eat. Looking

forward, I hope Argentina can further open its doors and strengthen its cooperation with China. China is in need of Argentina's beef, soybeans, and many other great things. Selling more of these things to China will facilitate the economic development of both countries.

I have been to several private farms in Argentina. I have often tried to talk the Chinese government into adopting your approaches to managing private farms. In China, we also have cattle raisers, but we call them herdsmen. Meanwhile, cattle ranchers in Argentina are doing scientific research. They have labs on their own farms to work on cattle embryos and even some genetic technology. This is modern farming. If China wants to further develop its rural areas, we must allow these areas to work with agricultural research institutions. We have so much to learn from Argentina.

Your country is at the end of the world and is geographically secure. Even if there is a great war in the rest of the world, Argentina will be safe and sound. You should invest more of your national wealth into education, healthcare, and research of other areas. During World War II, Argentina made a significant contribution to the world. Argentina provided woolen coats and beef to tens of millions of anti-Fascist soldiers, helping them secure victory. In the late 1940s and early 1950s, Argentina was one of the richest countries in the world. I look forward to seeing your country restoring

prosperity.

03

Javier García, EFE: Good afternoon, Mr. Ren. Thank you for taking the time to meet with us. I'm from Spain. I don't know whether you are impressed by Spain in the same way as you are by Argentina. Many Spanish carriers are using Huawei's equipment and have signed 5G contracts with Huawei. Vodafone is a prime example of this. However, we've learned recently that Spain's Ministry of Defense has recommended their employees not use Huawei's equipment in office areas, effectively banning Huawei's equipment from many public offices. Does this mean Spain no longer trusts Huawei like they used to? What are the reasons behind this?

Ren: First of all, we have not been banned by the Ministry of Defense, nor have we received any such notice from them or any other public institutions in Spain. We will continue to provide high-quality services to all of our customers in Spain.

Second, Spain is a great country. It played an instrumental role in ushering in the Age of Exploration and discovering the New World. The world was divided into the Western Hemisphere and Eastern Hemisphere when Spain and Portugal set forth to build their empires. Spain's rise to power is a key part of world history, and

something we all study. Despite the dangers, you used wooden sailboats to explore new sailing routes around the world. Records show a total of 3.5 million boats were capsized between Europe and Asia during that period, with the majority of them from Spain. Your spirit of dedication is something we strive to emulate.

Spain has adopted Huawei's 5G equipment, which may be the most advanced 5G technology in the world. Our "boat" will not be easily capsized, and will help bring Spanish civilization to the rest of the world. What future will 5G create for humanity? 5G will mainly be used to power AI, which will enable unmanned farms and remotely operated mines and ports. This could help, say, bring Spanish pork to the Chinese market on a large scale, improving bilateral trade. Spain is also an education powerhouse, and is well poised to help develop the education sector in China. This would not require the investment of large amounts of resources, but could generate good economic returns that would improve the trade deficits between China and Spain.

Huawei attends the Mobile World Congress in Barcelona every year, and we have always received excellent service while in Spain. At the event, we often host customers at La Pedrera. After getting out of the car, we need to walk about 20 meters to reach La Pedrera. Along the way, we receive elegant services, allowing us to enjoy the embodiment of Spain's glamor

from the past century.

After returning from Spain to China, I often say that even though China is on track to become a wealthy nation, it will take us dozens of years to catch up to Spain's glamor. I think China and Spain should leverage each other's strengths to enhance friendship and create a new mixed culture.

Javier García, *EFE*: I'm still very concerned about my previous question, whether Spain has lost confidence in Huawei?

Ren: I don't think so, because whether Spain has confidence in Huawei or not depends on what we do, not what we say. With Huawei, Spain could develop Europe's best 5G networks.

04 Ignacio del Castillo, *Expansión (Spain)*: Mr. Ren, we are aware that there is a lot of friction and conflict between China and the US right now regarding Huawei and technological advantages. Given the situation, many people are worried that the world may be divided into two technology camps, one dominated by China and the other by the US. Like with the Berlin Wall during the Cold War, these two digital or technology camps would be incompatible and wouldn't understand each other. What's your take on this?

Ren: I don't believe the world will be split in two. The Berlin Wall existed only in an age where the physical world could be separated by a wall. We now live in an information or digital age, where physical walls mean nothing.

If the world were divided into two camps, who would suffer the most? The answer is the US. Many US companies are the most advanced in the world. If they don't sell to some countries or regions, they will be dwindling their market scale and their financial statements will suffer. Once US companies exit the markets of these countries or regions, new players will emerge and replace them. US companies would suffer the most from a division of the world, so they certainly won't let this happen.

In contrast, papers written by scientists are published online, which means technological innovation will still be based on the same theories and basic technological research. Meanwhile, a group of competitive companies will emerge in the business application domain. This competition would only make products better and cheaper.

With all of that in mind, I don't believe the world will be divided into two technology camps.

05

Eladio Gonzalez Vizcarro, *Expansión (Mexico)*: Mexico is close to reaching a new North America Free Trade Agreement with the US and Canada. However, Huawei is currently facing a very complicated situation in both the US and Canada. Will this situation affect Huawei's business in Mexico, especially considering that important American telecom carriers like América Móvil also operate in Mexico?

Ren: I don't believe the US's sanctions on Huawei will affect Mexico. Over the next few decades, I think the biggest issue facing humanity will be the use of AI. Companies that adopt AI first will profit hugely and countries that adopt AI will benefit most. Therefore, developing countries should strive to strengthen basic education and improve the literacy levels of the entire nation to get ready for the future information society. For example, they can establish a large number of vocational schools to equip their people with the necessary skills for running AI companies.

It would be great if a new North America Free Trade Agreement becomes reality. The US and Canada are not a good fit for manufacturing, but Mexico is. In the future, manufacturing will be powered by AI. By that time, I believe Mexico will shine as brightly as the Mayan civilization did millennia ago.

Have you visited our production lines? Currently, our

production lines are just partially powered by AI. But if you come back around this time next year, you will see hundreds of new production lines with fewer people. All of those lines will be managed by 5G. I welcome you to visit us next year. Please also feel free to bring along entrepreneurs from your country.

Eladio Gonzalez Vizcarro, *Expansión (Mexico)*: In Mexico we have a carrier called América Móvil. Its founder was Carlos Slim. Is he one of your customers? Do you have a good relationship?

Ren: He is our customer, and I have a good relationship with him personally.

06 Lucas de la Cal, *El Mundo*: Recently we have seen negative comments about Huawei on Chinese social media platforms and state media websites. Do you think this will affect Huawei?

Ren: Huawei has been a hot topic over the past several months and has received a lot of positive attention. That made our image bright and colorful. Now these negative comments are adding some darker colors to the portrait, making us a bit more grey, which actually suits our current situation. Even when the general public believed that Huawei was only great before, we still had our own problems.

07

Macarena Vidal, *EL PAÍS*: I would like to ask something about Xinjiang. Recently we saw some news that Huawei was believed to participate in the Chinese government's control over residents in Xinjiang. Does Huawei have some sort of management over how your products and technology will be used in the market? If Huawei's technology was indeed used for that purpose, this could be grounds for the US government's charges against you.

Ren: The situation is similar to say a carmaker in Spain. Can a carmaker determine who it will sell the cars to? What the carmaker sells is just the car itself. What will be put into the car is determined by the driver. The carmaker does not sell drivers, just cars.

Macarena Vidal, *EL PAÍS*: But I think the situation is different. As I mentioned, Huawei's technology was not sold to an ordinary customer, but a government.

Ren: The US sells weapons to governments in the Middle East to help them deal with their problems. I think everyone can take their own look at these two approaches. Is the US's approach better for people in the Middle East? Is China's approach better for people in Xinjiang?

Macarena Vidal, *EL PAÍS*: One of the most severe criticisms of Huawei from the US government has been that they believe Huawei cannot be trusted. If Huawei

was involved in selling equipment to the Chinese government to help them control residents in Xinjiang, would this be justification for the US government's criticism?

Ren: Other industries face similar conundrums, including the automobile and arms industries. The US has no moral high ground to take in this matter.

08

Rodolfo Espinal Soria, *El Peruano*: Mr. Ren, how are you? I'm a journalist from Peru. I was wondering what's Huawei's plan for South America? Peru and China are both ancient civilizations and we are proud of our Incan culture. The two countries have also signed a free trade agreement. So what's Huawei's plan for the Andean states, or rather, South America as a whole?

Ren: More than a thousand years ago, China was a highly developed country. However, the last couple of centuries have seen it decline and become poor. We didn't start recovering until the reform and opening-up policy was rolled out. What happened during those last few centuries? The UK invented the trains and steamships at a time when China still relied on horse-drawn carriages for transportation. Horse-drawn carriages were slower than trains and didn't carry as much cargo as steamships. Europe amassed great strength in a short

period of time through industrialization when China remained an underdeveloped agricultural society. When I was young, we didn't have tractors to farm the land in China. Every rural household still relied on simple farming tools, manual labor, and livestock. We also didn't have the high-quality seeds that Europe had. These two differences led to Europe's rise and China's decline.

Today's world no longer develops along geopolitical lines. Communications networks, including 5G networks, can be developed concurrently around the world. 5G has changed the speed at which information travels. Deploying 5G is like getting people on trains and steamships. Because of this, 5G deployment will drive tremendous progress in Latin America.

I have been to Machu Picchu and was awestruck by the advancement of the Incan civilization that existed 3,500 years ago. Latin America has rich reserves of minerals, farmland, forests, and rivers. If we use AI to leverage these natural resources, Latin America will achieve even greater prosperity. The emergence of new technologies has allowed many countries to develop by leaps and bounds.

The key to achieving all of this though is promoting basic education in primary and secondary schools and improving the literacy levels of the entire nation. It is

also important to develop vocational schools that aim to improve technical skills. We need to cultivate talent for the future. With your abundant resources, an amazing rejuvenation is within sight.

09 **Francisco Miranda, *Portafolio*: Given the conflict between China and the US and the US sanctions on Huawei, your partnerships with US companies such as Google must be affected. But you have stated on multiple occasions that Huawei was fully prepared with a Plan B or a backup plan. Since I'm here, I want to hear about this plan from you first-hand. Could you give us more details about your Plan B?**

Ren: Way back then we were a poor company, unlike the deep-pocketed companies in the US. You probably know how difficult it is to develop a CPU. Intel has been the most successful company in the world to do it. All other companies may find it quite a challenge to develop CPUs. But we, a poor company, managed to make our own CPUs, which was a backup move to ensure our production security. You can imagine how difficult it was! Besides CPUs, we also managed to make NPUs, GPUs, Ascend, and Kunpeng. Without almost two decades of preparation, this would not have been possible.

Currently, we can serve our customers independently

without needing to rely on US supplies. That said, we are still open to working with US companies. As long as US companies can continue to supply us, we will be more than happy to use their components extensively. Self-sufficiency is not our long-term strategy. We still proactively embrace globalization.

10

Francisca Magdalena Guerrero Gatica, *La Tercera*: During US Secretary of State Mike Pompeo's visit to Chile, he gave a speech in Santiago, our capital. He said that investments from Chinese companies in Latin America would only bring corrosive capital to the region, breed corruption, and affect their governance. Despite that, our president visited China and met with a Huawei executive in Shenzhen shortly after Pompeo's visit to Chile. What are your thoughts on this?

Ren: Latin American has been caught in many traps, like the middle income trap, the widening gap between the rich and the poor, and the financial crisis. All of these were actually caused by the US's Monroe Doctrine. The US wanted to control Latin America and treated the region like its backyard, which caused all this. China is investing in Latin America now, but the region still maintains its sovereignty, and by investing in Latin America, China is actually building a ladder to help them

out of these traps.

I think Latin America is likely to develop in a big and open way. For example, as China gradually transforms into an industrial country, it will need a lot of food, meat, cooking oil, and other agricultural products. So Latin America can export large volumes of these products to China. The land in Latin America is very fertile. Two or three decades ago when I first visited Chile, someone asked me if I planned to buy land and settle there. I was deeply impressed by its beauty, especially those big roses. So as long as Latin American countries can ramp up development and production without compromising their national sovereignty, this will be good for their economic development.

**Francisca Magdalena Guerrero Gatica, *La Tercera*:
What are your comments on our president's reaction?
In fact, he visited China and met with a Huawei
executive one week after Pompeo visited Chile.**

Ren: I think it's very wise for President Pinera to propose a digital matrix program. We support every country in safeguarding its digital sovereignty. Chile is a large territory with abundant resources, but it has a small population and thus more urgently needs AI. The digital matrix proposed by the president is a platform that can support AI adoption. When choosing its development path and partners, each country considers what's in their

best interest; they don't choose to follow some other country because of an ideology and give up on their own development plan.

Huawei follows one principle in every country where we operate: We don't intervene in politics. As a business, we sell equipment and offer solutions, helping businesses think about how to develop better.

Let me give you an example that applies to all of Latin America. We have developed a solution called Connected Cows. With sensors on each cow, we connect cows to a network. We can monitor the best times for a cow's milk production and notify them to return to where they get milked. This solution lets each cow produce an additional 156 yuan worth of milk every month. By leasing the devices, carriers make 20 yuan per cow per month. So we are not changing people ideologically. Instead, we are simply seeking development in areas with no ideological factors in play.

You have seen our equipment for autonomous mining. Our 5G solutions can have latency lower than five milliseconds. That means remote operations are almost the same as doing it onsite. So unmanned mines and unmanned farms will be possible in the future.



Mavi Doñate, *TVE*: Hello, Mr. Ren. Thank you very much for having us. I have a question. Do you think

it is a paradox that Huawei, as a Chinese company, is leading the development of 5G while China is a country with strict controls over the Internet? We have to use VPNs to access some websites.

Ren: We are not engaged in information services. We make hardware, which is not that closely related to the Internet. This is like a highway and a car. We are building the highway, so we don't really have much to do with what cars are on it. So, no, I don't think this is a paradox.

Mavi Doñate, *TVE*: If there are no cars on the highway, isn't it a paradox?

Ren: We believe that we should consider a country's situation when building a highway there. For example, some developed countries like Switzerland want to promote AI adoption. This would be impossible without 5G. Since we can offer the best 5G, we can support their development. When other countries see how well these countries develop using our 5G, they will follow in their footsteps. So these developed countries can be a role model for others to follow.

12

Maria Cristina Lima Ferreira Fernandes Costa, *Valor Econômico*: I come from Brazil. I would like to ask you two questions. The first is about 5G. The US and Europe, especially the US, have tremendous influence on Latin America. But recently, Chinese investments

have started entering Brazil and Latin America as a whole. China is now actually the biggest investor in Brazil. Next year, Brazil will hold its first round of 5G bidding. Due to the pressure from local carriers, this bidding might be delayed. I would like to ask you, Mr. Ren, what does Huawei think against this background? Considering the hostile signals that the new Brazilian administration sent to China, will it affect Huawei's participation in Brazil's 5G bidding? My second question is about the use of 5G in Brazil. As we know, Brazil is a very large country with unbalanced development between regions. The less developed regions urgently need 5G, but capital is a huge problem for Brazil. Would Huawei provide funds to help?

Ren: Brazil is a great country. It's amazing that nature has provided Brazil with such incredible land. When I went to Brazil, I was really impressed by its abundant resources. Just scattering dry season rice seeds could get you 450 kg of crops. The fish bite the hooks as soon as they are lowered into the water. Nature has given Brazil amazing natural conditions, so Brazilians don't need to worry about their food or clothing. Because of this, Brazil lacks motivation to overtake the US.

Now that 5G is arriving, Brazil will grow more rapidly. Brazil's legal system is complicated, which is adding pressure to industry development. This is a

tangible barrier that Brazilian industries face. What can digitization do for industry development? With digitization, many things can be designed in advance based on Brazilian laws. Therefore, digitization will help industries overcome numerous legal barriers in Brazil. When AI is applied, productivity will significantly improve and the workforce required will be greatly reduced. Maybe the Brazilian company Vale will only need several hundred employees in the future. That will help settle labor disputes and accelerate industry development.

Someone will ask, "If labor is not needed, what should people do?" AI will greatly increase total wealth, so the government could grow experience-based industries through the proper allocation of this wealth. For example, AI cannot replace humans when it comes to entertainment, like Samba, or sports, like football. Therefore, new technologies are very important to Brazil.

Huawei is not the only company that has new technologies. Brazil can choose to work with other vendors. New technologies will facilitate social progress and industry development, and help lift more people out of poverty.

Maria Cristina Lima Ferreira Fernandes Costa, *Valor Econômico*: As I just mentioned, the current Bolsonaro administration expressed its hostility toward China when it first took office. I would like to ask whether

this will affect Huawei's development in Brazil. In addition, as I said earlier, some underprivileged regions in Brazil would need 5G to develop themselves, but severely lack funding. Can Huawei provide funds to support the development of Brazil?

Ren: First, that was the president's previous view about China at that particular stage. Once he gets to know more about our country, it is likely he will change his opinion. Second, this will not affect our development in Brazil. Underprivileged regions in Brazil should talk to local financial institutions to find solutions. Improving communications in remote areas is always a challenge for the entire world.

13 Pablo Díaz, ABC: It has been more than a year since your daughter, Meng Wanzhou, was arrested in Vancouver. As a father, have you been to Vancouver to see your daughter in person? Or has her arrest affected your personal travel schedule outside China?

Ren: I haven't, but her mom is with her. This incident has not affected my travel schedule.

Pablo Díaz, ABC: Are you concerned about traveling outside China, about being detained as well?

Ren: No.

14 **Javier García, *EFE*: A fellow reporter just asked about China's Internet control and censorship. Do you agree with China's measures?**

Ren: We are not an Internet company, and I haven't done any research into this. Just like the US has banned Huawei from its market, I think every country has the sovereign right to make its own decisions.

15 **Javier García, *EFE*: I also want to ask about the China-US trade war. We, of course, hope that China and the US can reach an agreement and end the trade war. But if no agreement can be reached, who do you think will ultimately win the trade war or tech war? We all know that Huawei is a Chinese company. If Huawei were founded in a capitalist environment, would it have grown better or worse compared to the current socialist environment?**

Ren: These are hypothetical questions, so I am not in a position to answer them. I have no idea why the US and China are fighting with each other or who will win the trade war in the end. Does the one that launched this trade war regret it? Are they confident they will win? I have no idea. We barely sell in the US, so this war has nothing to do with us.

16 **Francisca Magdalena Guerrero Gatica, *La Tercera*: I am a reporter from Chile. Now Chile is vigorously promoting interconnectivity, and it is especially keen to establish closer ties with Asia through submarine cables. Also, Chile wants to become a leader in 5G rollout in Latin America. What are your comments on this?**

Ren: I'm fully convinced that Chile will achieve its ideals and objectives. Asia is a densely-populated region, which means there will be huge demand waiting. If Chile connects with Asia via submarine cables, it will be like how direct shipping cargo greatly reduces transit. This will really boost Chile's economy. I think the President of Chile is very wise to propose a digital matrix plan.

Francisca Magdalena Guerrero Gatica, *La Tercera*: What role will Huawei play?

Ren: As a supplier, we proactively participate in competition. We will do our best if you choose us, and we will proactively provide the best possible service in the world.

17 **Rodolfo Espinal Soria, *El Peruano*: I'm from Peru. Huawei is now a very successful company, and it must have achieved the ideals you had when you started this company. What drives you to lead Huawei to go further in such a complex environment?**

Ren: Maybe the US's ongoing campaign against us has given me this drive. I was prepared to retire. But the US launched a campaign against us, and it pushed me to do some work for our public relations department.

18 **Macarena Vidal, *EL PAÍS*:** I come from Spain. Just now, you said you would be willing to provide Chile with equipment and services that connect it with Asia. Some Spanish carriers, such as Telefónica, have businesses not only in Spain, but also in many Latin American countries. Would Huawei also be interested in supporting Telefónica's effort to build 5G networks in Latin America?

Ren: First, we are very confident that we will help Spain build the best 5G network in Europe, making it a role model for other European countries. Second, we are actually already working with Telefónica in Latin America. We fully support Telefónica's development in Latin America.

19 **Eladio Gonzalez Vizcarro, *Expansión (Mexico)*:** I have two questions. The first is about Huawei's HarmonyOS. What is the relationship between this OS and Google's Android? Is it an alternative to Android? If Huawei is to develop the HarmonyOS, will you invite other vendors to produce devices that use this OS in the future? My

other question is about the US recently extending its Temporary General License for Huawei. If one day, they decide to stop extending the license, would this have a big impact on Huawei's device business, especially in overseas markets? Because Huawei's smartphones are unable to use Google's services.

Ren: First, whether or not the US extends the Temporary General License won't impact us at all. Second, the HarmonyOS will be open source for all countries. We support SMEs in all countries to innovate on this platform. We have developed a deep learning AI cluster in the Songshan Lake area. Any country can buy this cluster and conduct self-learning and deep learning on it, through which they can build their digital sovereignty. This shows how we support countries in building their own digital sovereignty.

The industrial and capitalist revolutions over the past several centuries have helped humanity establish physical sovereignty. But now, with the creation of digital societies and digital wealth, how should we define digital sovereignty? We support the digital sovereignty of every country, and we are also exploring ways to establish such digital sovereignty.

20

Eladio Gonzalez Vizcarro, *Expansión (Mexico)*: I think Huawei now needs to work on two areas. One

is technology, where Huawei is already a leader. Despite the US sanctions, Huawei remains ahead of its competitors. The other area is politics. In this area, I believe Huawei faces big challenges, as President Trump has started a trade war and imposed sanctions on Huawei. Will Huawei change its strategy and invest more in activities such as lobbying?

Ren: We won't change our strategy. First, Huawei has established its technology, service, and production centers for the Latin American Region in Mexico. The country will also stand out as a cloud center for our new businesses. We have established Huawei ICT academies in collaboration with more than a dozen universities in Mexico to cultivate "seeds" for the future. Over the past 10 years, we have trained more than 10,000 local ICT professionals. We also support the Mexican government's plan to provide all the Mexican people with network connections. To this end, we are helping increase 4G and 5G coverage in Mexico and enhance the foundation of its digital economy.

Second, resolving the conflict between Huawei and the US still relies on customer trust. If we had a good relationship with the US, but our customers didn't trust us, then this relationship would be pointless. If customers still trust us, then the US attacks will not really affect us. If the US chooses to attack us, let them do so. They may stop attacking us when they are tired.

Eladio Gonzalez Vizcarro, *Expansión (Mexico)*: Does that mean you will not change your strategy?

Ren: No, we won't.

21 **Francisco Miranda, *Portafolio*: Given the current situation, will your device business become increasingly closed off? In other words, will your products and ecosystem be free of all US components, software, and applications, and become a completely independent, closed Chinese system?**

Ren: That will not happen. Using in-house components is just a temporary measure because US companies are suddenly not allowed to supply us. This is an ad hoc tactic. We are still committed to embracing the most advanced civilizations of the world. Our new operating system will not just be used for smartphones; it will be used in everything from Internet of Things devices to display systems. We will never become a closed system though.

22 **Lucas de la Cal, *El Mundo*: You are not only the founder of Huawei, but also a famous, influential figure in China. There is news that NATO recently introduced a policy that labels China as a major threat and challenge to NATO. What's your view on this?**

Ren: I haven't heard of the policy you mentioned. What I do know is that NATO has been debating whether their relationship with China should be constructive or competitive. NATO didn't call China a rival. This is because there is neither a geographic connection nor a conflict of interest between NATO member states and China. 5G is a boon, rather than a threat. I don't think there has been any impact on our European markets.

23

Maria Cristina Lima Ferreira Fernandes Costa, *Valor Econômico*: My question is about AI. Just now you talked about the future development of AI positively. Now back to Latin America where we are seeing problems caused by uneven economic development, such as mass demonstrations in many countries as well as a lot of fake news. My question is, can AI at least help us eliminate fake news? Will there be any responsible AI system that can facilitate technological advancement without increasing unemployment in Latin American countries?

Ren: Social issues aren't my area of focus. We are looking at AI to increase productivity in industrial and agricultural settings.

Fake news is not unique to Latin America. It's prevalent in China, too. In the past, members of the media focused on exposing the real problems of society.

Nowadays, however, many articles only have eye-catching headlines and no substance. Even the most accurate articles may have been spiced up a bit, and the worst are nothing but spice. AI alone can't solve the problem of fake news. The law is the best solution.

AI can help create more wealth, but some say that it might also cause many people to lose their jobs. So I recommend that each country prioritizes the development of basic education to improve the literacy levels of their entire nation. They should also set up large numbers of vocational schools, to equip people with skills required for future jobs.

Sometimes, history develops differently to what people predict. When textile machines were first invented in the UK, it was believed that many people would lose their jobs. Some people even smashed these machines. Ultimately though, what we saw was the prosperous development of the textile industry, rather than textile workers losing their jobs. Today, we're not in a position to predict what the future information society will be like. People need positive guidance. This is the only way for new technologies to create wealth for society rather than destroy social structures on a large scale.

24

Natacha Carla Esquivel, *Clarín*: I'm from Argentina, where we have a complicated situation. We borrowed

a lot of money from the International Monetary Fund, so we have serious debt problems. This has led us to become very dependent on the US, hoping that the US will help us in this regard. In order to win the support of the US, do you think it's likely that Argentina will go against China and take actions such as excluding Huawei from building their 5G networks? Because the US may use our weakness to force us into resisting China.

Ren: This is an option for the Argentine people. From our side, we will not give up on our development in Argentina. A momentary setback will not change our long-term strategy.

Ren: Thank you all for coming to Huawei today, and I'd love to welcome you all back this time next year. Next time, the highlight of the visit will be AI, rather than just a general tour. I would also recommend that you set some time aside to visit some showcase examples of how AI is applied in China. We'd like to make our contributions to the economic development of Latin America, which I think is the most beautiful place in the world. I hope to see you all again next year!

Journalist: See you next year.



Ren Zhengfei and Yuval Noah Harari at Davos

Davos, Switzerland January 21, 2020

01

Zanny Minton Beddoes, Editor-in-Chief of *The*

Economist: I think both I tried to find things you have in common and I think it is a love of history. One you're obviously a professional historian. Mr. Ren, I would say that you perhaps are an excellent amateur historian. You have focused a lot on the lessons of history. So I think you're both extremely equipped to tell us about what this future is going to look like. And we're going to shake the next half hour by trying to answer three broad questions.

One is what is at stake? How much does it matter to humanity, to the world that we have this tech arms race? Is it a question simply of market dominance, or are there deeper questions about the future of market systems, the future of our democracies, the future of who has global dominance? What is at stake?

Secondly, what are the consequences of the tech arms race? What happens? Do we split into a two ecosystem world? And what does that mean?

And thirdly, what do we do to avoid the worst outcomes? That's a Davos-ian attempt to end on an upbeat note. So I'd like you to tell us exactly how we make sure we get the best outcomes.

So I'm going to start, Professor Yuval, with you. To shape us... What is at stake? And I want to start with a quote from one of your books. You said humans, you

wrote humans will change more in the next hundred years than in their existence before. AI and biotech could undermine the idea of individual freedom, making free markets and liberal democracy obsolete. Democracy, it went on to stay in its current form, cannot survive the merger of biotech and info tech. So would it be fair to say if you think a huge amount is at stake in this and why?

Yuval Noah Harari: Yeah, very much so. So I mean, on one level, the more shallow level, it would be a repeat of the 19th century industrial revolution when the leaders in industry basically have the power to dominate the entire world economically and politically. And it can happen again with the AI revolution and biotech revolution of the 21st century. And we are already beginning, I understand the current arms race as an imperial arms race, which may leave very soon to the creation of data colonies. You don't need to send the soldiers in if you have all the data for a particular country, but on a much broader and deeper, from a deeper perspective, I think it really is going to shape the future of humanity and the future of life itself, because with the new technologies you are soon giving some corporations and governments the ability to hack human beings.

There is a lot of talk about hacking computers, smartphones, emails, bank accounts, but the really

big thing is hacking human beings, to hack human beings. You need a lot of biological knowledge, a lot of computing power, and especially a lot of data. If you have enough data about me and enough computing power in biological knowledge, you can have my body, my brain, my life. You can reach a point when you know me better than I know myself. And once you reach that point and we are very close to that point, then democracy, the free market as we... actually all political systems, also authoritarian regimes, we have no idea what happens once you pass that point.

Zanny Minton Beddoes: Do you think that China, which in many ways is further ahead on this in terms of being a surveillance state, is a harbinger of where things are going?

Yuval Noah Harari: I think that at present, we see competition between state surveillance in China and surveillance capitalism in the US. So it's not like the US is free from surveillance. There are also very sophisticated mechanisms of surveillance there. I think in the competition at present, there is no serious third player in this arms race. And the outcome of the arms race is really going to shape how everybody on the planet is going to live in twenty to fifty years: humans, other animals, new kinds of entities.

Zanny Minton Beddoes: So Mr. Ren, you heard that. Do

you share Professor Harari's assessment of the stakes, that the very future of humanity and political systems is at stake?

Ren: I've read Professor Harari's *A Brief History of Tomorrow and 21 Lessons for the 21st Century*. I agree with many of his views on the rules that govern human society and the conflict between technology and future social structures and changing ideologies.

First, we must understand that technology is good. Technological development is not bad; it's good. Humanity has a long history of development. For thousands of years, technological advancement was very slow, which was very much in sync with biological evolution. So people didn't panic. When textile machines, steam ships, and trains appeared, people had some fears. However, as the industrial society progressed, these fears disappeared.

After we entered the information society, the intervals between technology booms started becoming even shorter. Now, we have made great breakthroughs in electronic technologies. Although Moore's law is still constraining the development of electronics technologies, we are sure that we will be able to scale chipsets down to two or three nanometers.

Second, due to great improvements in computing power, information technologies are like seeds spreading

everywhere. Breakthroughs in biotech, physics, chemistry, neurology, and mathematics, as well as interdisciplinary and cross-domain innovations have built significant momentum for humanity's advancement. When that momentum hits its tipping point, it will lead to an explosion of intelligence. This great technological explosion may scare people. Is such an explosion good or bad? To me, I think it's good.

I think humans have always been able to use new technology to benefit society, rather than destroy it. That's because most people aspire for a good life, rather than a miserable one.

Just after I was born, the atomic bomb exploded in Hiroshima; when I was around seven and eight, I found that people's biggest fear was the atomic bomb. People around the world were afraid of it. However, when we take a long-term view on history, we realize that atomic technology can be used to generate power to the benefit of society. Its applications in radiation therapy and other fields have also benefited mankind. Because of this, there's no need to panic about AI today. While atomic bombs may hurt people, the development of AI today can't cause as much hurt.

Of course, our company is just studying weak AI, which is limited to a closed system, clear rules, and a complete set of information. It still requires certain

conditions and the support of data to drive industrial, agricultural, scientific, and medical advancements. That means its application has boundaries. There are boundaries in many applications, including autonomous driving, mining, and pharmaceutical technologies. With the improvement of AI within these boundaries, huge wealth will be created.

Some say, "Many people would lose their jobs in the process of wealth creation." This is a social problem, and creating more wealth is better than creating less. In today's society, even the poor have a greater absolute wealth than what they had a few decades ago. The widening gap between the rich and the poor doesn't mean that the poor are sliding into more severe conditions of absolute poverty. Resolving the conflicts caused by the widening wealth gap is a social issue, not a technological one. How to fairly distribute wealth is a matter of policy and law. It's a challenge for social governance.

Zanny Minton Beddoes: Thank you. You raised a huge number of really interesting issues. I want to focus on two of them and ask Professor Harari to respond. One is the comparison between the atom bomb and atomic energy broadly. Is that an appropriate analogy? Because I think that is a very interesting analogy in the context of this discussion about the technology

arms race. I'm sure everybody in this room, Mr. Ren, would agree that there are huge benefits to be had from technology. I'm sure Professor Harari would agree with that too. But do you think that there is something, and I'm back to asking you again Professor Harari, fundamentally different about the nature of AI and biotech, which means that it is significantly more dangerous than previous technological breakthroughs?

Yuval Noah Harari: Yeah, I mean, the comparison with the atom bomb is important. It teaches us that when humanity recognizes a common threat, then it can unite, even in the midst of a Cold War, to lay down rules and prevent the worst, which is what happened in the Cold War.

The problem with AI compared with atomic weapons is that the danger is not so obvious. And at least for some actors, they see an enormous benefit from using it. With the atom bomb, the great thing was that everybody knows when you use it, it's the end of the world. You can't win a nuclear war, an all-out nuclear war. But many people think, and I think with some good reason, that you can win an AI arms race. And that's very dangerous, because the temptation to win the race and dominate the world is much bigger.

Zanny Minton Beddoes: I'm gonna really put you on the spot there. Do you think that is a mindset more in

Washington or in Beijing?

Yuval Noah Harari: I would say Beijing and San Francisco. Washington... they don't fully understand the implications of what is happening. I think at present that the race is really between Beijing and San Francisco, but San Francisco is getting closer to Washington because they need the backing of the government on this. So it's not completely separate. So that was the one question, what was the other?

02 Zanny Minton Beddoes: The second question was about AI. You've answered it broadly, and I actually want to go back to Mr. Ren to respond to that. Because you're clearly... the target of much American concern... Given what we've just been talking about, do you understand why the Americans are so concerned? Is it a reasonable concern to have that China, an authoritarian regime, should be at the cutting edge of technologies that can, as Professor Harari said, possibly shape future societies and individual freedom? Is it a reasonable concern for them to have?

Ren: Professor Harari said the US government doesn't really understand AI. I think the Chinese government might not understand it either. If the two countries really want to develop AI, they should invest more in basic education and basic research. China's education

is still stuck in an industrial era, and the focus of the education system is on cultivating engineers. Therefore, it is impossible for AI to grow quickly in China. Developing AI takes a lot of mathematicians, physicists, biologists, chemists, etc. It also takes a great deal of supercomputers, super connections, and super storage. China is just a toddler in these areas. So I think the US is worrying a bit too much. It has gotten used to being the reigning champ, and it thinks that it should be the best at everything. If someone else does well in something, it might feel uncomfortable. However, what the US thinks will not change global trends.

I think eventually humanity should make good use of AI and learn how to use it to benefit us all. As Mr. Harari said, rules should be developed to regulate what we can research and what we can't, so that we can control how it develops. There are also ethical problems in technologies. In my opinion, Mr. Harari's idea of electronics infiltrating our minds will not come true in the next 20 to 30 years or even after that. However, AI will first transform production, improve productivity, and create more wealth. As long as there is more wealth, the government can distribute it to ease social conflicts.

In my recent article in *The Economist*, I quoted a sentence, "What would happen if semiconductors integrated with genetics?" But they took it out because it would start a discussion. When they told me it had been

deleted, I immediately agreed to it, because I know it is a complicated issue.

03 Zanny Minton Beddoes: Let me follow up there by asking, the US may not understand, and the US in your view may overrate what it sees the threats from China. But what are the consequences of this current tech arms race? And what are the consequences of the US's blacklisting of Huawei? Are we seeing the world shift into two tech ecosystems? Is that what going to happen?

Ren: Huawei, as a company, used to be a fan of the US. An important reason for Huawei's success today is that we learned most of our management practices from US companies. Since Huawei was founded, we have hired dozens of US consulting firms to teach us how to manage the company. Now our entire management system is very similar to those of US companies. So the US should be proud, as US companies has contributed to our development. We are a model in terms of how successfully the US can export its management practices.

Therefore, from this perspective, I don't think the US needs to worry too much about Huawei's position and growth in the world. Being placed on the US's Entity List last year didn't have much impact on us. We have basically been able to withstand the attacks, as we

started to make preparations over 10 years ago. This year, the US may step up its attacks on us. We will be affected, but not significantly. More than a decade ago, Huawei was a very poor company. 20 years ago, I didn't have my own house, and rented a small apartment, which was only about 30 square meters. Where was our money? All of it was invested in Huawei's research and development. If we had felt we were safe with the US, we wouldn't have made our plan B. But we didn't feel this way. That was why we spent hundreds of billions of yuan making preparations. As a result, we withstood the first round of US attacks last year. As to the second round of attacks this year, with the experience we gained and the lessons we learned last year, we are confident that we will be able to withstand these attacks.

Will the world be split into two tech ecosystems? I don't think so. Because science is about truth, and there is only one truth. When any scientist discovers the truth, it will be spread to the whole world. The basic theories of science and technology are unified across the world, whereas there can be a diversity of technological inventions, representing different applications of science. For example, there are various models of automobiles competing with each other, and this competition is conducive to social progress. So it's not that society must promote only one set of technical standards. Will the world be divided? No, as the foundation of science and

technology is unified.

04

Zanny Minton Beddoes: Professor Harari, what's your take on that? I want to quote back to you something you wrote actually in *The Economist*, indeed. An AI arms race or a biotech arms race almost guarantees the worst outcome. The loser will be humanity itself.

Yuval Noah Harari: Yes, because once you're in an arms race situation, many technological developments and experiments are dangerous, and everybody may recognize that they are dangerous. And you don't want to go in that direction, at least not now. You're thinking this: Well, we don't want to do it; we're the good guys; but we can't trust our rivals not to do it. The Americans must be doing it. The Chinese must be doing it. We can't stay behind. So we have to do it. That's the arms race logic.

And a very very clear example is autonomous weapon systems, which is a real arms race. And you don't need to be a genius to realize this is a very dangerous development. But everybody's saying the same thing: We can't stay behind. And this is likely to spread to more and more areas. Now, I agree that we are unlikely to see computers and humans merge into cyborgs in the next twenty or thirty years.

I think there are so many things that we can see

development in AI in the next two decades. But the most important point to focus on is what I mentioned as hacking human beings. The point when you've got enough data on people and you have enough computing power to get to know people better than they know themselves.

Now I would like to hear what their thoughts are, also for people in the hall. Are we at a point... I'm not a technologist, but the people who really understand, are we close to or at the point when Huawei or Facebook or the government or whoever can systematically hack millions of people, meaning knowing them better than they know themselves. They know more about me than I know about myself, about my medical condition, about my mental weaknesses, about my life history. Once you reach that point, the implication is that they can predict and manipulate my decisions better than me. Not perfect. It's impossible to predict anything perfectly. They just have to do it better than me.

Zanny Minton Beddoes: Shall we ask Mr. Ren, do you think Huawei is at that stage yet? Do you know people better than they know themselves?

Ren: We are not sure whether the science and technology Mr. Harari is imagining will become a reality or not, but I will not dismiss his imagination. As an enterprise, we must have a deeper understanding of our

customers and their data and information. For example, is it possible for mining to rely solely on AI, without any manual labor? I think it's possible. Remote mining from several thousand kilometers away has become a reality. If a mine is located in a frozen or high-altitude region, AI will prove its worth there. In the future, top mines, like those in Brazil, may adopt this remote mining model. However, this requires us to have an in-depth understanding of mines. To better understand mines, tech experts need to work with mining experts. Similarly, telemedicine is only possible when doctors and electronic devices are integrated. Therefore, this understanding of humanity is a gradual process.

Mr. Harari said that embedding electronic devices in humans will make us gods. I don't think we have to worry about that, because we humans may die at 80 and our souls cannot just continue. That's why I don't think humans will ever become gods.

05 Zanny Minton Beddoes: What about the other subject Professor Harari raised of autonomous weapons? Because that does seem to be one where we are there. Military systems have them. What is your view of that? Do you think that they are as dangerous as Professor Harari says? And how do you stop the logic of mutually assured destruction from autonomous

weapons?

Ren: I don't know much about military affairs, nor am I a military expert. But if everyone can create weapons, weapons will no longer be weapons, but will be just like sticks.

06 Audience: I just want to ask Harari. Why do you think that there's an AI arms race between China and the US? At least one sees that the applications in China are all for civilian use. And there seems no mind for really competing. Is there an arms race?

Yuval Noah Harari: Well, by arms race, I don't mean necessarily developing weapons. Today, to conquer a country, you don't need necessarily weapons.

Audience: What I meant was, what's the difference between the usual commercial competition versus what's state, you know, the state ...?

Yuval Noah Harari: There is no clear border there. That happened in the 19th century and earlier with European imperialism. There is no border between commercial imperialism and military or political imperialism. Now with data, we see this new phenomenon of data colonialism to control a country, let's say, Africa, South America, or the Middle East. Just imagine this situation 20 years from now when somebody, maybe in Beijing,

maybe in Washington or San Francisco, knows the entire personal medical and sexual history of every politician, judge, and journalist in Brazil, or in Egypt. And just imagine the situation. It's not weapons. It's not soldiers. It's not tanks. It's just the entire personal information of the next candidate for the Supreme Court of the US, of somebody who is running for president of Brazil. And they know their mental weaknesses. They know something they did when they were in college, when they were 20. They know all that. Is it still an independent country, or is it a data colony? So that's the arms race...

07

Audience: I'm a global shaper from the young community of the World Economic Forum. So my question will be for both of you. First of all, I would like to ask, you know worldwide governments and big companies are so powerful that they are actually able to shape the life of consumers. What is actually the power that is left to normal people? I'm a technician, so I have my own opinion about information security. But what is the power that is left to normal customers?

Ren: As technical exchanges become easier, humans will get a better understanding of things and will become increasingly smarter. Actually, this is what is already happening. For example, we may not understand

the textbooks of today's elementary school students. Why do they learn these things? Courses we used to take in our universities are now being taken in middle school. This means we have made progress in the information age. However, we still need to master new knowledge. Different people may have varying degrees of knowledge, and may therefore have different jobs. People will still take the initiative, rather than being enslaved.

Zanny Minton Beddoes: So you would say that technology is giving individual people more agency and more power.

Ren: Yes.

Yuval Noah Harari: I think that technology can work both ways, both to limit and to enhance individual abilities or agency. And what individuals can do, especially technicians and engineers, is to design a different technology. For instance, now a lot of effort is about building surveillance tools that surveil individuals in the service of corporations and governments. But some of us can decide to just build an opposite kind of technology. The technology is neutral on this. You can design a tool that surveils the government and big corporations in the service of individuals. They like surveillance so much that they wouldn't mind if the citizens surveil them. For instance, you're an engineer.

Build an AI tool that surveils government corruption. Or you build an anti-virus for the computer. You can build an anti-virus for the mind that alerts you when somebody is trying to hack you or to manipulate you. So that's up to you.

Zanny Minton Beddoes: We've run out of time. I apologize. But that is an appropriately upbeat place to end on: Create tools that can empower the individual in this. Thank you both very much for fascinating points.

Ren Zhengfei's Interview with South China Morning Post

March 24, 2020

01

Tammy Tam, Editor-in-Chief, *South China Morning Post*: Good afternoon, Mr. Ren. We are from South China Morning Post, based in Hong Kong. Thank you so much for taking our interview today. As the saying goes, there are two sides to every coin. We finally made a go at interviewing you, but the flip side is that we can't meet in person due to the COVID-19 outbreak. But with advanced communications technology, we can try it this way. We really appreciate it!

Today, COVID-19 is spreading rapidly around the world. Luckily, the Chinese mainland has contained it. Speaking of the epidemic, can you talk about its impact on Huawei's production? How has Huawei responded to this epidemic? Can you tell us what's going on in your company?

Ren: There is definitely some impact, but as we live in an ever-changing world, we must adapt to changes. This change has had some impact on us. Our growth isn't as fast as before, but over 90% of our production and R&D activities are back to normal.

Even during the Spring Festival, we had over 20,000 scientists, experts, and engineers work overtime. Why? We are working against the clock on production continuity, since the US may increase its sanctions against us.

First, the company started working back on February

1. Since then, our production capacity went from 70% to 80%, then to 90%, to over 90%. However, we rely on many companies along the global supply chain for our materials. So we are facing some difficulties. Many small companies and factories in China are not well-equipped to defend against the virus, so they have difficulties returning to work. We are helping them address their lack of protective materials like masks along with hygienic conditions and other problems. We're also encouraging local governments to let them return to work, so that they can pick up the pace in supplying components to us.

Second, we provide decent incentives for truck drivers transporting our goods. Today, it is not easy for them to get food on their route, so we prepare snack boxes for them. What's in the snack box? A thermos of hot coffee or tea, yogurt, sandwiches, and masks. We have also set up tents in places where they unload goods. They can eat there. This way, these drivers have the initiative to transport goods for us.

Third, air freight is costly, up three to five times, because many flights have been canceled. We must cover these additional fees to address customer needs and continue supplying them. So the entire supply chain has had some impact on us, but the impact is limited, so we can still guarantee our supply.

We also have a lot of maintenance personnel. To guarantee smooth communications, we can't always have them at home. They need to go to different sites to maintain networks around the world. The more severe the pandemic is, the more people need network services. So they can't just stay put. We worked to provide better hygiene and protection for them and also better incentives. This helps them better protect themselves while serving customers.

Besides Hubei, there have been very few confirmed cases in our company. There hasn't even been one case on our Bantian or Songshan Lake campuses. Even for those confirmed cases, mostly in Wuhan, our employees have recovered very quickly.

Tammy Tam: You've put invaluable efforts into this. Just now, you said that you are racing against time, since you need to develop something new before the US tightens its sanctions. Can you tell me what this new thing is? Which one has had a greater impact on Huawei's future, the US sanctions or the COVID-19 pandemic?

Ren: The US sanctions have had some impact on us, but not much. The pandemic also has had some impact on us, but not much either. The impact is very limited, so we can survive both of them.

Tammy Tam: So what's the new thing you mentioned?

Ren: There is no problem for us to survive as a company. But the question is whether or not we can maintain global leadership. Anyway, the US is the leader in many aspects. They have the world's most advanced science, technologies, and education system, as well as the most educated talent. But if we don't have access to these elements to fuel our development, we may lose our global leadership. So we really need to get all these elements done ourselves in the next three to five years. Otherwise, we won't be able to lead the world any longer. So we're investing even more in these areas.

02

Eugene Tang, Business Editor, South China Morning Post: Just now you spoke about racing against time to restore productivity. Has this pandemic had any impact on Huawei's sales or customer demand for equipment? Recently, the situation has calmed down in China, but things outside China are getting rapidly worse. This is the second wave of the pandemic. For international companies like Huawei, how will you cope with this second wave?

Ren: First, when the situation in China becomes more stable, our development may even speed up. People have already seen the role new technologies play in preventing the spread of the virus. Telemedicine, distance education, teleconferencing, and telecommuting all

show us how important networks are. People are eager to improve their networks, and so we need to meet their actual connecting needs. Second, Western countries are starting to feel the impact of the pandemic, but quite a few of our projects are about capacity expansion or capability improvement. They don't necessarily need to be completed in the field; they can be completed in an equipment room. This means the pandemic hasn't significantly affected our customer services or development. Of course, there is some impact, but we can handle it.

03

Eugene Tang: You also mentioned the US sanctions just now. Over the course of your personal career, you have learned from many US companies and even drawn wisdom from US politics. However, during the past two years, the friction between the US and China has intensified, and the US seems to be determined to take Huawei out. Ultimately, do you think the US is an enemy or a friend?

Ren: If we want to survive, we have to learn from the best. Even if they fight against us, we still have to learn from them. How else would we become advanced? If a technology company is not advanced, it's bound to die. So if we don't want to die, we have to study hard.

The US sanctions were enacted by a relatively small

number of people. They don't represent the American people or US companies. We have worked earnestly with US companies, and we sincerely want to work more closely with the US's science and technology communities, as well as US companies. There are many science and technology research papers available online. Those papers are openly accessible to the whole world. We also read them. We can't be narrow-minded. We must learn from the US, because they are the most powerful.

Eugene Tang: Your open-mindedness is admirable. From a long-term perspective, the friction between China and the US is inevitable. Do you think Huawei is a pawn in this game between the two countries?

Ren: First, I don't know much about the conflicts between China and the US. What they are fighting over is a bit unclear to me. What we focus on is how Huawei can survive. The only way for Huawei to survive is to learn from the best. As Confucius said: "When three walk together, there must be one who can be my teacher". Even if there are less than three people, at least one of them can be my teacher, and so we should learn from them. This is the only way we will have the chance to improve. Narrow-minded populism and nationalism will only leave us behind.

Huawei has over 200,000 employees. Even today,

you cannot hear any anti-American slogan from top to bottom in this company. Everyone is learning from the US. We recently even posted some articles on our Intranet released by the US Department of Defense, such as The 5G Ecosystem: Risks & Opportunities for DoD, and another one about Mattis' order on troop deployment. We think they're very well written. They know how to launch an effective campaign against us. Based on their deep insight, we can learn how to further improve ourselves.

Eugene Tang: In the early days when you started your business, you went to the US to learn from their business experience, their politics, and the US Constitution. You say you have a lot to learn from them. In the past two or three decades, from your own experience, what events or periods do you think contributed to the vicious circle we now see between Huawei and the US?

Ren: There was no specific period that caused this, because we've always viewed the US as a powerful country. We've been looking at how companies in Silicon Valley have succeeded. We've worked hard the entire time. The US's legal system is sound, so we learnt from it to standardize our operations. The US's system for separation of powers is also great. For our company, we also avoid centralizing authority in the hands of any

one person. All these have laid a solid foundation for our steady development today. There were no milestone events in this development process. We are confused about how we stumbled into this situation, and we will probably move forward in a similarly confused manner.

In short though, we have never shied away from self-improvement or self-reflection. Self-reflection is our company's greatest strength. If you ask a Huawei employee what he thinks he does well, he likely wouldn't be able to answer. If you ask him what he doesn't do well though, he'll talk your ear off. In our company, if a management team keep bragging about themselves, they will be booed off stage; if they talk about what they don't do well, everyone understands them. The more people reflect on themselves, the more outstanding they can become. People who know where they don't do well make changes. This is the "self-reflection" that is part of Huawei's corporate culture.

The US is a good example of self-reflection. In American movies, the US government is often set to be the loser. As the impeachment against Trump continues, he keeps working as usual. This is a self-correction mechanism. We should learn from this mechanism and avoid letting any one person have all the say. Otherwise, the company would be in great danger. We learn from whatever the US does well, regardless of the conflict between us. That doesn't matter in the end.

04 Tammy Tam: What you said about learning from the US is very interesting. Could you share how you've planted good things from the US in the Chinese soil? Many people say there are certain things in the West that just wouldn't work in China. But Huawei has set a different example. You have learned from American culture, ideas like the separation of powers, and aspects of the legal system. I was wondering how you cultivated a company like Huawei in China. Was there any struggle during this process?

Ren: No, no struggle within the company. Before we launched this corporate-level transformation, consultants from IBM warned us that it would diminish the authority of our top leadership. They made it very clear at the very outset that this transformation would place all authority in our business processes. That means authority would be vested in the processes, rather than top leadership. What top leadership could do was setting rules. The ultimate goal was to make me a puppet, because the more I became a puppet, the more successful this transformation would be.

Every link in a process has a certain scope of authority. We learned this from the West. If we want to intervene in matters beyond the scope of our authority, we would have to change rules. We have the authority to change rules, but rules cannot be changed overnight.

There must be discussions, just like the legislative process in the US, which can take years, but a legislative proposal will become clearer and more practical through debate. It may be impossible to make things that are too idealistic a practical reality. However, it's often the case that the things that we have come to agree on through debate do gradually become a reality.

Therefore, the higher the leadership at Huawei, the less authority they have, because all the authority has been delegated to lower levels. That's what we have achieved through our transformations.

Though the model of process-based authority originated from Western countries, companies in the West still give too much authority to their CEOs. Their CEOs have the final say in almost everything. What if a CEO is asleep at the wheel? What if a CEO fails to answer an important phone call?

Many things at Huawei could run their course without the CEO even noticing them. There are different kinds of cycles in business, big, medium-sized, and small, which run their course and improve on their own. They may require different kinds of authority allocation and different oversight mechanisms. We have learned methodically from the world's leading management practices.

Eugene Tang: Just now, you mentioned the concept of

taking foreign things and making them work in China. Huawei's ownership structure is really unique. It's a structure seldom seen in businesses anywhere in the world, with the exception of John Lewis Partnership, a long-standing department store in the UK. Why did you choose this structure when you founded Huawei? Could you share your thoughts with us?

Ren: First, Huawei is different from, for example, a real estate company. At Huawei, it's the brains of our employees that create wealth. I cannot put these brains in my pocket. They are independent individuals. The company relies on the brains of our employees to create wealth. Some employees might create more wealth than others, and we reward them based on how much they contribute to the company.

Second, tech companies thrive on the foundations they built in the past. Employees' past achievements can continuously create value for the company. Even if we immediately awarded bonuses to employees for the achievements they made in the past, it would be unfair if we use them for free today.

That's why we have adopted a Contribute and Share system where employees share in the benefits of their past hard work. We distribute shares to employees in recognition of their past contributions. This way, they can continue to benefit from the contributions they

made in the past, as these still create value for the company today.

I didn't come up with this structure at the very beginning; it took shape gradually. In a word, we need to recognize the contributions employees made in the past and give them rewards, but the proportions of the rewards need to be assessed according to the actual contributions of our employees. This approach can help bring our employees together.

Eugene Tang: As an employee-owned enterprise, you'll never need to go public, right?

Ren: Maybe someday. We haven't given it any thought.

Eugene Tang: You have three rotating chairs, each of whom is in office for six months at a time. People outside the company don't really know how the rotating chair system works, or how the position is handed over every six months. As you just said, a company can collapse if its CEO is asleep at the wheel. Under this structure, how do you downplay the role of personality of each rotating chair and ensure consistency throughout the management team?

Ren: While in office, the rotating chair serves as the foremost leader of the company. The other two non-acting rotating chairs provide assistance and serve as a constraint. The Executive Committee of the Board of

Directors (BOD) and the BOD also serve as a constraint on the rotating chair in office. The BOD Chairman presides over the Representatives' Commission, and has the authority to remove incompetent executives. Rotating chairs cannot simply do whatever they want while in office, as there are constraints on their authority. At Huawei, authority is locked up in a cage, which is to say that authority is constrained by rules and collective decision making.

The rotating chair in office works in accordance with the company's rules and regulations. The other two rotating chairs also need to fulfill their due responsibilities; they're not left idle. It's just that they do not make the final decisions. They actually need to prepare themselves to further advance the company's transformations once their terms start. They don't just manage transformation projects once they take office. They conduct sufficient surveys, prepare transformation solutions and related documents well in advance, and will present many documents for discussions once they are in office. If a rotating chair doesn't prepare in advance, he will run out of time, as his term will end even before he gets all these documents prepared. So he must get prepared before he takes office.

All rotating chairs fulfill their due responsibilities, either in the short-term or long-term. Each rotating

chair needs to oversee the implementation of a transformation project that they might launch when they take office. The rotating chair in office doesn't have the final say in a transformation project; instead, it is determined through collective decision making. This way, this won't affect the consistency across the company that much.

This rotating chair system is mainly designed to protect our managers. When an executive is in office, you don't see their whole clique of managers rising with them. Say the rotating chair currently in office doesn't like a manager, he cannot remove this manager on his own. Instead, the rotating chair must discuss it with the other two rotating chairs, four executive directors, the BOD Chairman, and other BOD directors. Together, they decide how managers are deployed. That's why we don't have a high attrition rate of senior managers or experts.

We have strong talent succession plans and have very stable managerial teams. Managers are not afraid of their upper-level leadership. They feel it doesn't matter whether their leadership likes them or not, as their leadership might step down in just a few months. For managers, all they need to do is to prove their capabilities with the results of their work.

Our rotating chair system enables the company to stay fresh and ensures the stability of our managerial

team. When a rotating chair is not in office, they are busy making preparations for their next term. They travel around the world to provide guidance. Their guidance is valuable as they remain part of the senior leadership. They talk with representatives from different departments, so that they can develop well-thought-out plan for how they will advance transformations when they take office, and get fully prepared for this.

When in office, they take prompt actions to deal with the issues that come up. When not in office, they need to recharge their batteries, because they won't have much time to do so while they are in office. This can help create a reasonable cycle. This rotating chair system has been successful so far.

We've also implemented a tenure system for members of the BOD Executive Committee. All seats on the committee come up for election every five years. Some members might not be re-elected next time. Even if a member is excellent and elected again, they can only serve a maximum of three terms. There is an exit mechanism for senior managers. If they serve lifelong tenures, there won't be opportunities for young people to grow and shine.

When a rotating chair is in office, they work with many other BOD directors and executives. They are actually cultivating the next generation of leaders. We

are still figuring things out, so we cannot say for sure that we're doing everything well.

05 Eugene Tang: Huawei is not a listed company, but it still publishes its annual report in the way a listed company does. This is a bit unusual. I assume that at the beginning, there must have been opposition within the company to the idea of sharing its business data and sensitive information with the world. How did you come up with this idea? Why did you decide to do this?

Ren: We bid for thousands, maybe even tens of thousands of international contracts every year, and each time we bid, we need to submit an audit report. If we don't, we are not qualified to bid. So we turned to the most authoritative companies and asked them to perform audits. Right now KPMG is our external auditor. They audit all of our businesses across more than 170 countries, and produce an audit report in March every year.

We make our audit reports publicly available so that our customers can trust us. When we submit a bid, the customer's board of directors often check our reports. An audit covers more than financial statements; it also covers many other details. If we don't have strict management systems, there will be chaos. Then how will international carriers and customers trust us?

We aren't just publishing our financial statements. We are showing the world that we are open. In addition to financial statements, we also publish many other things. This is something we need to do. We are not a listed company, but it doesn't mean we have more freedom or can relax our management. To be accountable to our customers around the world, we first need to make things openly available, because every bid requires audit reports and the contracts may need to be approved by the customers' boards of directors. From this point of view, we are not forced by anyone to publish our financial statements; it's just something we feel we need to do.

Moreover, there was never really any opposition within the company. Everyone understands we need to make these things public.

06 Eugene Tang: Huawei has a unique corporate culture. Some employees criticized this corporate culture, calling it a "wolf culture". They say that while China's wider technology sector has the 996 work schedule, Huawei has a 007 schedule, where employees work from zero hundred hours on day one to zero hundred hours on day two, for seven days a week, without rest. What's your opinion on the work-life balance in China's business world?

Ren: First, Huawei doesn't have a 996 schedule – I don't know which company first used this phrase – and we definitely don't have a 007 schedule. The standards we use for our employment contracts are high, higher than what is legally required in China, because we are also subject to EU audits. We cannot work too much overtime, because workers in the EU are restricted in this regard. Our junior employees are not allowed to work too much overtime even if they want to, and our regulations do not allow for overtime pay past a maximum number of hours. For some scientists and high-end talent, they may spend more time on their work because they are driven by a sense of mission, but they don't do this all the time. Sometimes they attend meetings and brainstorming sessions for several days, but that is normally at nice scenic spots like parks with cherry blossoms in Japan or the countryside with lavender fields in France, where they can sit and discuss and chat. This lets them work and rest as they need. This is flexible. We don't have a 996 or a 007 schedule.

Regarding the "wolf culture", we believe wolves have three characteristics: They are highly sensitive; they work as a team; and they persevere. One of the most notable characteristics of wolves is their acute sense of smell. Similarly, we need to be highly sensitive so that we can identify customer needs and technological trends for the next 10 to 20 years. This sense of smell is important

to wolves because it helps them find food, even on the frozen tundra. Similarly, we need to be sensitive to market needs, customer needs, and new technologies.

Second, wolves don't work alone; they work together. For us, that means teamwork. We need this kind of teamwork. Google does this very well, and they have an "Army of PhDs". We have learned from Google in this area, even if we also reposted an article revealing the other side of the coin. We advocate for the strengths of this model while also analyzing its weaknesses as we form our own. No individual in the world can succeed just on their own. Currently we are trying out our "Tu Dandan model". Tu Dandan is a young lady who works as a team leader at Huawei. She proposed a model where teams would be made up of three PhD degree holders and two master's degree holders. We later added two engineers and an administrative assistant or clerk to this model. Administrative work can then be handled by the clerk, and the engineers can help with the experiments. The engineers are not necessarily very experienced or have high academic degrees, but they can learn and grow under the guidance of the top talent in their team and may even outperform them one day. This is the type of teamwork we want to promote.

Third, wolves are persevering, and won't stop until they get the job done. We don't want managers to run

away whenever they encounter difficulties. Transferring them to other positions or even demoting them takes promotion opportunities away from young people. Instead, we say if we must die, let's die on the battlefield. Even if we can't handle the main fight, we can still cook for the team. You will be rewarded when the team succeeds, no matter what role you play. You may be a team leader at one point and then later on work in a supporting role, such as serving as a "cook", providing logistics assurance, improving work environment, analyzing different scenarios, or supporting other team members. Right now, I personally play a supporting role. I talk with employees to help them identify their problems and coordinate with others to solve them. Therefore, we don't let managers switch their positions arbitrarily, because this gets in the way of young people in other teams. You should try your best to overcome difficulties on your own battlefield, or provide support at the rear. There, you may have more time to learn and thus get back to the front line one day. You should always stay with your team.

The term "wolf culture" may be misunderstood by people outside Huawei. For us, it represents high sensitivity, teamwork, and perseverance. We don't have a 996 or a 007 schedule.

07

Eugene Tang: When the Belt and Road Initiative was rolled out, Huawei had already been exploring emerging markets in Africa, Southeast Asia, and Latin America for over a decade. Why didn't Huawei start with high-end markets or more profitable markets when it started going global?

Ren: Back then, there weren't many good opportunities out there for us in the Chinese market. In order to survive, we had to turn to the global market. When we decided to go global, we started with the war-torn Africa. Many Western companies had evacuated, but Africa still needed communications networks. Many parts of Africa were at war when I visited there. We currently have the highest market share in Africa, which came out of our long-term efforts starting right then and there.

Only when we became more advanced were we able to enter high-end markets. When we just started our internationalization efforts, we were not advanced at all. We were not an advanced company even in the Chinese market. In our early days of development, the Chinese market was 100% dominated by Western companies. We could only make some simple products and serve in niche markets. That way we grew little by little.

When China just started reforming and opening up, it was highly underdeveloped. Western equipment was in high demand and highly coveted in China. Western

companies didn't need to promote their equipment because many Chinese companies lined up to buy their equipment. Western equipment was quite popular in China because their technology was mature and advanced. Many of the employees Western companies sent to China were familiar with Chinese culture and spoke fluent Chinese and English. They were good-looking and had good manners. They got their business done by drinking wine, talking about philosophy, and playing golf with their customers. They didn't have the "wolf culture" and didn't have to work very hard, so we had the opportunity to gradually catch up. We didn't take over their market; instead, they lost it themselves. With persistence and decades of hard work, we have gradually come out on top.

Second, Huawei is not a listed company, so we invest heavily into the future. When we assess managers, an important indicator we look at is soil fertility. We don't just look at how many crops they have harvested, but also how fertile their soil is. We want to make sure the soil is fertile enough to support our growth next year, the year after that, and even 10 or 20 years down the road. During a test, senior executives were asked: What is the "manure" in our soil? Our Rotating Chairman Eric Xu gave the right answer: Invest in scientists, experts, and engineers so that they can research advanced elements of the future. The investment into the future largely

relies on scientists and top business leaders. The biggest merit of scientists is that they spend money generously. How can they do scientific research and apply their findings without enough money? That's why we have always poured a lot of money into scientific research. This year, that amount will exceed 20 billion US dollars. Last year, it was over 15 billion US dollars. We increased this year's budget by 5.8 billion, so it should be over 20 billion. We take this kind of investment seriously.

We are not a listed company, so we don't need to maintain high profitability to get as much money as possible out of investors. We know that the fertilizer we put in the soil will help our crops grow the next year. Then why don't we invest boldly now? A consensus within the company is that we must increase soil fertility. We cannot overburden the soil by harvesting all the crops in one or two years. What if no crops grow the next year?

Eugene Tang: Huawei's business footprints now span the globe. You have personally visited every emerging market across the seven continents and five oceans. Which market makes you proudest or gives you the greatest sense of accomplishment? Which market gives you the biggest sense of frustration?

Ren: Of course, the Chinese market is the largest, but outside China, the European market gives me the

greatest sense of accomplishment. Almost all European countries like us.

Our rise in Europe is also the result of our own transformation efforts. There are many old buildings in Europe, and the streets there are narrow. We can't put up a lot of towers because these old buildings couldn't bear the weight of the equipment. What was the solution then? SingleRAN. It is our light, compact, and powerful wireless system, which helped us make inroads into Europe and go further and further. Today, our 5G base stations are also the lightest in the world. They can be lifted with one hand and installed on a wall, in a drain, or on a pole. It's that simple. Why do so many people in Europe like our products? Because we solve their problems.

We've never had a sense of frustration. There have been difficulties, but difficulties are not setbacks. We also have business in some underdeveloped countries like South Sudan. In these places, we make sure our employees have living standards as high as wealthy Swiss and provide them with a pleasant working environment that is up to European standards. Our culture of dedication doesn't mean our employees must live difficult lives.

Our goal is to serve humanity. We don't just go after lucrative markets. We also do business in markets where

we don't make money.

Tammy Tam: Under China's Belt and Road Initiative, what can Huawei do for the countries involved? Does Huawei face any difficulties in bringing its technology to those countries?

Ren: The Belt and Road Initiative is mainly about infrastructure construction, which involves huge investments. Our contracts are usually for short-term projects and involve much smaller sums of money.

Our customers are very wealthy and make more money than us, so they can buy our products without taking huge loans from banks. We sign small contracts with our customers, and compared to the infrastructure construction of the Belt and Road Initiative, the investment required for our projects is much smaller. Therefore, we have no connection with the initiative.

We are doing our utmost to serve our customers in all countries, whether they are involved in the Belt and Road Initiative or not.

08 Tammy Tam: I'd like to ask something about your life and personality. Previously, you were quite mysterious, but you have appeared a lot in the public over the past 18 months. I recently read a story about Huawei's 5G rollout in the Huoshenshan and Leishenshan hospitals

in Wuhan, when the epidemic in China was at its peak. As there had been no publicity from Huawei, people essentially learned about it by accident. Is Huawei's corporate culture of keeping a low profile directly affected by your personal style? Why did you choose to keep a low profile until recently?

Ren: I don't know what it means to be high profile and why we need to keep a high profile. In this case, I can say that we weren't deliberately trying to keep a low profile. I didn't even know about the Huoshenshan project myself throughout. No one reported it to me, and I learned about it on the news, just like you did.

The company has an emergency rescue system and management regulations in place. When the earthquake and nuclear leaks occurred in Japan, our employees rushed to the disaster area with network equipment. Emergency rescue would not have been possible if base stations had not been restored.

We installed base stations, and restored communications by connecting them to satellites. This provided wireless communications to the local rescue forces. Otherwise, how could the military on the mountains coordinate the rescue efforts? On the day two dammed lakes were exploded, it was raining, so our employees had to hold umbrellas for the equipment, and took six hours a day to carry diesel oil up the

mountain. The rescue efforts were truly demanding.

As a communications company, we have the responsibility to do our part in emergency rescue worldwide. When there are emergencies, we are not a company, but a firefighter squad whose first aim is to solve problems. It doesn't matter whether we get paid or not.

09

Tammy Tam: You mentioned just now that, during emergency rescue, your company is like a firefighter squad. In the past year and a half, during which time Huawei was sanctioned by the US, and your daughter was arrested by Canadian authorities, did you feel then that you were like the leader of the firefighter squad? The number of interviews you gave in the past 18 months exceeded all the interviews you gave in the previous 30 years combined. As both a father and the founder of Huawei, how did you handle the crisis? What role did you play?

Ren: You can call me a firefighter squad leader if you like, but my major contributions have been related to scientific research and production continuity. Meeting the media was only part of my job. Survival is not just about talking. It concerns a great many issues, so I paid a lot of my attention to internal affairs. My major contributions have been to help maintain the company's strength during

hard times. This is the most important part of my job.

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Tammy Tam: Do you think you are a good father? Your daughter has been in Canada for a long time and COVID-19 is now spreading there. Do you worry about her? When was your last call with Meng Wanzhou?

Ren: Before the Spring Festival.

Tammy Tam: Do you worry about her?

Ren: Her husband and mother are with her in Canada, so I don't worry about her. I am not a good father or a good family member. I devote too much of my time to the company. It's one of my greatest regrets. My children are all grown-up now. I wasn't with them when they wanted to play games like hide-and-seek or when they wanted me to read them stories, so it's normal that we are not very close. The same happened with my wife and me. It's understandable that we are not that close, as I don't spend much time with her. This is also a regret. This often happens with scientists. They may look like a fool in life, but are very bright when it comes to research. I have focused too much on my work, and I neglected my family, so I am not a good family member.

Tammy Tam: How is your relationship with Meng Wanzhou? How do you feel about your relationship with her?

Ren: When I said that my children and I are not very close, I mean I am sorry towards them because I didn't give them much support when they were growing up. They had to rely on themselves. That doesn't mean we have a bad relationship. I just feel sorry towards my family as a father and a family member.

Tammy Tam: Her case is still pending. Have you thought about the worst-case scenarios? As her father and the founder of Huawei, how will you help your daughter get justice? What's the next step?

Ren: We trust that the Canadian judicial system is open, fair, and just. This case will be resolved through the efforts of lawyers and the courts.

Tammy Tam: You talked with Meng Wanzhou on the phone during the Spring Festival, as you just mentioned. Could you tell us what you talked about?

Ren: We just chatted.

Tammy Tam: Are you prepared for the worst possible result? How would you deal with that?

Ren: I don't think the worst possible result could ever happen, because there are very few companies, even in the West, that are as well-behaved as us. Backed by the power of their whole state, the US intelligence system spent over a decade scrutinizing Huawei but still found no evidence of any wrongdoing.

Tammy Tam: To be frank, you were dashing along when you talked about Huawei, but your answers to questions about your daughter Meng Wanzhou were fairly short. It feels like you are not good at expressing personal feelings, including your feelings towards your children. Do you think that's true? Do you miss Meng Wanzhou? Do you just not know how to say that you miss her?

Ren: Of course I miss her. We're family. But missing her can't help. There's still a legal process we have to get through, step by step.

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Tammy Tam: I'd like to ask you a follow-up question. You were once a soldier. Did that have a big impact on your character? Does that have anything to do with the regret you feel towards your family members, including your daughter? Is that impact big?

Ren: When I was young, joining the army was the best option for me. I was very lucky to have been given the opportunity to work in the Liao Yang Chemical Fiber Factory. Looking back now, we were like migrant workers. When the country decided to build that factory, no work unit wanted to be stationed there. The conditions there were tough and the Cultural Revolution made many things chaotic. No one wanted to work, so the army was dispatched instead. There weren't many

technicians in the army, so soldiers like me who weren't really experts were sent to work on this factory instead. That was how we got the chance to work there. I think we were lucky because the factory introduced that super-advanced French chemical fiber equipment. This was a huge opportunity for us, so we poured ourselves into work, and didn't care enough for our families. I was thousands of miles away from them. What could I do? We didn't have mobile phones or WeChat back in those days. It was really difficult to call home. Sometimes, even when the call connected, we still couldn't hear each other, even if we shouted. So I could only write them letters that said simple things. Do I regret that? I do. Everyone has regrets in life.

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Tammy Tam: When you mentioned Huawei's culture, you said Huawei would avoid the practice of "every new sovereign bringing his own courtiers". As the founder of Huawei, how do you view yourself? Do you think of yourself as Huawei's spiritual leader? What is your role at Huawei? People outside the company think of you as the symbol of Huawei, a spiritual leader. Would you ever consider retiring completely, or will you just keep working for Huawei?

Ren: There will be a day when I will retire. All people eventually pass; no one can live forever. When will I

retire though? That is something that will have to be decided when the time is right. I'm not Huawei's spiritual leader. I'm a puppet leader. With our rotating chairs, the Executive Committee of the Board of Directors, and all the other governance bodies we've put in place, I'm like a puppet here. I only play a symbolic role, like a clay idol in a temple. Without it, the temple would look empty, but in truth, the idol doesn't really do anything. I don't manage any specific things. I'm not even involved in management appointments. Whether or not I'm at Huawei has no real impact. I've been a puppet for a while, and I'll continue to be one in the future. I'm just a clay idol, getting smaller and smaller every day. One day, I'll disappear.

Tammy Tam: You are still the spiritual leader, not just a clay idol.

Ren: I'm telling the truth. Really.

13 Tammy Tam: I have a question about your personal life, personality, and work style. You made Huawei a global tech leader. What is your biggest concern going forward? How worried are you that Huawei might lose its leadership position? Are you more concerned with your daughter or with Huawei's position? No matter whether you are a clay idol or a spiritual leader at Huawei, is there anything that keeps you up at night?

Ren: What's most important to us is that we need the right external environment if we want to advance into a new domain. It's impossible for us to enter a domain and lead the way by ourselves. China needs to place more emphasis on basic education, especially in rural areas. Throughout the history of China, many leaders were born or grew up in rural areas. This means rural areas are also a cradle for talent, so it's important to promote basic education in these areas. Basic education paves the way for basic research, which in turn leads to basic theories and then to breakthroughs. It is unlikely for us to be a leader without making breakthroughs.

China has made great progress in education and culture over the past 70 years. But if we look at the international environment and the role China plays, the country has a long way to go in basic education. Basic education will help turn the sparks of technological advancements into something really great. Over the years, Huawei has partnered with countless scientists and hundreds of universities worldwide, which has enabled our development. Hopefully, in the coming years, China will become a country with all the necessary elements, not only in manufacturing and engineering, but also in coming up with new theories and all other elements. I hope China will develop further in basic education and provide the right environment for many companies to lead the world. If you are not a leader in the information

industry, chances are your products or services won't sell.

Tammy Tam: When you step down, how would you like others to see you? As an entrepreneur or a thinker? A good father or a somewhat bad father?

Ren: I hope that I am "the forgotten one". People should forget me and spend their time learning science and technology or making contributions to society. I'm just an old man. What's the point of remembering me? People should think more about the future and the world. Young people should not have to bear extra weight on their shoulders. Huawei doesn't relish in its history and has seldom documented what it has been through.

We have implemented sunset provisions for our corporate files. We learned this from Trump, who requires that for every regulation added, at least two be repealed. Huawei sunsets a corporate file five years after its release, otherwise so many files would drag the company down.

I think young people should move ahead on light feet. I don't want anyone to remember me. My biggest wish is to drink coffee in a café unnoticed.

During the COVID-19 outbreak, I went to many parks in Shenzhen, where there was no one else around. I also went to cafés and empty shopping malls. Shenzhen

is a nice place to live, but I wasn't able to enjoy all its beauty because I'm a net celebrity and I get recognized everywhere I go. People took photos of me and posted them online. It would be sublime if nobody noticed me in a café when I'm old, with a hat on, a walking stick in my hand, and wrinkles all over my face. I wish to see, with my own eyes, the splendor of my country. People should forget me, and I will be "the forgotten one".

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Tammy Tam: I don't think your dream will come true. You will always be recognized no matter where you go. Just now you brought up Trump. What's your opinion about him? Do you have anything to say about him? Why did he sanction Huawei?

Ren: The US sanctions and our sunset provisions are two different things. Trump requires that for every regulation added, at least two be repealed. This has inspired us. Over the course of three decades, Huawei has developed an excessive number of corporate files that have never been repealed. When all our files are still in effect, we have to follow them all. This problem has made operations a nightmare. The sunset requirement of Trump reminded us that we must have our own sunset provisions. At first, we called it "Trump Sunset Provisions", which was shortened during internal reporting. This is Trump's creation. Before that, we had

no idea about how to get rid of legacy procedures. Later we learned about this and took off the extra weight of the legacy procedures. Our company has become more nimble, and our HQ workforce has shrunk.

15

Eugene Tang: Here's a question about cyber security. Could all countries in the world reach a consensus on global cyber security standards?

Ren: Survival is everyone's ultimate goal, and security comes next. Everyone in the world agrees on that. Europe was the first to set cyber security standards, including the General Data Protection Regulation (GDPR). This is a very good initiative. When everyone abides by the GDPR, sooner or later cyber security won't be an issue.

Huawei supports European standards and has been investing heavily in R&D to reconstruct our networks. As Huawei has gone from a small company into what it is today, our network architecture has been built up along the way, but it's unclear whether this architecture will be able to adapt to the future framework. That's why we are bringing in many talented people who will help us reconstruct our networks. If we can completely meet Europe's high standards and simplify our networks over the next few years, then our ability to serve humankind will increase significantly. We believe the global

community will reach a consensus on cyber security and privacy protection.

Eugene Tang: You often say that Huawei's network equipment is secure and has no alleged backdoors for the Chinese Ministry of State Security. How do you convince your customers of this, especially your customers in Europe, which you said is the most important market for Huawei?

Ren: To begin with, our network equipment is secure. We don't have any malicious intentions. But can we meet the European standards in terms of technological capabilities? We will continue to work on that. Our European customers have worked with us for over 10 years, and some for even 20 years. They have gained a deep understanding of Huawei through years of cooperation, and know that we have no security issues. Over the past 30 years, our network equipment has served three billion people in more than 170 countries and regions, without causing any cyber security or privacy protection issues. This proves that we have no cyber security issues in traditional networks.

Second, our future network architecture needs to adapt to new social developments such as cloudification, massive amounts of traffic, and AI. Cyber security and privacy protection will remain our top priorities; otherwise, no one will dare to use our network equipment.

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Eugene Tang: As the US is now pressing Apple to develop network equipment, will there be two different 5G standards in the world in the future?

Ren: The US is a technology powerhouse, and is fully capable of doing so. Some US companies have a cash reserve of hundreds of billions of US dollars. We believe they are fully capable of developing network equipment. However, I still think there will be only one 5G standard worldwide. If there were two standards, how could you enter markets that used the other standard? If you limited yourself within your own market, could you ensure companies that use the other standard would not break into your market and take your place? The US used to dominate the world market. If the US decided against joining a unified world standard, it would put restrictions on itself. This would be a pity. Therefore, we believe that the US is technologically capable of leading the world and creating new products. But there should be only one standard worldwide, because we all need to interconnect with each other, and products that fail to enable this will be of no value.

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Eugene Tang: After Huawei was added to the Entity List by the US Department of Commerce, you have made many adjustments to your supply chain in terms of the OS and components. Is Huawei able to

eliminate all US elements from its supply chain?

Ren: This isn't going to happen, because US companies need to survive. They can still sell and supply components to us as long as they meet certain standards. We are now continuing to buy these components in large quantities. However, if the US government further increases these standards, US companies will be unable to sell some of their components to us. Therefore, we need to find alternatives to these components. Currently, most US chip makers are still selling to us.

Eugene Tang: So it's not necessary to totally eliminate US elements?

Ren: We are living in a globalized world, and any missing links will cause problems. For example, we were incredibly nervous about component supply when production was suspended for two days in the Philippines due to the COVID-19 pandemic. We put a lot of effort into helping them, offering our own experience in fighting the pandemic. It made us nervous when the Philippines suspended production for only two days, let alone if this happened in the US.

Tammy Tam: Do you mean that US companies are still supplying you with some chips and components?

Ren: US companies can apply to the US Department of Commerce (DOC) for licenses under the DOC's

jurisdiction. After these applications are approved, they can supply licensed products to us. The DOC has set a threshold, and any exports above the threshold are banned, while sales below the threshold are allowed. It's not a complete ban.

Eugene Tang: The core of any communications equipment lies in chips. Does Huawei have a complete set of alternative chips?

Ren: Yes, we can achieve self-sufficiency, but we are still buying chips from Qualcomm. I don't know how many chips we will buy this year. In the past, we bought tens of millions of chipsets every year. As long as the US does not stop us, we will continue buying large quantities of chips from Intel, Qualcomm, and many other companies. Why not? These companies have been our friends for decades. We can certainly make chips by ourselves, but we still buy from other companies, as this is the foundation of our survival. We cannot stop buying from others just because our own chips are cheaper. Otherwise, if we found ourselves in trouble one day, other companies would be reluctant to sell to us, and we would collapse. Therefore, we will keep buying even if we have our own chips, so that we always have a Plan B.

Eugene Tang: Do Huawei's chips include software design?

Ren: Of course.

Eugene Tang: Can the chips made in China fully meet Huawei's requirements?

Ren: Chinese chip makers are now capable of producing low-end and mid-range chips, but are not fully capable of producing high-end chips. All chip makers need time to develop.

18 Eugene Tang: Huawei is facing pressure from the US. In addition, COVID-19 is affecting the production of smartphones worldwide, as well as sales and demand. Would you please share your forecasts for your business results in the networking and consumer segments this year?

Ren: I don't think COVID-19 will have any huge impact on our annual plan. Sales at the retail stores of our Consumer BG may be affected a little. However, the surging demand for equipment required for online learning and telecommuting has made up for the declining sales of other products. Our overall sales have grown significantly recently, and there are no signs of decline.

19 Eugene Tang: During our visit to Huawei, we saw a lot of advanced equipment and learned about your vision for 5G. Mr. Ren, how do you see the future of 5G, big

data, the Internet of Things, and AI? How do you think these technologies will change China?

Ren: I don't think these new technologies will just change China. I think they will change humanity. For example, our 5G technology has been used to build campus networks for Huawei's facilities in Songshan Lake, Dongguan, and oil fields in Saudi Arabia. 5G will not just support massive amounts of traffic, and 5G would be a failure if it only served this purpose. 5G has many other functions, for example, supporting high bandwidth and enabling low latency, which can be used for industrial controls and manufacturing. Currently, about half of all manufacturing factories, such as aircraft factories, could use 5G to enable automated and AI-powered management. However, 5G still can't support some high-precision manufacturing work, so we need to work on that.

Businesses' adoption of 5G technology is part of the B2B market while consumers' use of 5G is part of the B2C market. We believe that 5G will create tremendous value in the B2B market. Businesses can use 5G to create cutting-edge things.

For example, 5G can help automate surface mining in Brazil, eliminating the need for manual operations. It can also enable autonomous driving on large farms, allowing tractors to work 24/7. People would only need

to fuel these tractors. If agricultural machinery is able to work 24/7 in some of the more challenging areas in Africa, we could see real miracles.

New technologies can serve a wide array of purposes. 5G is still in its infancy, and its functions still need to be improved. Take the anti-jitter function as an example. We need to conduct more mathematical and other theoretical research to ensure the stability of 5G networks for millisecond-level jitter, so that 5G can play a vital role in high-precision manufacturing.

5G development has just begun, and it has brilliant prospects. We believe that the US has some great ideas and approaches that they can use to overtake us. Huawei cannot serve all businesses and all people, so we need to work with more partners.

20

Eugene Tang: Do you think COVID-19 is an opportunity or crisis for Huawei?

Ren: We sincerely hope the pandemic will be over soon. Throughout history, humanity survived numerous plagues, and the COVID-19 pandemic will be over eventually. Modern medical technology is very advanced, and we are more capable of containing epidemics than ever before.

In ancient China, emperors fought epidemics by

hanging moxa sticks on their doors during the Dragon Boat Festival. Guangdong apparently cured more than 90% of the confirmed cases with traditional Chinese medicine, although I'm no expert and just saw this on the news. I believe that through concerted efforts, humanity will eventually overcome COVID-19.

21 Tammy Tam: Many people see Huawei as a victim of the US-China trade and tech war. How do you view Huawei's future development? You just said that Huawei is racing against time for fear of being overtaken by the US. Do you think Huawei will be overtaken by the US? How far ahead of the US are you? Do you feel a sense of urgency?

Ren: Playing catch-up is the norm in our society, and no one can stay ahead for ever. If someone is chasing us, it will drive us to run faster so we are not surpassed. Those who are left behind also need to run fast in order to catch up with those in front of them. So I believe playing catch-up is a good thing for companies, as it drives companies to move forward.

22 Tammy Tam: Do you have anything to say to President Trump?

Ren: We should all work together to serve humanity. That's the ultimate goal of any company.

23

Tammy Tam: Finally, I would like to ask you, Mr. Ren, a question on another topic. As Huawei is under attack from the US, many people from the Chinese mainland have said that Huawei represents Chinese enterprises. This has become a kind of populism. However, you yourself are using Apple's products. What do you think of people considering Huawei as a symbol of China?

Ren: Huawei itself is a global company, with a high proportion of non-Chinese scientists. We currently have 40,000 non-Chinese employees, who are mainly middle- to high-end talent. Therefore, our success can be attributed to our global operations.

I just hope that China can place more emphasis on education, become on par with the US and Europe in this regard, and boost the creativity of Chinese children. Only by doing this can China contribute to basic theories over the next several decades.

Don't think that we must overtake the US or Europe in basic theories. This thought is wrong. Any basic theory will ultimately benefit all of humanity, and China needs to contribute to humanity in this regard. China cannot simply take without giving back, and should contribute much to basic theories, which sometimes take decades to bear fruit.

Qualcomm's channel coding schemes for 5G long message transmission were developed based on a paper

of a US mathematician in the 1960s. Our channel coding schemes for 5G short message transmission were based on a mathematics paper written by a Turkish professor over a decade ago. Generations pass before theories are applied to society. We just hope China can contribute more to humanity in the future. These contributions will be theoretical breakthroughs.

24 Tammy Tam: As the US has been trying to impede Huawei's development, President Trump says that they can directly work on 6G. Has Huawei considered working on 6G as of today?

Ren: We have always worked on 6G in sync with 5G. However, there haven't been any breakthroughs in theories or any other aspects of 6G. Therefore, 6G could only be used about a decade from now.

25 Tammy Tam: Some time ago, there was chaos in Hong Kong. Some Huawei stores there were smashed by demonstrators. Do you have anything to say to young people in Hong Kong? Do you have any expectations of them?

Ren: Similar things have happened throughout history. The UK now has the world's most developed textile industry, but around 200 years ago, workers in the UK

would smash the textile machines. However, society continued to move forward. Smashing things does not create new opportunities. The textile workers back then were afraid that textile machines might leave them behind. However, even today, the UK is still the world leader when it comes to high-end shell fabric. Other countries still cannot produce fabric as delicate as that made in the UK. The UK is a developed country with high salaries and good social welfare, but it still produces fabric. I think we must learn from advanced human civilizations.

If a phone is smashed, it means one more can be made. The more that are smashed, the more that are sold.

Tammy Tam: Thank you very much, Mr. Ren, for spending so much of your precious time talking with us today. I hope that while you continue to work hard, you and all other Huawei employees will stay safe and sound during the COVID-19 crisis.

Ren: We will work around the clock.

Ren Zhengfei's Interview with The Wall Street Journal

March 25, 2020

01

Neil Western, Asia Business Editor, *The Wall Street Journal*: Thank you for taking the time to talk with us again. We really appreciate it. Unfortunately, we can't be there. The coronavirus is keeping a lot of people working from home and quarantined. I hope you are doing well, and we'll start. Can you tell us a little bit about how the coronavirus has affected your operations?

Ren: The COVID-19 outbreak has had some impact on our production, sales, and delivery. Our company resumed operations on February 1, so our business operations have not been impacted. Initially, about 70% of our employees returned to work, and that percentage has gradually increased to 80%, and then 90%. However, some cities in China are still under lockdown, so not all employees are back in the office yet, but more than 90% of our employees are now working in the office.

The COVID-19 outbreak has also affected the production capacity of our suppliers. Some of them are small factories that didn't meet the sanitary requirements for resuming operations, and were banned from doing so by the local governments. So we helped meet the sanitary requirements, and persuade the local governments to allow our suppliers to resume operations under the precondition of ensuring the health of their employees.

We have also seen some impact on our international logistics. The number of international flights has been cut significantly, and air freight is costly, up three to five times. This has had some impact on us, and we may reduce the numbers we set in our business plan for Q1, but I don't think our annual plan will be affected.

Dan Strumpf, technology reporter based in Hong Kong, *The Wall Street Journal*: Thanks a lot, Mr. Ren, for that background. When you say you have reduced your numbers, you said your revenue numbers or your financial numbers? Could you be more specific about that?

Ren: I mean our revenue numbers for Q1.

Dan Strumpf: By how much have you reduced that target? Can you give us some specifics as to what the effects are?

Ren: The specific numbers will not be available until mid-April, but overall it will be a very small adjustment to our targets. The supply of some components and customs clearance in some countries have been affected by the pandemic. In addition, our project delivery may be affected as some people are being quarantined and isolated at home. However, the overall impact on our company is not significant.

Dan Strumpf: Now, that's interesting that you mentioned

the issues with quarantines, isolations, and customs and crossing borders, and because obviously Huawei is a global company, crossing international borders has become so much more difficult right now given what's going on. How are you able to compete around the world in a situation like this where there are so many travel bans in place? And I'm just curious too, how has it affected your personal routines and management style at Huawei?

Ren: Look at this remote interview we're having now; we've adopted a similar approach when it comes to managing the company during the COVID-19 crisis. Employees can work from home, and use teleconferencing for meetings. In addition, we have taken measures to reduce the amount of international travel required for our employees. The vast majority of employees only move around locally.

Many of our international contracts are about network expansion, and there's no need to send people to the field to fulfill them. Instead, we can simply fulfill the contracts from our equipment rooms, carrying out software upgrades remotely. So our contract sales can continue to grow.

Dan Strumpf: Mr. Ren, have you changed your habits, your routines at Huawei? What have you been doing differently as a result of this new world?

Ren: I don't see much change in our habits. For executives at Huawei, our work is to have meetings, revise corporate documents, and then get these documents published so that employees can act upon them. That's how we did things in the past and that's the same today. There hasn't been much change.

Now we have meetings over video, so the pandemic basically has no impact on us. Maybe in the past we had to take flights to meet face to face, but now we don't need to. Because even if we fly somewhere, we would still have to go through quarantine, and we would end up meeting over video as well. What's the point of taking the flight?

Dan Strumpf: Do you think that whenever it is that things return to normal, if those changes will stay in place, that there will be more remote meetings and, perhaps, less international travel? Do you think that those changes will stay?

Ren: I think humanity is entering an information society. IBM calls this the "Global Village". With planes, of course, we can travel anywhere quickly. This is a characteristic of the Global Village. In the past, you would have traveled by ship, which would have taken months. If we look even further back into history, our ancestors had to cross entire oceans with wooden sailboats.

Now, with advanced communications networks, we

can chat over video as if we were sitting next to each other. However, we can't have a cup of coffee online together, because we can't drink through the screen. So barring these kinds of physical experiences, we will see more online information exchanges in the future. For example, during this pandemic, hundreds of millions of Chinese children have started taking online courses at home. There are also many students in the US and in Europe taking international courses online. Once people get used to this approach, it won't be easy to get rid of it. The number of users or how often they access the service may decrease, but this new approach isn't going to go away any time soon. As an equipment vendor, we strive to meet customer needs in this regard.

Neil Western: Mr. Ren, I know you always find yourself traveling around the world to meet grassroots employees firsthand. How are you able to keep communicating and getting advice from them?

Ren: That's because I've already traveled to almost all those least developed countries, to learn about how our employees work and what their lives look like. Today we can communicate over video and collect feedback from our employees through our internal BBS instead. This way, we can understand how they work and live in other countries. Then, we will know how to improve the environment and situation to support their work.

That's how our past travel experiences have helped. If we don't travel around the world, we don't develop an accurate sense of it. So even though we're now isolated in different places around the world, our engagement and communication with each other is uninterrupted.

02 Neil Western: Can we turn, Mr. Ren, to the difficulties you have had with the US administration over the past 18 months? First of all, when we last met, we spoke about your daughter. Have you been in touch with her lately? How are you communicating? What kind of conversations are you having?

Ren: We talk to each other over the phone. We usually talk about how everything is going in our lives. Her mother and her husband are currently in Canada keeping her company, so she's not alone there.

Neil Western: How is she doing with regards to the criminal case, and what are you doing personally on that front?

Ren: We have committed no criminal offence, and we have already made our case to the US court. We are still pursuing these matters with the US District Court for the Eastern District of New York.

Neil Western: Do you believe that the Canadian government should play a role, in your point of view?

Ren: Canada is a country ruled by law. That means its legal system should be open, fair, just, and transparent. We believe that the legal system of Canada will arrive at the right conclusion in the end.

Neil Western: So you have not lobbied the Canadian government directly?

Ren: There's no need.

03

Dan Strumpf: Just on the subject of the US criminal case, if I may. Mr. Ren, as you are aware, the recent indictment by the US was extended to include a number of new charges against Huawei, including racketeering charges. These are very serious charges. A racketeering charge is accusing Huawei of basically being a criminal enterprise. I was just wondering if you want to respond directly to those charges that the US has made.

Ren: We certainly will defend ourselves against these charges in the courts. It's not the US Department of Justice that has the final say.

Dan Strumpf: I want to ask you about your strategy that you have taken with regards to Huawei in the last year. Last year, you met with us – which we're grateful for – and you have met with a number of other newspapers and television stations. Of course, you

have filed a number of lawsuits against the US and just took a much more aggressive approach to Washington, much more so than in the past. I was wondering if you think that approach was effective, given that it seems as though the US remains as aggressive as ever against Huawei. One of your lawsuits was thrown out, and there was a new indictment filed. So, do you think your strategy last year was effective?

Ren: As I said, it's not the US government that has the final say. In the end, we still need to follow the court rulings. It's up to the judicial system of the US to handle these cases in a fair, just, and open manner.

Neil Western: So, Mr. Ren, you trust the US courts to give you a fair trial. What would be your strategy in defending against these charges?

Ren: We are still communicating with the US courts through our lawyers in the US.

04

Neil Western: In the last 15 months, Mr. Ren, you have taken a higher profile in terms of the media and the legal strategy against the US and in many countries around the world, arguing very strongly against US efforts to dissuade foreign governments from using Huawei equipment. Do you feel that strategy is working and can you give examples of how it's working if you think it is?

Ren: It must be working. At first, it felt like the sky was covered by dark clouds, and all we heard was what the US was saying. The US is a powerful country and has a powerful government, so people generally trust what they say. As time goes by though, more and more facts are coming to light, and the sky is changing from pitch black to a dark grey, to a more neutral grey, and hopefully soon to a light grey. We want people to know more about Huawei and increase their trust in us. We are still doing business with companies in Western countries, including the US's allies. Because we have been working with these companies for decades, the trust that has been built between us is precious. They won't give up on Huawei just because of a little pressure.

We will release our 2019 audited financial statements in just a few days. Last year, our sales revenue increased by nearly 20%, and we also saw a significant rise in our profits. This shows that customer trust was not affected by US attacks against us.

As for this year, we expect some growth over what we saw last year. We also plan to spend 5.8 billion US dollars more on R&D. In 2019, we spent around 15 billion US dollars on R&D, and this year's spending is expected to exceed 20 billion. We are becoming more capable of overcoming difficulties, and the difficulties and challenges we face will become less and less. So we

are confident that we will achieve our sales and profit goals this year.

After the pandemic, people will better understand the value of advanced information technologies for fighting against the pandemic. It's likely that network rollout around the world will speed up. We're actually concerned that we may not be able to produce enough equipment to meet these needs. This proves our efforts over the past 10-plus months were effective.

Neil Western: I'll come to R&D at any second, but I just wanted to follow up. So you're saying that from your experience, the countries you're talking to no longer trust what the Trump administration is saying about Huawei, but they do trust your assurances?

Ren: I don't know why they no longer trust Trump. Isn't Trump very popular among US voters? I think the American people are very smart.

05

Dan Strumpf: I want to follow up on something you just said. You said the difficulties that you will run into this year will become less and less. I'm just wondering why you feel that way. What will become easier for Huawei? And you said that you're still confident in reaching your financial goals this year. Can you share with us what those are?

Ren: First, we have invested very heavily into R&D. Second, we have cut back on some low-performing product lines and moved outstanding engineers to our major product lines. This way, we will come up with even better products and services this year.

Our financial performance ultimately depends on product quality, service quality, and customer trust. All of the employees at Huawei are working hard to achieve our goals, so we believe our goals can be achieved. I would gladly welcome another interview with The Wall Street Journal in January next year. By then, I will be telling you about our survival.

Neil Western: We would happily take that interview, of course. Could you explain the extra 5.8 billion that you're going to spend on R&D? Exactly what products are you going to invest that money into? And what are your most prospective lines of business?

Ren: The areas of investment haven't changed. We will continue investing in the same products as we have in the past, but now with more intensity.

06

Neil Western: Looking back over 2019, what do you view as your biggest success for Huawei? Do you see it as the decision by the UK to allow you in their 5G network? What role, if any, did you play in that decision?

Ren: We were very successful in 2019, and we must first thank Mr. Trump for that. He's such an influential figure in the world, and yet he pays so much attention to Huawei. Many people did not know about Huawei or were skeptical about us before. Even in China, some people didn't have much faith in us and thought we might be tricking them. After Trump hit us with a big stick, people began to think: "There must be something really good about Huawei. We should buy Huawei equipment before it's too late." So Mr. Trump did us a huge favor. We need to thank him for that.

Before the US campaign, the company actually became somewhat complacent. We have nearly 200,000 employees around the world, and it's difficult to have them all work as one. Our Strategy Department came up with a new vision and mission: Bring digital to every person, home and organization for a fully connected, intelligent world. The aim was to align our employees' thinking. But in reality, our employees didn't necessarily buy into such slogans and were not motivated by them. However, when Trump began to attack us, our employees became vigilant. Survival became an issue, and they knew that if they didn't work hard, the company would collapse. Everyone was on their toes. In fact, they are working a little too hard like a runaway train. I always feel the need to step on the brake to prevent the company from breaking into pieces. So, at

the lower level our employees are working flat out, but at the top, we keep a cool head. This lays the foundation for our success.

Neil Western: Do you believe that people in other countries, in Europe, Australia, and New Zealand, feel similarly about the Trump campaign and they're now more aware of Huawei and see it as a technology power more than they did before President Trump's campaign?

Ren: I would say there has been some impact on other countries. Countries like Australia, New Zealand, and the US don't trust us, and their carriers may be affected. It is also a game for them. Some of our customers still trust and understand us though, so we remain confident in our steady growth.

07 Dan Strumpf: Mr. Ren, I want to just ask you a very specific question about the lawsuits that you filed in the US last year. I came to the Huawei campus to cover those lawsuits, and I watched and wrote extensively about them. I followed them closely. I'm wondering, was it your decision specifically to file those lawsuits? I'm just wondering, as I'm aware of some disagreement internally within Huawei over the decision, specifically within the US, to file those lawsuits. How do you deal with that sort of disagreement within Huawei over the

decisions you make?

Ren: We have been forced to stand up and defend ourselves in the US, rather than picking a fight there. The US is waving a stick at us, and after taking a blow from the left, we can't just wait for the next one to come at us from the right. Therefore, we are simply defending ourselves in court. As to this question, I would suggest you talk to our lawyers, and they will tell you the answer. There is no disagreement within the company, and we are very much aligned on this issue.

The lawsuits have nothing to do with our ordinary employees, whose responsibilities are to harvest more crops and increase soil fertility. Public relations and legal issues should be handled by specialized departments. I don't know exactly what ordinary employees have on their minds, and there is no need for me to know that. They should focus on their own work. We have no disagreement within the company that needs to be coordinated.

If the US government drops their lawsuits against us, then we can drop ours against them. But as we are seeing no sign of the US moving in that direction, we are actively preparing for other sticks the US may wave at us. If we are caught unprepared, the US may begin waving a stick at our head, and we may get wiped out. Therefore, we have to protect ourselves and prepare for defense.

08

Neil Western: Mr. Ren, can I ask about your operating system and the app ecosystem you're building in the absence of Google's Android? Can you say how far you feel you have succeeded in that and the prospects for that business?

Ren: Our HarmonyOS has gone open source, and the HMS will enter the market with our P40 series phones. Though our operating system (OS) lags behind established brands like Apple and Google, it has unique features. That's why we have decided to put the OS on the market.

We were forced to do so because we didn't feel secure using the operating systems of others. If supply was cut off again, what would we do? The previous supply cut forced us to find a way of our own. We must spare no effort to fill our gaps. If we hadn't done this, we would have been unable to keep our foothold in the market.

Neil Western: Have you recently spoken with Google directly?

Ren: I don't know.

Dan Strumpf: Mr. Ren, how are your smartphone sales this year in and outside China?

Ren: Our sales are still growing, but I don't know about the specific numbers. I just know that we sell about

450,000 smartphones in China every day. Our sales in international markets are declining. However, we expect to see new growth in April and sell more than 20 million smartphones every month worldwide. Because of the pandemic, sales of our tablets, laptops, and other devices have also gone up five or six times. Some of those products already have HMS built in.

Dan Strumpf: So to what do you attribute the decline in smartphone sales in foreign markets? How can you reverse that decline?

Ren: We haven't found a way to increase our sales in overseas markets yet. We are still working to address the problem.

09

Dan Strumpf: Mr. Ren, I'd like to just pivot slightly. I have read a lot of essays that you have written over the years at Huawei and you have written a lot about your past and your travels throughout the US. Who do you count as your biggest inspiration among American tech entrepreneurs? I know you have written a lot about IBM, for example, Louis Gerstner, and you traveled and visited a lot of these companies. Who do you see as your inspiration or mentor?

Ren: The whole tech circle in the US is inspiring, especially sleepless Silicon Valley. Their dedication has inspired us. Business leaders like Steven Jobs, Bill Gates,

and Louis Gerstner have also motivated us greatly. We don't just learn from big companies like Google, Facebook, and Amazon though. We also look to the spirit of innovation found in American SMEs. All of this together has tremendously inspired us. The soil for innovation in the US is still very fertile. The US will continue to shoulder the heaviest responsibility in the rapidly developing information society. The US has strong capabilities and many renowned universities that provide high-quality education. This lays a solid foundation for the US's revitalization.

The US attaches great importance to education. A young man helped found Harvard University with a small fortune. A US railway tycoon founded Stanford University. It is the open-mindedness of Stanford University that made Silicon Valley a reality. I think we will always learn from the US's dedication and down-to-earth spirit in technological innovation.

10

Neil Western: I know when you started Huawei, you were concerned about how badly China lagged behind the world in innovation. At what level do you put China now in terms of innovation against the US and the world?

Ren: 70 years ago, most Chinese people were illiterate. But today, you seldom find any illiterate people in this

country, and education has been very instrumental in this process. That said, China's education system still follows the old model of the industrial age, failing to encourage children to let their creativity blossom. In kindergartens, naughty kids are always scolded, and their mothers always try to make them behave. The sheer number of exams stifles their naivety.

Children are more creative than the rest of us, and their imaginations are limitless. If their growth is narrowly confined, their drive to innovate will be inhibited, even though the route they take gets clearer with time. In China, what defines a good student is how well they do on an exam. The great Chinese mathematician Hua Luogeng probably wouldn't be able to get into university if he were alive today. China's education system should be more like the US's, which advocates diversity, academic freedom, and free thinking. Only a system like that is going to encourage students to explore different directions and make breakthroughs.

In the US, there are different types of schools with different teaching methods. Students in leading universities have heavy workloads. If you can get to bed by 2:00, your homework might be easy. And it's not unusual for them to go to bed at 4:00 or 5:00 in the morning if they have algorithm courses. For students in ordinary universities, a very important part of their

education is about legal and regulatory compliance, and on top of that, they need to study courses that are essential to their future livelihood. They learn boating, horseback riding, golfing, and skiing – hobbies that are vital to social engagements with business people or friends. Of course, these students still have to learn basic courses, but not as many as the students in leading universities like the Ivy League schools do.

Students applying to the Ivy League schools are asked if they helped at orphanages or the lonely elderly. Leaders are supposed to serve and give back to society. Leading US universities focus on fostering leaders in politics, business, science, and many other domains. These people assume significant responsibilities, so they must give back to society. The higher a university's rank, the more important it is they don't create selfish individuals. This is how a society can thrive. Generally speaking, the US's education system is more advanced than China's. Why else would so many young Chinese people study in the West?

11

Neil Western: The China-US relationship is a relationship that directly impacts Huawei, so presumably you do keep an eye on the level of tensions between the two countries as you steer your business.

Ren: The road of development is inherently bumpy. We can dream about all land on earth being flat, but it never will be true. An ideal world should be made up of hills, where even if there are barriers, we are still able to climb over. However, the mountain we are currently climbing is very high and imposes great resistance. But it is not as high as the Himalayas, so we are still communicating with the world. We hope these barriers can gradually be removed and the situation can improve, so as to facilitate production and increase wealth worldwide. Only in this way can conflicts be resolved.

12

Neil Western: I just want to ask how you see the next few years of Huawei and yourself, your role at Huawei in the next few years. Obviously a lot of people speculate about succession plans. What are you thinking?

Ren: Compared with 2019 and 2020, Huawei will only see better developments in the next few years. This is because we now know where our pain points are and where we should improve, so we believe we will be healthier over the next few years. Having learned these lessons, Huawei will slowly move upwards, as if it were climbing up a slope. While our company is climbing upwards, I will be on the way down due to my physical

condition, and will not be able to continue climbing with the company. We are seeking a balance, and in the end the world will be increasingly close to being flat.

If Huawei is still operating then, you are welcome to visit us again!

Content in this publication is based on excerpts of Huawei founder and CEO Mr. Ren's interviews with the media.

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