

# **ON THE RECORD**

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**HUAWEI EXECUTIVES  
SPEAK TO THE PUBLIC**

**VOLUME I**

Dec. 2018 – Feb. 2019



## **Heroes are forged, not born.**

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

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# Ken Hu's International Media Roundtable

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December 18, 2018  
Dongguan, China

**Ken Hu:** Good afternoon, everyone! Welcome to our new campus. This is our largest campus in the world. We built our new manufacturing center here. We built our training center here, and our R&D center as well. And we have moved many of our employees from Shenzhen to here in Dongguan. What I have learned is that our employees are so excited about this new campus.

I believe in the morning you had a good tour of our technology lab and here in the security lab. The next time you visit here, we'll be happy to take you on a small train tour of our very beautiful campus. This is a lakeside campus, which is very nice. I know that the holiday season is very busy for all of you, so thank you very much for taking the time to meet with us today.

This year has been so eventful, hasn't it? So I believe you must have many questions for today's conversation. Before we start, I would like to take this opportunity to give you a very quick update on our business progress this year, and then go on to the Q&A session.

This year business has been very good for us. We are pretty sure that, by the end of this year, we will achieve more than 100 billion US dollars in revenue.

This is a big milestone in our history. This is the first time our sales revenue has exceeded 100 billion US dollars. For different business groups, we had very

satisfying growth as well.

For example, in our carrier business, which accounts for the largest part in our total portfolio, we secured more than 25 commercial contracts for 5G. Now we rank number one in terms of commercial 5G contracts. This is the result of our far-leading technological innovation across the whole industry. And we have started to ship 5G equipment to the whole world. Actually, we have already shipped more than 10,000 base stations to different markets around the world.

Our enterprise business has seen very good progress as well. We secured more and more contracts with leading global companies. This year more than 200 companies in the Fortune 500 selected Huawei as the vendor for their digital transformation. So this is a big step forward as well.

And our consumer business. We all know that our smartphones sales are very good. This year, we had a big increase in our sales revenue and shipments with the successful launch of our flagship smartphones, the P20 and Mate 20. These new smartphones bring some amazing functionality to the market, including high quality cameras and particularly artificial intelligence.

So in all three business groups we've had very satisfying growth this year. Particularly in October, for

the first time we announced our full-stack, all-scenario artificial intelligence solution.

We have been working with artificial intelligence for around 10 years, and this year we announced our solution – full-stack, all-scenario. We believe that, with this solution, we will be able to make artificial intelligence eventually become a real GPT – a general purpose technology.

We're trying to make it more accessible and more affordable for the whole society. And we hope that, in the coming years, we will launch more exciting chipsets, hardware and software solutions for artificial intelligence to help our customers maximize the benefits of this emerging technology.

So this is the exciting growth we have achieved this year. Of course, at the same time, we're facing some challenges. You are all aware of the allegations that have been made against Huawei this year. Despite the efforts in some markets to create fear about Huawei, and to use politics to interfere with industry growth, we are proud to say that our customers continue to trust us and recognize our contribution to the industry.

They continue to work with us, innovate with us, and build their networks with our innovative technology. We're so grateful for their support.

When it comes to security issues, as an industry, we believe that we need to talk more about the technology and how to improve. When it comes to security allegations, it's best to let the facts speak for themselves. And the fact is: Huawei's record on security is clean. We believe that cyber security is a global issue. It's an industrywide issue and we need to address it together.

Moving forward, we will continue investing in technological innovation, in broadband, cloud, artificial intelligence, and smart devices. And we believe that this continuous investment in technological innovation will help us secure solid growth in the telco sector in the coming year with faster deployment of 5G technology. It will help us to be in a stronger position in the enterprise market with digital transformation across different vertical industries. And particularly, it will help us bring more exciting and innovative devices to consumers. We are going to launch our first 5G smartphone, and we can expect a lot from that.

This is just a quick brief on our business growth and business progress. I'm very happy to talk more about that today with all of you, so we have enough time to do the Q&A session.

Now, I would like to open the floor for questions.

01

**Given the allegations and the fear that's being pushed across many governments, what specific actions does Huawei plan to take in the near term or the medium term to alleviate some of that pressure? I know you have your cyber security center in the UK working with the operators there and a number of other similar facilities. Can you talk about that?**

**Ken Hu:** We realize that the industry we're in is undergoing faster technological transition periods. Technologies are becoming increasingly complicated. Networks are becoming more open. As a result of this, we definitely notice the increasing interest and care from network operators and regulators and also the general public about the industry. We think this is just normal.

When we look at ourselves, as I mentioned just now, Huawei's business has been growing very fast. Our revenue will exceed 100 billion dollars very soon. We're doing business in 170 countries around the world. About half of the Fortune 500 companies are using Huawei products. The majority of the top telecom operators have deployed Huawei's equipment. Our smartphones are being used by hundreds of millions of consumers worldwide.

Given our scale, our size, and our presence, we definitely need to take it very seriously when we look at the concerns or interests expressed by governments, by

society, and by the general public.

In that context, we are keenly aware that it is simply something we must be doing to have proactive, transparent and constructive dialogues and conversations with the governments, with local communities and with our customers.

This is exactly what we have been doing. I can briefly introduce our actions and our plans in this area. Take security, for example. Many people have expressed concerns or interests in this area. For Huawei, we take security as our highest priority and our overarching guideline.

In 2011, this positioning of security as our highest priority and overarching guideline was recognized in the form of a board resolution. That was the open letter released by our founder and CEO, Mr. Ren, addressed to the world, showing and demonstrating our serious commitment to security.

Following that positioning and the resolution, we have taken very solid steps and measures internally and externally. For example, internally, cyber security guarantee and protection have been built and implemented across our business operations from corporate governance, organizational structure, technology innovation, staff management, and IT systems as well. I believe Sean Yang

in the morning may have introduced some of those to you.

Externally, when we engage with customers, regulators and the general public, we have been following a strategy or approach that we call "make white whiter" over the last 10-plus years.

In other words, we understand the concerns from our customers or regulators. Therefore, we are willing to take additional steps or go the extra mile compared to other peers in our industry.

As part of that effort, we have undergone third-party certification of Huawei's hardware, software and solutions, which has been done by independent third parties.

If we look at the results of those certifications, we can clearly see over the past 30 years, Huawei and Huawei's equipment have maintained a very solid and correct record in our industry when it comes to cyber security.

We have never had a serious cyber security incident for our equipment.

And also even with the strictest review and screening by regulators or our customers, there has never been any evidence showing our equipment poses a security threat.

According to a most recent report from CFI, a third party independent auditor, Huawei's equipment, from operational stability and operational reliability point of view, has far exceeded industrial average over the past three years.

We will be very glad to share this report with you after this interview.

We feel very proud about this recognition from customers and the industry.

But we definitely will not relax requirements we put on ourselves, because we are keenly aware that technology will become more and more complex; networks will become more open. Therefore the requirements or demands on security will just be much higher.

Therefore, we will continue to increase our investment in security and security related technologies.

In our most recent board meeting, we decided on a companywide transformation program to improve our software engineering capabilities.

The company will invest an initial special budget of 2 billion US dollars in the next five years to comprehensively improve our software engineering capabilities so our products will be better prepared for the future world.

We believe through these efforts, we will be able to continue to maintain our leading position in our industry when it comes to cyber security. We also hope with such efforts we will continue to maintain our solid cyber security track record.

We will continue to step up our efforts in terms of communicating, engaging, and collaborating with governments around the world. We will help governments to understand the track record we have had on cyber security, and we'll also talk with the governments so they also understand the efforts and actions we have been taking on cyber security.

For example, the internal cyber security lab you visited in the morning, that's also the lab we make successful and open to governments and customers around the world, so through the visit and the dialogues they can understand our positioning and what we have been doing. Moving forward, we will localize some of these efforts.

For example, 10 years ago we set up an independent cyber security evaluation center in the UK. As a result of that, we have put in place a long-term and effective collaboration model with the stakeholders in the UK. We're going to continue to work on that moving forward. We also have a similar arrangement in Canada. Those are the efforts we will continue to work on and

strengthen.

At the same time, we are and will continue to expand similar engagement with the governments. Last month, I was in Bonn, participating in an opening ceremony of a security innovation lab there. This lab is essentially an open platform allowing the German government and also our customers in Germany to conduct testing of Huawei's products around security. Such efforts have won the recognition of the German government.

The next step is to launch our security transparency center in Brussels in Q1 next year. That is also part of our longer term plan as well. We will also build and put in place similar open and transparent security management mechanisms in other parts of the world as needed.

When it comes to security, in short, I would say this is an area where we take it very seriously and we pay a lot of attention to it. We have taken a lot of efforts in this area, and we'll continue to do so by having dialogue and engagement with governments around the world.

When we look at the concerns from governments of Huawei, I think there's another part of it that we also need to address as well.

Huawei is a company that originated from China, and we are not a public company. But that does not

mean we cannot achieve the same level of transparency. We have taken a lot of efforts and measures in this area as well.

Very early on we announced our ownership structure so that people all know that Huawei is a private company that is owned by its employees.

Every year we go through the strictest processes of audit before we launch our annual report, so all stakeholders will know the authenticity, integrity and independence of our business operations.

At the same time, given certain specific concerns, we have been communicating with the governments around the world around the independence of Huawei's operations. The fact that we have never taken any requests from any governments to damage the business or networks of our customers or other countries. As I mentioned earlier, for any concern, the best way is to let the fact speak for itself. The fact is that over the last 30 years, there's been no major cyber security incident; there's been no cyber security threat; and there's been no evidence showing that Huawei is damaging cyber security. And we'll continue to take proactive engagement and also open collaboration so more and more people will be able to realize this.

**02 I have a question about the arrest of Ms. Meng in Canada. It's been reported before by Reuters that Skycom, which is a subsidiary of Huawei, was selling technologies from American companies to Iranian customers. And we've also found that Ms. Meng was a director of Skycom, and Skycom employees have described themselves as employees of Huawei. Can you clarify the relationship with Skycom and Skycom's activities in Iran?**

**Ken Hu:** I know you are definitely very interested in what happened recently. But since, as you might be aware, this is right now under a judicial process, I'm not in the position to provide any information at this point in time. Two points I still want to share with you.

First, we are very confident in our trade compliance management system. We started development in 2007, which covers our global businesses across our entire portfolio and the entire Huawei workforce. We believe with such a well-running trade compliance management system, we have the fundamental guarantee of our 100-billion-dollar business. We have the guarantee to ensure smooth, efficient, and secure operations of our business and also to reassure our customers around the world.

Second, we have confidence in the fairness and independence of the judiciary systems in countries

involved in this specific case. We look forward to a just conclusion to this matter.

**03**

**So one of the issues that various governments have raised concerning Huawei and the potential security threat is the national intelligence law which was passed last year which would compel any industry or company to cooperate with China's national intelligence work. Now, it's fine to say that Huawei has never been asked by our government to infiltrate or otherwise spy on a network but if the Chinese government would come to Huawei and ask it to, what legal grounds would Huawei have to refuse such a request?**

**Ken Hu:** First, on December 10, the spokesperson of the Ministry of Foreign Affairs of China in a press conference formally clarified that no law in China requires companies to install mandatory backdoors.

Of course, just like the US and Australia, China also has certain legal requirements for counter terrorism or cyber security objectives. China also specially emphasizes that all government institutions or agencies must enforce the law according to the law. There are clear definitions.

For Huawei, our approach is to address these issues

in strict accordance with the law. In the past, we haven't received any requests to provide improper information. In the future, we will also follow in strict accordance to the law in dealing with similar situations. When we talk about according to the law, the law has clear stipulations around the terms of reference for related agencies.

**04** **We know Huawei has appointed an acting CFO after the Sabrina's case. My question is – with the current case, if Sabrina can continue with her responsibilities as corporate CFO and what are the real implications and impacts of this case on Huawei's operations because we have learned from some of Huawei's international employees that if there is no financial guidance of this nature, it will have an impact on their business like procurement.**

**Ken Hu:** Currently, our business operations are not impacted by the case in Canada. Our business operations as a company and operations in the financial system are still business as usual.

**05** **After Meng was arrested in Canada, the Chinese government arrested two Canadians on national security concerns. The Chinese government has said this is not in retaliation, but most independent**

**experts now say it was. Does Huawei have any comments or thoughts on the arrest of these two people?**

**Ken Hu:** No comment on that.

06

**Do you think that Huawei will have any significant business in the United States and does it matter to the company for the future?**

**Ken Hu:** Well, the US is one of the biggest communications markets in the world and I would definitely not say it doesn't matter to us. However, the reality today makes this very difficult for Huawei to enjoy business growth for reasons I think you all know.

As a result of that, our current status of US business, I would say, is very limited business. Of course we still have customers in the United States and we continue to follow our business principle of customer-centricity. We try everything we can to provide the best possible services to them and they are very satisfied with our services.

On the other hand, we also noticed that the United States is also in a development period when it comes to the digital infrastructure market.

Because Huawei cannot participate in the US market,

we also notice that this is a market that is falling short of competition in a very big way.

According to some economists, from the period of 2017 to 2020, which we believe is a very important period for 5G deployment, if Huawei could participate in market competition, there would be 20 billion US dollars of savings when it comes to capital expenditure for wireless infrastructure.

At the same time, since Huawei cannot participate, HHI – which describes market concentration in certain geographies, in the US – HHI is as high as 2,500, much higher than other markets in the world, which are typically in the range of 1,000.

Since the best suppliers and the best technologies cannot be part of the market, I believe from a deployment cost point of view, this will significantly be higher. At the same time, it will substantially delay time-to-market of new technologies.

At the same time, the digital infrastructure industry is highly dependent on the global supply chain. In other words, the equipment of any company in our industry relies on the global supply chain for development and manufacturing.

At the same time, when it comes to deployment, in most of the cases we can say that digital infrastructure

is going to be a multi-vendor environment. It requires collaboration and partnerships with players across the industry.

From that point of view, banning a particular company from market competition cannot fundamentally address concerns about cyber security. We believe that, at the end of the day, US markets will need the best technologies and best companies to participate in market competition. When that day will come, we don't know. We have patience.

**07 We saw earlier this year that ZTE almost went out of business because the US prevented it from using American technology. Obviously Huawei is not in this position. But could you explain to us what the impact could be if Huawei is someday in this position—and is the company taking steps to protect its supply chain from dependence on the US?**

**Ken Hu:** We don't comment on things that have not happened, but I would be very glad to share with you our thoughts and our actions on supply chain and on business continuity management.

We all know the ICT industry highly depends on a global supply chain. And Huawei is no exception.

Today we have 13,000 suppliers in our supply chain.

Companies coming from Japan, the US, Europe, China and many other countries in the regions. Take this year for example, our annual procurement spend would be 70 billion US dollars.

From this point of view, the technology innovations of Huawei are, on the one hand, the outcome of our own efforts. On the other hand, they are also the results of our close collaboration with 13,000 partners in our global value chain.

We also realize that the more globalized the nature of your supply chain is, the more vulnerable it might be. So almost 10 years ago, we started to develop a comprehensive and effective business continuity management system.

That management system covers many parts of our business: R&D, procurement, manufacturing, logistics, and also services. Over the past 10 years, with this system in place, we have successfully dealt with quite a number of emergencies.

Natural disasters like the tsunami in Japan, the flood in Thailand, the earthquake in Nepal, and also ransomware attacks. In order to ensure supply chain continuity, we also have to put a lot of thought when we put together our supply strategy and also when we think about how to ensure the operations of our equipment.

Our supply chain strategy, for example. We take a diversified supply strategy. That means we have a multi-sourcing strategy. We look at multiple choices in terms of technology solutions, and we also have multi-location supply networks. At the same time, since we're working together with hundreds of telecom operators in the world, and also we are serving a significant number of enterprise customers, so we look at the full lifecycle support that is needed and build up our stock of spare parts and components to ensure support across the product lifecycle.

These are some of the actions and measures we have taken to ensure business continuity. At the same time, we think the continuity of the ICT industry chain is also important. We believe this is a topic and an issue that the whole industry and international community need to look at.

As I mentioned earlier, we have 13,000 suppliers. Our annual procurement this year is 70 billion US dollars. If we look across the entire industry chain, or the companies or the countries involved, they are interdependent.

If any link in this global industry chain is obstructed in an unusual way, that would have a major impact on the development of the industry chain and even the economic development of countries involved.

Therefore, if we take a bigger look, society as a whole, countries involved and the industry must work together to ensure continuity of this global ICT value chain.

**08**

**I'm going to have two quick follow-ups on things people may have mentioned. One is, I know you cannot comment on the case of Ms. Meng, because it is a legal case, but specifically on the impact. For yourself and other senior executives, what's the impact? Are you limiting or changing your travels, or are you avoiding certain countries, for example? What about the impact on Huawei employee morale?**

**The other is about the US's potential moves. Because we started to see some moves by governments or operators in the US and its allies like France, the UK, or even Japan, to block the use of Huawei equipment in their core 5G networks. Are you worried about this trend? Do you think that's geopolitical issue no matter what you say or do?**

**Ken Hu:** On your first question: There is no impact on our travel plans. Yesterday, I was still on the plane, at this point in time.

Regarding the second question, the latest developments on 5G in different countries. I just came

back from Europe yesterday. I want to share with you some of my observations.

Before that I would like to correct you a little bit. There is no official decision from either France or Japan saying they would ban Huawei from 5G. What we are seeing right now, instead, is that more and more governments and operators in more and more countries are engaged in very proactive discussions with Huawei with 5G.

As I mentioned earlier at the very beginning, Huawei has been awarded 25 commercial contracts on 5G. That number is bigger than that of any competitor in the industry. At the same time, we are in a significantly leading position on 5G no matter when we look at the leadership or maturity of our technologies.

You visited some of our labs this morning and I believe you must have seen many cool technologies there.

Those are the cool technologies that only Huawei enjoys in our industry. It is because of those technologies that we have been able to build the strong leadership position on 5G that we enjoy today. We have participated in dozens of pre-commercial tests on 5G. From the testing results, Huawei is at least 12 to 18 months ahead from a technical maturity point of view compared to

other peers in our industry.

This leadership of Huawei has been publically acknowledged by our customers. For example, last month at the Mobile Broadband Forum held in London, the chief architect of BT publicly commented that Huawei is the only true 5G supplier right now and others need to catch up.

This significant recognition we have from customers and governments is first attributed to our technological leadership in 5G.

Those governments and customers believe using the best supplier for 5G network deployment would help substantially shorten the time-to-market of this new technology. For example, LG U+ in Korea has already launched 5G services after deploying 5G networks with Huawei equipment.

This could help them to enjoy a more competitive cost structure and bring compelling services to consumers. At the same time, we also see concerns of various natures of different countries on 5G. We think most of those concerns are very legitimate concerns that are based on technology. Those are the concerns that we believe could be well clarified and mitigated through our collaboration with telecom operators and through engagement and communication with governments. Of

course, there are also rare cases, where countries take—what we would say—an unnatural approach.

They turn this 5G security concern, which is industry- and technology-related in nature, into groundless speculations targeting specific companies. This is not putting the focus on how to improve and how to protect the technology itself, but ending up with speculations targeting particular companies out of ideological or geopolitical considerations.

In very rare cases, certain countries, when it comes to 5G technology selection, took an irresponsible approach, which is not at all based on facts, banning certain companies from market participation.

We think decisions like this should be very serious and very professional. There must be evidence or proof to support these decisions. If there is no evidence, I think any decision of this nature would not win the test of time. We believe discussions around 5G security should return to technology discussions and should be based on objective assessment of companies.

We think security is first a technology topic. And it is also something that the whole industry needs to come together to address. It should not target specific companies for no substantial ground.

Security concerns can only be addressed through

technical discussions. Security discussions need to involve all stakeholders. On 5G technology selection, we think any government decision should be serious and professional and what's very important is that there must be proof and evidence.

If you have proof and evidence, it should be made public, maybe not to the general public, not to Huawei. But at the very least, it should be made known to telecom operators, because it's telecom operators who are going to buy from Huawei.

We think for our industry and for society at large, security challenges will be real for a long time. And these can only be addressed and mitigated through open communication and collaboration. And Huawei is committed to being a part of this process.

Rejecting one particular company, especially a leading company, cannot fundamentally address concerns on cyber security. At the same time, it would increase the cost of network deployment; it would delay the adoption of new technologies. And in the end, it would be the consumers who have to pay the heavier bill.

Take Australia for example, we have some numbers around it. Without Huawei's participation, the cost for deploying wireless base stations in Australia would be higher by 15% to 40%. And the cost of building up

an entire network would be higher by several billion Australian dollars. Even worse, the time for people to adopt and use 5G technology would be delayed.

**09** **You talked about the Security Transparency Center as an upcoming initiative taken in Europe. Do you have similar measures in Japan, Asia, or Australia on security?**

**Ken Hu:** On security, we are very willing to take proactive measures to address and mitigate concerns. This is our principle. Under this principle, we stay open to have proactive dialogue with governments around the world, to understand their concerns and to explore all possible solutions.

We have already had many successful cases in countries like the UK, Canada, Germany, and France. And definitely the APEC region is not an exception.

We've also proactively communicated with regulators in those countries. We'll be looking at their needs and requirements and explore the right solutions to address those recent requirements.

**10** **Some people suggest that governments such as the US that say Huawei is a security risk really aren't**

**concerned about security but about trade and are trying to stop Huawei from becoming a competitor with American technology companies. First, I want to ask, do you think that's the case, that governments are creating this as a competitive issue to stop Huawei?**

**Second, how much do you think this might hurt Huawei's business?**

**How do you feel about being labeled a security risk?**

**What do you want to see changes in trade between China and the United States or China and other countries to help you?**

**Ken Hu:** First, as for Huawei being labeled as a security risk, our opinion is that any conclusion, any speculation should be based on real evidence.

Either you have evidence to show that Huawei's solution or equipment is not secure.

Over the past 30 years, hundreds of telecom operators have used Huawei's equipment. There have been no major cyber security incidents. And there has been almost zero Huawei equipment being used in the United States, so what is the evidence here to say that Huawei is not secure?

Or either you say there are problems with Huawei's behavior, yet again, over the past 30 years we have

become a 100-billion-US-dollar company with business in 170 countries and regions. There's no evidence to show Huawei has problems with our behavior.

We are a company with 100 billion US dollars in revenue, with businesses in 170 countries. We've provided leading products to most telecom operators around the world, and we serve hundreds of Fortune 500 companies. We also serve hundreds of millions of consumers around the world. You say Huawei is a cyber security risk without any proof. On what grounds?

You also talked about competition.

If you look at advancement in society from a technology and innovation point of view, a very big driver is the benign competition between different industries and between different companies.

Without competition, consumers cannot enjoy better technologies in a shorter period of time.

We also believe leadership can only be gained through competition.

Locking competitors out of the field cannot make yourself more excellent.

Therefore we believe any concern, any allegation or suspicion on security about Huawei, should be based on factual evidence. Without factual evidence, we don't

accept and we oppose those allegations.

Huawei has the strongest leadership position in 5G that is about to be deployed.

Leading companies need to be respected and encouraged, because we bring benign competition and drive the healthy development of the industry. And in the end the entire society will benefit.

11

**As you know, much of the recent efforts against Huawei over the last year in many Western ally countries around the world have been led by the United States and by the United States security establishment and it has been well-reported this is a coordinated effort. It's been six years since the American government first raised its security concerns about Huawei. And the company finds itself in this position now six years later defending itself against the very same allegations. I am just wondering if you believe, if Huawei believes that it could have done anything differently over the last six years to communicate its position primarily to the United States but to governments that find it mistrustful, in particular governments that used to welcome Huawei but now find themselves less willing to accept its equipment as 5G rollout begins.**

**Ken Hu:** Over the last couple of years, Huawei has taken many measures to engage in proactive communication with governments. On top of communication, we also established cooperation mechanisms on security with many national governments, including the governments of the UK, Canada, Germany, and France. We highly appreciate the open and pragmatic approach those governments have demonstrated in these engagements. And that progress has encouraged Huawei to do even better in those areas. This is the strategy and approach that Huawei will continue to follow.

At the same time, as I mentioned at the very beginning, we realize that as we grow bigger it is also part of our responsibility to proactively communicate and collaborate with the governments around the world. Because naturally, big companies draw more attention and also more concerns. Therefore, as we grow bigger, we will continue to embrace openness and transparency, communicating with all these stakeholders to address and mitigate their concerns.

**12 I have a couple of questions specific to Australia. I just want to know the numbers you previously quoted about the cost of rolling out base stations and wireless network without Huawei. Was that a Huawei study or a third-party research? And the other thing is**

**obviously Huawei continues to engage the Australian government regarding the recent policy of banning Huawei from bidding for 5G. I just want to know if they actually express any detailed requirements for Huawei. Like, is there something that Huawei can do to actually qualify? Or is it just a blanket ban without particular details, technical details?**

**Ken Hu:** On the first question, the numbers that I shared with you earlier came from a third-party report. The name of the company is Frontier Economics. The title of that report is *The Value of Competition on 5G Network Deployment*. If you are interested, we can provide this report to all of you.

And then to your second question. It's a pity that we haven't got any clear message from the Australian government, saying what exactly the problem is, and what is the evidence for them to come to their conclusion. And we did not have the opportunity to clarify this doubt with the Australian government.

**13** **Just a follow-up on Dan's question. You've shown us the wonderful testing and evaluation center here and described how the processes are working for countries like UK. I wonder if in the United States and Australia for example, you see any value in making**

**similar investments to create centers that can show people how these technologies can be verified and demonstrate your security record in a concrete way in particular markets that's been especially problematic.**

**Ken Hu:** I would say, why not? Because if we look at the cyber security center we built in the UK, it's for the UK. And we have a similar center in Canada to address their concerns. We have this new security center in Germany to serve the German market. As I mentioned earlier, we should have communications with government to fully understand their concerns. And also take agreed actions to address and mitigate those concerns.

Once people raise concerns about security, and if they want to address and resolve the concerns, I would say definitely we will be able to find the right solution.

But for security concerns raised as an excuse to block good companies from market participation, without hoping to truly address these concerns, I would say the results would be very different. Take 5G for example. If security concerns are raised as an excuse to block market competition, the result would be slower adoption of the new technology, much higher cost of network deployment, and consumers not being able to enjoy good technology or good services in a timely way. And yet, they will still have to pay more for those services.

And from a security point of view, this approach would not help to truly address and resolve the concerns around cyber security, given the fact that the ICT value chain is global in nature. If there are concerns saying Huawei's equipment is made in China, then if you look at all the companies along the value chain of ICT, you can hardly find even one company which can say none of its products or components are produced in China.

We would urge all players to get rid of these ideological or geopolitical considerations, and return the discussion to security and to technology. I also call for all players to come together to identify the real risks, and to find the right solutions.

**14**

**I want to ask for more details on the two-billion-dollar security overhaul. Can you please give some more information on how exactly you arrive at this number? How you will spend the money in which market, and why now? Is it in response to the July report from CSEC that you decided to address some of the UK concerns? But some of the issues had actually been raised as early as 2015. So why does this take so long for you to take any action, and why now?**

**Ken Hu:** The two-billion dollar five-year program on software engineering improvement is part of Huawei's

IPD transformation. This year, the company decided to start what we call IPD 2.0 program. IPD refers to integrated product development. This software engineering improvement program is part of that overall effort.

More than 10 years ago, we started this transformation process by introducing integrated product development for technology and innovation. That's what we call IPD 1.0. And through our efforts over the last 10-plus years, and with the support of these restructured processes, we are able to deliver reliable, high quality, and innovative products.

Then we started IPD 2.0 with a renewed understanding about future technology evolution, future networking environments, and what customers and society expect from technology at large. From a technical point of view, as we say it, the future technical landscape will become more complicated. From a network point of view, the future network environment will be more open, connecting not just people but also things. From a social point of view, digital technology will become increasingly important and become an integral part of people's lives, having implications for everyone in the way they work and live. Naturally, as a result of this, what people expect from technology is not just technical leadership and quality. Security will become a basic demand and

requirement.

We foresee in the near future, the trustworthiness and security of technology will become the most fundamental and basic requirement for any given technology.

That's how we envision the future, then we will start from there and work backwards. The trustworthiness of a technology or a product cannot entirely rely on testing efforts at the very end of development processes; rather, it has to start from the early design phase. As people often say, a good product is not made through testing but through design and development.

Similarly, we believe trustworthy and secure products of the future will firstly rely on design. As a part of the IPD 2.0 transformation, ensuring trustworthiness and security of our products is a very important objective that we will be working on. At the same time, we think software will be more and more important in future products. Therefore, software engineering will play a more important role to ensure the trustworthiness and security of future products.

You are right when you talked about the July report from the Oversight Board of the UK. While they acknowledged the track records of Huawei's products from a security point of view, they also reminded us

that Huawei needs to improve its software engineering capabilities and practices.

This is help from the UK government and we feel very appreciative about it. Therefore, as part of the overall IPD 2.0 transformation, we include software engineering capabilities as a very important component. In terms of how we arrived at this number [US\$2 billion], it is based on our technology mix and also based on our own cost estimations.

In the recent several months, we have been looking at this software engineering improvement as part of our overall IPD 2.0 transformation and we are working on our implementation plans for the future. We are quite confident about this transformation.

Huawei is a big company. It's not that easy for us to make a decision, especially a big decision. But whenever we've made a decision, Huawei has never failed. We are committed to seeing to it that we deliver the results on the things that we have decided to do. More importantly, we think this transformation and also all these improvement efforts are important for us to remain confident for our longer-term future and also to maintain the confidence of governments, customers, and partners around the world on Huawei.

**15****Whether Huawei would recruit new people or open new labs?**

**Ken Hu:** This investment will cover a lot of areas, including organization and people. For example, we will bring on board more people, especially talented people in software security. We will also improve our facilities at the labs. We will also revisit and improve our processes. At the same time, as part of this effort, we also need to change the mindsets of tens of thousands of our R&D engineers, so that they know security and trustworthiness is part of the important commitment we make to our customers.

**16**

**I think my colleague has asked this already, but I'm gonna ask a lot more specifically. So we know a lot of carriers are considering or have already decided to rip out Huawei equipment or steer clear of Huawei equipment for 5G. So, specifically, is Huawei confident of sustaining its growth? I know you said your revenue is gonna surpass 100 billion US dollars this year. But are you confident in maintaining your growth rate given the actions that I just described? And, then also, just more philosophically, I think you would agree that Huawei is at a very critical juncture in its history. You know, you are just on the cusp of becoming a 5G power. And then this happened. So, I understand**

**that in some ways it's a technical issue. There are also many who would argue that Huawei is already technologically superior in 5G. But I think the greater concern is more a motivational issue or an issue of your independence. How do you address that?**

**Ken Hu:** We are not seeing as pessimistic a picture as was described just now. We didn't see operators saying they want to swap out Huawei equipment or they want to stay clear from Huawei. On the contrary, out of the hundreds of operators we work with in the world, almost all of them are saying they want to work with Huawei, using Huawei equipment for their 5G networks, because they know we are the best. Only by using the best equipment can they build up their 5G networks faster and can they build up their 5G networks in a more cost-competitive way.

It's like a race. There are several runners on the field and now we are in the leading position. And I think leading runners should have every reason to be confident about the future. And we are confident that we will be the first one to hit the line.

And you also talked about independence. And I think the most convincing way is to let the facts speak. And over the last 30 years, we have been providing services to the telecommunications industry and our track records in all different aspects have proven our

independence.

I think it's not necessary to always dwell on fear or speculations without any facts. But it definitely does not mean we don't value other voices or concerns around Huawei's openness, transparency, and independence.

Therefore in the future, we will continue to adopt a transparent approach in proactively communicating with all stakeholders on all of their legitimate concerns, by providing more information that they need.

17

**You mentioned there were geopolitical concerns rather than real technical concerns. Underlying some governments' concerns of 5G safety in Huawei, you mentioned this in the context of the US. But do you think the same geopolitical concerns are also motivating countries, Japan, or more recently the Czech Republic, or even BT in its vision strip Huawei equipment out of its core network? Would you say these countries are also being politically influenced perhaps by US political concerns? Or do you think those countries' concerns are coming from genuine technical concerns?**

**And to ask a more specific question on that point, the UK's Oversight Board concluded in July that Huawei's safety standards were below industry standards. Do**

**you think this was a technical finding or do you think it was motivated by politics as well? If it was a technical finding, then why were you not prepared for it?**

**Ken Hu:** Let me first respond on the BT issue. We are working with BT for over 10 years. We are very good partners to each other. We have provided large amounts of equipment, both fixed line and wireless to BT.

From the very beginning of the Huawei-BT collaboration we had very thorough discussions around the whole strategy before network deployment and specifically where to introduce Huawei equipment into BT's networks.

Regarding 5G technology, BT fully recognized Huawei's leadership as exemplified by the chief architect's remarks, that Huawei is the only one, the only true 5G supplier now in the market. Therefore, it is definitely not the case that BT out of technical pressure decides to swap out Huawei's core equipment.

All of our collaboration with BT will follow this pre-agreed network deployment strategy, between Huawei and BT.

This year's OB report included the areas where Huawei needs to improve on the technical capability side. We attach great importance to this, and value the viewpoints and perspectives in this report.

On the one hand we have very active discussions with UK operators and also regulators to study and explore our action plans to improve based on those findings.

At the same time, we have also started our internal actions. And I would say over the last couple of months and less than half a year, the progress across all different dimensions has been quite encouraging.

**18**

**President Trump has shown that he enjoys engaging directly with executives and we have seen that with Jack Ma, for example. Have you considered or any executive at Huawei, visiting the White House? Or if invited would you consider going?**

**Ken Hu:** We have not received such invitation yet and we don't have such plans.

### **Closing remarks**

**Ken Hu:** Ladies and gentlemen, I thank you very much for this long interview and conversation, which is very helpful for me to understand different perspectives from the media community. And now I would like to do a quick summary before we end this session.

So as we discussed today, over the past 30 years,

we believe it is the hard work and dedication of every Huawei employee that has made Huawei what it is today. And we also appreciate the trust and support from our customers, from our partners, and also from many, many governments around the world.

I joined Huawei in 1990, almost 30 years ago, so I have had the honor to witness almost the whole process. From my perspective, over the past 30 years, this journey of transformation for Huawei across many, many aspects – in terms of culture, in terms of the management of our people – this is a journey of transformation that has helped us grow up from an unknown vendor to the 5G leader. And actually today, our 5G product solutions are in the leading position ahead of our industry peers.

So we appreciate the recognition from society. We appreciate the dedication from our employees. And we believe that industry leaders should be respected, because we bring healthy competition and we enable the development of technology and our society. As we discussed today, upcoming 5G technology will create huge opportunities and benefits for society. It will tremendously change many people's lives and the future of many industries, and we believe it highly relies on a global supply chain.

Talking about the security, in the past 30 years we have also witnessed the proven track record of Huawei's

product security. There isn't any evidence that Huawei poses a threat to national security to any country. We will always welcome any open dialogue with anyone who has legitimate concerns. But for any ungrounded allegations, we will firmly defend ourselves, and we won't allow our reputation to be tarnished.

At last, I'd like to share a saying from Romain Rolland. "There is only one heroism in the world: to see the world as it is, and to love it." At Huawei, we see what we have encountered and we still love the work we are doing.

Similarly, in Chinese, we have a saying.

"道阻且长，行且将至。" It means that the road ahead is long and hard, but we will keep moving and reach the destination, because we have already embarked on this journey. So once again, thank you very much for your time with us today. I really appreciate the wonderful conversation with all of you guys. And at last I would like to wish all of you an early Merry Christmas and Happy New Year. Thank you.

# Fire is the Test of Gold

Guo Ping's 2019 New Year Message

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December 27, 2018

Shenzhen, China

Marcus Tullius Cicero, a Roman philosopher, once said, "The greater the difficulty, the greater the glory." Truer words were never spoken as we bring 2018 to a solid close. It has been an eventful year, to say the least. But we have never stopped pushing forward, and as a result, our 2018 sales revenue is expected to reach 108.5 billion US dollars, up 21% year-on-year.

We have signed 26 commercial contracts for 5G with leading global carriers, and have already shipped more than 10,000 5G base stations to markets around the world. More than 160 cities and 211 Fortune Global 500 companies have selected Huawei as their partner for digital transformation. We have shipped more than 200 million smartphones, and have made remarkable breakthroughs in both our PC business and IoT ecosystem for smart homes. Huawei Cloud has launched over 140 cloud services in 18 categories, and we are working with our partners to serve global customers with 37 availability zones across 22 regions. This year we also announced our AI strategy and launched a full-stack portfolio of AI solutions for all scenarios. This portfolio includes the world's first all-scenario AI chips – our Ascend series – as well as related products and cloud services.

Our business performance remains strong, and this is by far the most direct form of validation that we can receive from our customers. It is also our best response

to negative conjecture and market restrictions. Here I would like to thank all of our customers and partners, as well as the public, for your trust and support. Thanks to our employees for your incredible, hard work. And finally, I would like to extend my gratitude to your families for their unfailing support and understanding. No matter what changes we might face, our procurement strategy will remain unchanged. We will keep our policy consistent especially for our US suppliers and firmly collaborate with them for shared success.

In the coming year, we will see new waves of development in digitization and intelligence, and we may very well encounter even greater difficulties. In times like this, we must summon our inner strength, improve the quality of our operations, inspire passion across the organization, and continue forging ahead to satisfy customer needs and achieve strategic leadership.

**In 2019, we will focus on strategic businesses and strategic opportunities and build a more resilient business structure.** We will continue to optimize our product investment portfolio to achieve end-to-end strategic leadership. As part of this, we need to retain products that are competitive and appealing, and phase out those that aren't. We will cut down on the development of products that haven't been competitive for some years now, and redirect our people towards areas of strategic opportunity. If we can develop the

simplest possible network architecture, make our transaction models as simple as possible, ensure the highest level of cyber security and privacy protection, produce the best products, and provide the best services, no market can keep us away.

In 2018, we successfully optimized the investment portfolio for our Carrier Software & Core Network Business Dept. A group of key people remained in the carrier software domain to help it increase profitability, while others transferred to other domains to support the company's strategic development. The Carrier Software & Core Network Business Dept has set a benchmark for other departments in terms of both organizational and business transformation. Lonely heroes are among the greatest.

**In 2019, we will fully enhance our software engineering capabilities to build trustworthy, quality products.** Our products and solutions have earned the trust of our customers in more than 170 countries and regions. We have a very strong track record in cyber security. Huawei has never and will never present a security threat.

Today, the trustworthiness of ICT products has become the top concern of our customers, and solid software engineering capabilities and practices are the foundation for building this trust. We will hold ourselves to the highest standards, placing cyber security and

privacy protection at the very top of our agenda. We plan to systematically enhance our software engineering capabilities over the next five years, building trust and high quality into each and every one of our products and solutions.

**We will inspire greater passion in the field, and focus on growing the harvest and increasing the fertility of our soil.** Through a pilot project for contract approval at the rep-office level, we aim to inspire greater passion and increase the per-capita contribution of our teams in the field. We will do this while also ensuring internal and external compliance, meeting financial targets, and maintaining sustainable development. For this project, we will use working capital as a constraint and total rewards as an incentive.

Under centralized governance, we will gradually optimize our operations and establish a new operating model. HQ will loosen control and delegate more authority to field offices. It will focus on budget management while field offices make good use of the authority they're given. In essence, budgets will represent the direction of the company, and decision-making authority will be delegated to those who are closest to our customers.

By optimizing the relationship between HQ and field offices, we aim to increase productivity, and inspire our teams in the field to make greater contributions,

which will naturally bring them greater returns. We will continue to use AI in our GTS, Finance, and Supply Chain to automate large amounts of highly repetitive work. This will help us drive efficiency and address practical pain points in our business departments.

**We will refocus the efforts of our manager and expert teams on business success while building out stable teams of professional operations staff.**

The opposite of success is not failure, but mediocrity. We can't let our managers become overcautious or commonplace, and we need to prevent Huawei itself from becoming a mediocre company. Our managers must have drive, not apathy. Constant vigilance, perhaps a bit of madness even, is vital to success. We will continue to open our arms and embrace scientists from around the world, while strengthening the rotation of our own experts. Generalists and specialists at Huawei need to rotate, and we must use our examination and appraisal systems to weed out the experts who are no longer qualified. By further bolstering our professional operations staff, we will be able to build a set of stable, efficient, and quality operational systems and teams.

**We will optimize individual performance management and build a more united team.**

When managing performance, we should not overly focus on individual results and responsibilities. Of course, we need to inspire our people to keep improving their

performance and capabilities, but we also need to inspire them to do the same for their teammates. While maintaining a focus on results and responsibilities, we should also de-emphasize output as a factor of productivity. We need to look at how much value our people create for customers, how they help others maximize their contribution, and how they use the output of others to improve their own. We will learn from Google Corps and form our special forces.

**We will value the most dedicated among us, and put everyone on equal footing when rewarding contribution.** We should explore incentive structures that better match the characteristics of different businesses while ensuring the consistency of our HR policies. We need to combine different kinds of incentives to reflect different responsibilities and contributions, both for teams and individual employees. This will give people the extra motivation they need to push themselves and achieve more. Naturally, those who contribute more will earn more. Bonuses should serve as an incentive for short-term contributions, and also as a guide for future investment. We should reward those who work to grow the harvest, as well as those who work to increase the fertility of our soil for future growth.

**We will look out for others, collaborate for shared success, and build a favorable business ecosystem.** As the dynamic between world powers becomes more

intense, we will see even greater uncertainty in the macro business environment. We aren't equipped to change the macro environment, but what we can do is keep our feet on the ground and improve the business ecosystem for our own industry.

We must step up efforts to establish our global presence and increase investment, making tangible contributions to local communities and working to secure opportunities for fair competition. We need to establish fields, both internally and externally, where we can proactively engage with stakeholders like governments, media outlets, our partners and suppliers, and industry standards organizations. Every Huawei employee is an ambassador of our core values and a representative of the Huawei brand. We also need to understand different value systems around the world and use a more global mindset to resolve the issues we encounter in Western countries.

**We will remain calm and composed in the face of adversity, and use the certainty of legal compliance to deal with the uncertainty of international politics.**

Going global means complying with the laws of all countries and regions where we operate. This is the most important basis for us to survive, serve, and contribute to the world at large. We must continue to incorporate compliance requirements into all business activities through carefully aligned policies, systems, organizations,

processes, culture, trainings, and communications. These requirements must be ingrained in the awareness and behavior of each and every Huawei employee. We must not be discouraged by malicious incidents or temporary setbacks, and must remain determined to achieve global leadership. Setbacks will only make us more courageous, and incredibly unfair treatment will drive us to become the world's number one.

Over the past three decades, we have served our customers with religious devotion, working closely with them and our partners to bring telecommunications technology beyond the confines of ivory towers and labs, and give it practical application in cities and remote regions the world over. By doing this, we are bridging the digital divide between developed and underdeveloped countries and regions, and connecting more than three billion people around the world. We can proudly say that we have left a profound impact on the course of human civilization.

Today, as an important leader and contributor in the ICT industry, Huawei is now a member of more than 380 industry organizations, where we serve in 300+ key positions and submit more than 6,000 proposals each year.

We are ahead of others in domains like wireless, optical, data communications, and smart devices. For 5G markets that choose to not work with Huawei, they will

be like an NBA game without star players: the game will go on, but with less deftness, flair, and expertise. As for new developments in technologies like AI, big data, and cloud, we are in sync with the industry and primed to take the lead.

In the years ahead, the ICT industry will continue to overflow with excitement and promise. Building on 30 years of experience, Huawei will accomplish great things. Each and every Huawei employee will accomplish great things, too.

Digital transformation is in full swing, and we find ourselves at the cusp of an intelligent world. Consumers are actively looking for more advanced, more trustworthy digital technologies and services. Going digital and intelligent will be a long process, so we need to keep innovating and delivering cutting-edge results.

Always remember that the journey is hard, but joyful. Fire is the test of gold. Hardship and pressure will only make us more united and stronger. I have no doubt that we will achieve what we've set out to do: to bring digital to every person, home and organization for a fully connected, intelligent world.

A thousand ships sailed past the shipwreck; our day to brave the winds and waves will come. No hardships or difficulties can stop us sailing forward.

# Ren Zhengfei's International Media Roundtable

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January 15, 2019  
Shenzhen, China

**01** **To kick this off, it will be great if you can give a little background on how your experience in military shapes your management style with Huawei. And the tie with that is, now that Huawei is under a bit of scrutiny worldwide, how are those ties with the military impacting Huawei's future as it continues to grow?**

**Ren:** I joined the military during China's Cultural Revolution. At that time, there was chaos almost everywhere, including in agriculture and the industry. The country was facing very difficult times. These difficulties were reflected in people's diets and clothing. I remember that, in 1962, at the most difficult of times, every Chinese person was allotted only one-third of a meter of cloth. That amount could be used only for patching. So I never wore clothes without patches when I was young.

The central government hoped that every Chinese person could get at least one decent piece of clothing every year, so they decided to introduce the most advanced equipment from a French company called Technip Speichim and build a large synthetic fiber factory. This was used to produce some synthetic fibers with the hope that every Chinese person could be given synthetic fabric clothes. The factory was situated in a northeast city called Liaoyang, which is along a river called the Taizi River. The conditions there were very harsh. Back then, China was in complete chaos, and the central

government was trying to mobilize local engineering teams for the construction of that factory. However, no team answered the call. Therefore, the government had to mobilize military teams to build the factory.

It was a very advanced set of equipment from the French company, and the engineering capabilities of the military were not up to the task. I had been to college, and people like me could play a role in that project.

When we just arrived at the site, it was dozens of square kilometers, and there was no housing at all. So everyone slept on the grass, and it was in July or August. Later, the factory got some funding and built some shabby housing that provided little shelter from the rain and wind. You can imagine how harsh the conditions were. If you ask me how I felt back then, I would say: First, we had been given access to the world's most advanced technology. That French company had a very high level of automated controls that no Chinese companies had. This was the first time that I had learned what the world's most advanced technology looked like.

Second, we learned to endure hardship. Our housing was very shabby, so we constantly felt cold as it couldn't protect us from the wind. Just imagine, the temperature could drop to minus 28 degrees Celsius. China was facing huge economic challenges at that time. The supply of meat and cooking oil was very limited. For

ordinary people living in Northeastern China, their monthly supply of cooking oil was around 150g. There was no supply of fresh vegetables at all, so we had to pickle some vegetables like cabbages and radishes we got in autumn in large concrete pots, and rely on pickled foods for six months at a time. Our staple food was sorghum. It was far from delicious. So in a nutshell, we learned from the world's most advanced technology while living a life that could be seen as primitive. That's how I felt back then.

But I was happy then, because if you read too many books in other parts of the country, you could get criticized. The factory was probably one of the few places that people could read. We had to read to understand how this modern equipment worked. At the time, I was a technician of a company in the military, and then I became a deputy director of a small construction research institute with just twenty plus people. That's actually a title equivalent to a deputy-regimental level. My dream back then was to reach the military rank of Lieutenant-Colonel before China disbanded its military forces. Unfortunately, that did not happen. So I'm just a veteran without a military rank.

**02**

**I have a question regarding your personal experience. It is reported that you participated in the National**

**Congress of the Communist Party of China back in 1982. How come you attended that conference, and what is the relationship between Huawei and the Communist Party of China today?**

**Ren:** When we built the synthetic fiber factory, we ran short of a kind of instrument used to test the advanced equipment. One technician with the Shenyang Automation Research Institute told me that he saw similar instruments when he traveled abroad, and he described to me what they looked like.

Through mathematical inference, I was able to produce a design of the instrument in question. But I was not 100% sure if my mathematical inference was correct, so I went to consult a professor with the Northeastern University of China. His name was Li Shijiu. I wanted to confirm whether the inference made sense. The professor affirmed my inference. In the end, I invented that instrument.

That's also the time when the "Gang of Four" was smashed and the country was trying to find readily available examples to demonstrate that science and technology were valuable. My little invention was exaggerated into something really big and it was promoted in various media outlets, including newspapers, magazines, movies, etc. And because of such massive publicity, luckily I was chosen to be a

member of the National Science Conference.

If you are aware, that's a time when you had to be a CPC member even to become the head of a cooking team in the military. I was selected to attend the National Science Conference, but I was not a CPC member. My supervisor felt that was really strange, so with the help of party organizations, I became a CPC member. The reason I was not a member was not because I didn't do my job well enough. It was because of my family background.

My father was labeled as a "capitalist roader". For this, he was actually locked up in a cow barn at one point in time. You know, for an educated person back then, an intellectual, his or her background or history would be much more complicated than that of a cadre among farmers and workers. It was because of such close scrutiny of my father that he was in such a difficult situation for over 10 years before his name was cleared. And because of this family connection, there was no possibility for me at the time to become a CPC member.

After I joined the party in 1978, China encouraged leaders to have "four qualities": young, professional, educated, and revolutionary. I happened to meet the requirements, and was recommended to be a member of the 12th National Congress of the Communist Party of China. And in the end, I was selected. Unfortunately, I

was too young to truly understand what the big reform was all about in that historical moment. That was really a pity. I was a complete technical geek back then. Today, I still love my country. I support the Communist Party of China. But I will never do anything to harm any other nation.

**03** **As I understand, over the last few weeks or months, it must have been very stressful for you. Thank you for taking the time to talk with us today. I want to ask a question about security. Security incidents occur a lot recently. The security concerns raised by governments such as the US and Australia are not about the capabilities of Huawei's technologies. These governments appear to be concerned that every company in China, fundamentally Huawei, is under the authority of the Communist Party of China. If the Communist Party requires Huawei to do something, the company has to obey. I'm wondering, what assurances can you give foreign customers that Huawei is able to protect the safety of their networks or protect the confidentiality of information? Under the legal circumstances of China, what can Huawei say to customers about the limits of its abilities to give assurances about that?**

**Ren:** The first point I want to make is that over the

past 30 years, our products have been used in more than 170 countries and regions, serving more than 3 billion users in total. We have maintained a solid track record in security. Huawei is an independent business organization. When it comes to cyber security and privacy protection, we are committed to siding with our customers. We will never harm any nation or any individual. Secondly, China's Ministry of Foreign Affairs has officially clarified that no law in China requires any company to install backdoors. Neither Huawei, nor I personally, have ever received any requests from any government to provide improper information.

**Pardon me. I'm not arguing with you. Any government, the United States or Australia, would say you are a company that sells networks. A customer has to trust a vendor with the most secret information about how a national telecommunications network operates. Suppose, for instance, the Ministry of State Security were to come to Huawei to ask Huawei to give information about a foreign country to the Ministry of State Security. Legally, there's nothing Huawei can do to refuse. Huawei must obey. So what can and will Huawei do to reassure customers?**

**Ren:** Can I sell Huawei to you?

**Yes, I did just buy a Huawei product.**

**Ren:** If you cannot afford [to buy Huawei], I would probably have to shut the company down. Customer-centricity has been at the very core of Huawei's business operations since our founding. We will never do anything to harm the interests of our customers. Apple is an example we look up to in terms of privacy protection. We will learn from Apple. We would rather shut Huawei down than do anything that would damage the interests of our customers in order to seek our own gains.

**04 I was hoping to ask you about your daughter, Meng. It's been just more than one month since she was detained in Canada. I was just wondering how you're feeling knowing this was an [extradition] request? And tell me if you feel that your daughter has been targeted because she is your family member and because of her position in Huawei?**

**Ren:** As you must be aware, the case of Meng Wanzhou right now is in legal proceedings. So, we'd rather leave it to legal proceedings. I won't provide much comment about it here.

As Meng Wanzhou's father, I miss her very much. And I'm deeply grateful to the fairness of the Honorable Justice, William Ehrcke. I'm also much grateful to Prosecutor John Gibb-Carsley and Prosecutor Kerri

Swift. I also thank the Alouette Correctional Centre for Women for its humane management. Thanks to Meng Wanzhou's cellmates, for treating her kindly.

I also appreciate the consular protection that the Chinese government has provided in safeguarding the rights and interests of Meng Wanzhou as a Chinese citizen. I trust that the legal systems of Canada and the United States are open, just, and fair, and will reach a just conclusion. We will make our judgment after all the evidence is made public.

**05 You are the father of Ms. Meng. And now your daughter has been treated like this. You mentioned just now you trust the legal proceedings. But is it because Meng is part of your family that she is being targeted by US and Canada? What's your personal feeling?**

**Ren:** You know, I certainly do not have access to the email correspondences between the US Department of Justice and the Canadian Department of Justice. Maybe in the future when they make this evidence public, I will see whether it is because Meng is my daughter that she is being targeted. We will wait to see more evidence that will be made public in the proceedings that follow.

**06** I just want to follow up on the answer you gave to Joseph in which you mentioned Apple, in your response. You were referring to the case when Apple was asked to hand over evidence from an iPhone and they took it to court. Is that what you will do if there was a request from the Chinese government for data from the networks? Just a second one, let's say, topic. What kind of correspondence do you have with the US authorities around some of the other engagements that may let you back in the market? What have the conversations been? And what is coming up for the very thing?

**Ren:** We don't have any channels for communicating with the US government, and, honestly, we don't know much about each other. Regarding what would happen if the implied cyber-security case occurred, I believe I have made myself very clear: We will never harm the interests of our customers.

**07** A couple of points have been raised already regarding issues which foreign nations may consider as causes of concern for Huawei, namely military background, affiliations with the Communist Party, etc. Another primary concern foreign nations have is that the government somehow has ownership for Huawei. Huawei claims to be an employee-owned company,

**but the exact way that the shares are spread out among its employees is still secret. If you were to make that information public or even make Huawei public, you would surely have resolved all the suspicions, so why do you keep the shareholding structure private?**

**Ren:** First, I think there are very few success stories where public companies become strong and big. Capital tends to be greedy. Whenever there is an immediate interest, capital tends to take it away, and that would certainly compromise the long-term pursuit of ideals. We are a private company, so we are able to remain committed to our long-term ideals.

Ever since we were a relatively small company, with just several hundred employees, we have focused all of our efforts in one direction. Even as we grew larger, to several thousand, tens of thousands, or even today with over 100,000 employees, we have maintained the same focus as we move forward.

Our annual R&D investment has reached 15 to 20 billion US dollars. Over the next five years, we are going to invest a total of more than 100 billion US dollars into R&D. Public companies, however, are unlikely to do this, because they focus on making their balance sheets look good. What matters more to Huawei is the future industry structure. Our decision-making system is different from public companies. It is very simple, and

we are working hard to make the information society a reality.

Here, I also have a piece of information to share with you. We have 96,768 shareholding employees. Just a few days ago on January 12, we completed the election of the new representatives of shareholding employees at 416 polling stations across over 170 countries and regions. The entire process of this election lasted about one year. We first communicated our *Articles of Governance* to all employees. Through those efforts, our employees became more familiar with how the corporate governance structure of this company works.

Then, we nominated candidates at different tiers of our organization. All candidates then gave some presentations to win the support of the constituency. At that time, they were only nominated, not yet elected. Then the list of nominated individuals was put together, and submitted to a higher-level department for review. Feedback from more shareholding employees was collected. After that, we had a certain level of convergence, meaning the list of individuals was narrowed down. And then that shortlist was subject to reviews, discussions, and deliberations at higher levels of the company, which also took into account the opinions of people around those individuals. The shortlist then got shorter. This list was reported to the Election

Committee, then it was sent back again, further polished and narrowed down to a list of roughly 200+ individuals. This list was published on our internal information sharing platform to collect employee feedback, and then the list of candidates was finalized.

On January 12, we completed the voting – the election – of our shareholding employee representatives around the world. Over the past few days, our messengers around the world have been taking those votes back to Shenzhen. The Representatives' Commission is the highest decision-making authority in Huawei, and the company is owned by our 96,768 shareholding employees. Our shareholding employees are currently working at Huawei or are retired former employees who have worked at Huawei for years. There is no single individual that owns even one cent of Huawei's shares without working at Huawei. There is no external institution or government department that owns our shares, not even one cent's worth. We have a shareholding registry that lists the shares held by our shareholding employees. Journalists who are interested are welcome to take a look at it.

I myself am the founder of this company. At the time when I wanted to found Huawei, I did not have enough money. When I got demobilized from the military, my ex-wife and I received a total of CNY3,000 as compensation from the military. At the time, a minimum

of CNY20,000 was required as registered capital to start a company in Shenzhen. By pooling funds from different people, I managed to get CNY21,000 to register Huawei.

Today, the total number of shares that I personally have within Huawei is 1.14%, and the stake that Steve Jobs had in Apple was 0.58%. That means there is still potential for my stake to be further diluted. I should learn from Steve Jobs.

**08**

**Last year, it was reported that the African Union said there was infiltration from the Chinese side on their equipment based in Ethiopia. And we also learned that some of the equipment used by the African Union was provided by Huawei. Do you have any comment on that? You have said that Huawei will never harm the interest of any customer or individual. Suppose one, either Chinese or foreigner did something illegal here in China, and they left some trace on their Huawei smartphone, for example. Huawei, just like any other company, is supposed to provide support and cooperate with public security authorities because it is required by the law. Then in that case, would Huawei cooperate? Then, imagine that one Chinese or one foreigner committed a crime in countries outside of China, what would be Huawei's actions in those cases?**

**Ren:** For Huawei employees, whether they are Chinese or non-Chinese, if they violate local laws, we'll always cooperate with the investigations. We stand strongly against any behavior that violates laws and regulations. Within Huawei, we have a very sound internal and external compliance management system. The idea is to prevent those wrongdoings or bad things from happening. Those who commit violations will be disciplined by our compliance department. Huawei may grow even bigger in the future. In the cloud era, our society is becoming more and more complex. If we do not govern our behavior through discipline, we might get overwhelmed.

For the breach of equipment used by the African Union, it had nothing to do with Huawei.

**09** **Following up on that and about how Huawei implements its disciplinary actions, just last week, a member of Huawei's staff was arrested in Poland on suspicion of spying. Huawei has fired that employee already without waiting for the trial, without waiting for the evidence to move forward. Whereas in Canada, where Meng Wanzhou was arrested in December, Huawei appears to at least stand by her and is still, in a sense, putting trust in her innocence. So why was the decision made to fire the employee in Poland? Why**

## **has that action not been taken in Canada?**

**Ren:** Both cases are in the judicial process, and I'm not in a position to make further comments other than the information available from our official statements.

**10** **My question is more related to Huawei's business. In light of recent developments, especially where some European countries have also stopped using Huawei's equipment based on the concerns on cyber security, what impacts will this have on Huawei's business? What actions and plans does Huawei have in mind or what do you think Huawei should be doing to address this kind of situation and to sustain its business in those markets, like Europe, US, and other Five Eyes countries?**

**Ren:** First, it has always been the case that some customers accept Huawei and others don't. This is nothing new at all. If only a handful of congressmen decide that Huawei should not be accepted, then that does not represent the entire government. We can reach out to talk with the right stakeholders. If those individual opinions become orders coming from a government, then we may have to stop our sales there.

One of the major topics currently in question is 5G. If you look at 4G, I do not believe there was any

controversy or debate about it. So, for products where there is no such debate, we will continue working to drive our sales. Some countries have decided not to buy equipment from Huawei. Therefore, we can shift our focus to better serve countries that welcome Huawei. We can build high-quality networks in those countries to prove that we are trustworthy. Therefore, it's like a peaceful race from a technical point of view, and I think that's fair.

**11**

**Chinese foreign ministry arrested two Canadian citizens on national security charges. Yesterday, a court pronounced a death sentence for a Canadian who was accused of drug charges. Some people outside of China suggested that these two Canadians were detained basically as hostages in connection with the arrest of Meng Wanzhou in Canada, and the drug case might have been influenced by that case. How do you feel having people say this sort of thing about your company or that you are personally connected to Chinese government taking hostages to help you or that there might be some political influence on this drug case to help your company? How does that make you feel?**

**Ren:** I don't know the whole story about this case, and it is not related to Huawei in any way.

**12** I was wondering about the rollout of 5G networks in coming years. There are a number of countries taking a lead from apparently the United States to put new restrictions on Huawei's participation in 5G, and perhaps even more broad restrictions on top of that. I was just wondering, last week Polish officials stated they would like a unified position with NATO with regards to Huawei. In light of these new potential restrictions, what does this mean for Huawei knowing that it might be effectively locked out from a significant chunk of the world's telecommunications networks in the future, both from a business sense and a reputational sense? And how will Huawei contend with these restrictions?

**Ren:** To start with, I'm not sure how far this proposal will go, and whether or not Poland is able to push it through. I think countries like France and Germany might have a greater say in NATO.

So I'm not sure if Poland can get its proposal accepted. Even if they get what they want, it does not matter so much to Huawei. Because, as you know, we are not a public company – we aren't overly concerned about beautiful numbers, or a nice-looking balance sheet. If we are not allowed to sell our products in certain markets, we would rather scale down a bit. As long as we can feed our employees, I believe there will

always be a future for Huawei.

As I mentioned, right now our R&D investment averages 15–20 billion US dollars per year. That puts Huawei in the top 5 position across all industries in the world in terms of R&D intensity. In total, we have been granted 87,805 patents. In the United States, we have registered 11,152 core technology patents. We are actively involved in 360+ standards bodies, where we have made more than 54,000 proposals.

So we are the strongest in terms of telecommunications capabilities. I believe people will make their own comparison in the end between countries that choose Huawei and countries that don't work with Huawei. Of course, there is no way we can control their choice.

In terms of 5G, we have signed 30-plus commercial contracts today, and we have already shipped 25,000 5G base stations. We have 2,570 5G patent families. I believe that, as long as we develop very compelling products, there will be customers who will buy them.

If your products are not good, no matter how strong you go for publicity, nobody will buy them. So what matters to Huawei more is working to streamline our internal management, improve our products, and improve our services. I think that's what we should work on to address the challenges of this changing world.

There are only several companies in the world working on 5G infrastructure equipment, and not many companies are engaged in microwave technology. Huawei is the only company in the world that can integrate 5G base stations with the most advanced microwave technology. With that capability, our 5G base stations don't even need fiber connections. Instead, they can use superfast microwave to support ultra-wide bandwidth backhubs. This is a compelling solution that makes a lot of economic sense. It works best for sparsely populated rural areas.

We should not presume that rural areas are poor. A lot of villa districts in the US tend to be in the countryside. Without fiber, how can they enjoy an 8K resolution TV experience in the future? If Huawei is not involved in this, these districts may have to pay very high prices in order to enjoy that level of experience. By then, things might become very different. Those countries may voluntarily approach Huawei and ask Huawei to sell them 5G products rather than banning Huawei from selling 5G systems. We are a company that is customer-centric; therefore I think it is possible that we will sell our equipment to them.

**13**

**Mr. Ren, I just want to go back to a point you made earlier. You said that if there was a request by the**

**government to access data, to create backdoors and networks, then you would deny it. You would not comply. Considering that you are a member of the Communist Party, how could you deny what they are asking for? What means do you have to actually fight against any request from the Chinese government to do any of these things? What assurance would you be able to give to your customers that if there was a request for something along those lines you would actually be able to fight it?**

**Ren:** We are a company, and we are a business entity. The values of a business entity are such that it must be customer-centric and the customer always comes first. We are a business organization, so we must follow business rules. Within that context, I can't see close connections between my personal political beliefs and the business actions we are going to take as a business entity. I think I already made myself very clear earlier. We will certainly say no to any such request. After writing this quote in your story, maybe 20 or 30 years down the road, if I am still alive, people will consider this quote and check my behavior against it, as well as the behavior of our company.

**This one just follows up the previous one asked. Like you mentioned, Apple went to court against the government. Is there a system here such that**

**you can take the government to court to fight such requests?**

**Ren:** If I or Huawei deny those requests, I think it should be the government in question that files litigation against Huawei, not the other way around. Whether or not the government would file such litigation, I don't know.

14

**The trade war developing with the US seems to have moved beyond just a trade war, and the term "Cold War" has come up a bit. Looking at the technology camps – GSM and CDMA, years ago I participated in CDMA. What are your thoughts on the two technology camps? Do the US and China lead these camps in technology, which is facing tailwinds similar to what we see in mobile platforms like Android and iOS?**

**Ren:** I want to use the example of railways to answer this question. We once had diversified standards, with a narrow track, standard track, and wide track. This added many difficulties to the transportation industry throughout the world. Similarly, in the area of communication, we also have gone through a period where different standards coexisted. That also increased the deployment costs of the networks. We have seen that for 3G and 4G. In order to unify communications

networks, we have worked hard to come up with a unified global standard. I think the 5G standard serves as a very good foundation for humanity to move toward an intelligent world. Arbitrarily dividing technology into two different camps will only harm the interests of the world. I believe the ideals of the technological community and scientists, as well as the wisdom of political figures coming together, will determine the future of humanity. Personally, I strongly support unified global standards.

**15** **I'd like to follow up my colleague from Associated Press's question on the detained Canadians and the case of the Canadian who was just sentenced to death. I know some of these cases don't have anything to do with Huawei, but the perception is that they do have a connection to Huawei. I'm wondering if you could comment on whether you think this helps or hurts Madam Meng's chances for her release. And then, on that, I just wanted to talk a little bit about your personal relationship with Madam Meng, as your daughter, and how that's translated into the workplace at Huawei.**

**Ren:** Personally, I don't see any connection between those cases and the case of Meng. In Meng's case, I believe we just need to leave the outcome to the proper legal proceedings.

As far as the relationship between me and Meng as father and daughter, I would say, it's a close relationship in some aspects and not so close in others.

Why do I say it's not so close? Throughout her childhood, I was in the military, which means that each year I was away for 11 months, spending one month with my family. Meng had to go to school, and after school, she had to do her homework. Therefore, our connection during her childhood and adolescence was not that strong. In addition, when I started Huawei, I had to fight for the survival of this company, spending 16 hours a day in the office. I have one son and two daughters, and I do not think my relationship with them was very close. As a father, I feel indebted to them. I once talked to all of them, asking if they would prefer we spent more time together as a family. The alternative I gave them was that I would build a platform upon which they could grow. Their response was, alright, we would choose a platform for our professional development.

Within Huawei, Huawei's management system is one based on processes. Processes are cold things, and I do not directly supervise Ms. Meng's responsibilities, so we don't have a strong connection in the workplace, either. Of course, maybe after my retirement in the future, I will try my best to compensate for these things.

16

**Follow-up question on that: You talked about retirement. Do you have any plan right now to retire? And the two other questions are related to the United States. You mentioned earlier that you do not have access or channels to talk to the US government. Right now we have so many foreign media outlets and journalists here. What is the message that you want to communicate through us to the US government? Trump also mentioned or tweeted that he could intervene in Meng's case if that would serve the trade negotiations with China. What would you say about that? And how do you feel about Donald Trump as a person?**

**Ren:** To your first question, the timing of my retirement will depend on when Google can invent a new medicine that will allow people to live forever. I'm waiting for that medicine.

To your second question, the message to the US that I want to communicate is collaboration and shared success. In our high-tech world, it is increasingly impossible for any single company or even any single country to do the whole thing.

In the industrialization era, maybe one nation alone would have all the capabilities needed to produce a complete textile machine, a complete train, or a complete ship. We are in a world of information. In

an information society, interdependence between one another is very significant. And it is these interdependencies that drive society to progress even faster. The information society we are going to see will be massive. And for any single market opportunity, it cannot be sustained or supported by any single company. Instead, it calls for the concerted efforts of thousands or even tens of thousands of companies working together.

As for your third question, for President Trump's comment that he might intervene in the case of Meng Wanzhou, we need to wait and see whether he acts upon this. Right now I can't make a judgment about that.

And then for President Trump as a person, I still believe he's a great president, in the sense that he was bold to slash taxes. I think that's conducive to the development of industries in the U.S.

With the increasing adoption of AI in industry and also in the management of companies, traditional challenges like trade unions, social welfare issues, and possible strikes might be mitigated.

Reducing taxes is conducive to encouraging investment. It is like digging a trench in the ground, which makes it easy for water to flow into that trench.

However, it's also important to treat all countries and all companies – which are potential investors – nicely, so that they will proactively invest. Benefits from increased investment can offset loss of revenue from tax cuts for the government.

If countries or companies are frightened, let's say, by the detention of certain individuals, then those potential investors might be scared away, and the favorable environment created by tax cuts will not perform to expectations.

**17 Many people are saying that the suspicion around Huawei's 5G in Europe and the United States is not all about technology. It is about politics as well. Some people even argue that Huawei perfectly embodies the Cold War going on between China and the US. What do you have to say about that?**

**Ren:** First, I would say Huawei is not that important. We are like a small sesame seed, stuck in the middle of conflict between two great powers. What role can we play? The trade conflict between China and the US has not had a major impact on our business. We are expected to continue our growth in 2019, but that growth won't be greater than 20%.

Second, some people in the West believe that

Huawei's equipment is stamped with some sort of ideology. That's as silly as people smashing textile machines back during the industrial revolution, as they thought advanced textile machines would disrupt the world. We only provide equipment to telecom operators, and that equipment doesn't have an ideology. It is controlled by telecom operators, not by Huawei. So I definitely hope that people do not go back to the old days of the industrial revolution when textile machines were being smashed.

**18**

**You were talking earlier about the need for the telecom industry worldwide to be integrated and be interconnected. Let's look at what happened to your state-owned rival ZTE last year when sanctions of America shut down the company's production. Are you worried that something similar might happen to Huawei if the US were to impose sanctions? Will it stifle Huawei's business? Secondly, I read that when Huawei was still young, and just a manufacturer of telephone switches, you had a meeting with Jiang Zemin when you told him that telephone switches were related to national security, and that a country without its own telephone switches is a country without its own military. I just want to ask, what do you mean by that? Maybe you still think domestically**

## **producing telecoms equipment is vital to China's national security?**

**Ren:** We have been investing heavily in R&D for years, and we have extended great effort. We are a company that is different from ZTE. What has happened to ZTE, I believe, will not happen to Huawei. On top of that, we have made it clear in our corporate policy and fundamental business principles that we must abide by all applicable laws and regulations in the countries where we operate, including all applicable export controls and sanction laws and regulations of the United Nations, the United States, and the European Union. We are committed to building and improving our compliance system.

If this type of situation did happen to Huawei, it would impact Huawei, but I think the impact would not be very significant. That is because I believe telecom operators around the world would continue to trust us.

Let me give you some examples. One example is the tsunami that happened in Japan. There was nuclear leakage in Fukushima. People were evacuated from the affected areas, but Huawei employees went to the affected areas to restore telecommunications equipment. Huawei employees risked their lives and restored 680 base stations within two weeks. That was a really important lifeline, especially in those difficult times.

Meng Wanzhou also flew from Hong Kong to Japan during that time. There were only two passengers on that flight. Huawei is a company that does not run away in the face of disasters. Instead, we march toward those disaster-stricken areas.

The second example is a tsunami that happened in Indonesia. 47 Huawei employees restored 668 base stations in affected areas within 13 hours, supporting the disaster relief efforts.

Another example is the 9.1-magnitude earthquake that happened in Chile. Three Huawei employees were out of touch at the epicenter of the earthquake. The local team sought my opinion when they were about to send a rescue team. I thought there could be subsequent earthquakes and I feared that there would be even greater losses if we were to send the rescue team. We decided to wait patiently. Finally, those three individuals managed to contact their supervisor. That supervisor told them where microwave equipment was broken. And then those three individuals returned to repair the microwave equipment. We then shot a short movie based on their experience. Afterwards, I went to Chile and talked with those employees. The richest man in Chile gave me a box of very good wine as a gift. I gave it to the three employees.

The other example is Africa. In a lot of African

countries, there is not only war, but also very serious disease. A lot of Huawei employees have contracted malaria. A great number of Huawei employees often go to war- or disease-affected areas to do their job. We have pictures to prove it. If you are interested, we can have our public relations staff send them to you.

We're able to do these things partly because we are not a public company, so we can work truly for our ideals, and for the greater good of society. Public companies tend to focus more on their financial numbers. So no matter how harsh the conditions are, we have committed ourselves to working for the bigger ideals of society.

I also visited a village near Mount Everest at an altitude of 5,200 meters, as well as the base stations nearby. I told everyone that, if I'm personally afraid of death, how could I motivate my people to charge forward?

If Huawei were a public company, I think a lot of behavior that I shared with you just now would not have been possible. Over the past 30 years, Huawei has made very admirable contributions to the progress of people around the world, especially people living in poor and remote areas. Some of our people have even sacrificed their lives. Those people should never be forgotten. Likewise, we should not forget the contributions that

Huawei has made to society. More importantly, we shouldn't allow suspicion to confuse the facts.

For your second question, President Jiang Zemin once came to visit Huawei. That was a time when Huawei was very, very small, and the floor, made of cement, was still wet, not even dry yet. President Jiang did not give any specific instructions. I have never heard of what you mentioned just now. But he did encourage us to work harder.

**19 Who do you have in mind to succeed you as the CEO of Huawei? The second question is about your roles in setting Huawei's culture, which is known for, it's very aggressive, with high standards, and is described by people as "wolf culture". What's your role in shaping Huawei's culture? Why is Huawei's culture important?**

**Ren:** The only reason Huawei exists is to serve our customers. Authority is the propellant and lubricant that drives our shared values. Those who will succeed at the highest levels of leadership and those who will hold the authority in their hands will serve as the propellant and lubricant for driving our shared values forward. If authority is not tempered by constraint, it will hinder or even destroy our shared values. Therefore, our Articles

of Governance are designed with the idea of realizing a division of authority, shared progress, and checks and balances. This will ensure that the authority flows in a closed loop, and renews itself with every circulation.

The company cannot place its future squarely on the shoulders of any single individual. If this person runs into trouble, then wouldn't that mean our company's operations would halt? In light of the future uncertainties in the environment where we survive and thrive, we must stick to collective leadership so that we can overcome one difficulty after another, and continually achieve success.

The vitality and continuity of this collective leadership mechanism will be achieved through orderly succession. As I mentioned earlier, this year, we completed an election that was attended by 96,768 employees across 170 countries and regions. This whole governance structure is meant to form a new institution of authority. Therefore, it is the succession at an institutional level that we are looking at and using to guarantee that our shared values, essentially customer centricity and customer value creation, are safeguarded and inherited.

We have several layers of different governance bodies. For each level of governance, the roles and responsibilities are focused and clear. There are divisions of authority, while at the same time checks are

conducted and balance is maintained. That will help prevent authority from becoming too concentrated.

In addition, this helps prevent authority from being used without constraint and stops it from being abused. For example, one governance body within Huawei is what we call the Core Elite Group. The members of the Core Elite Group used to be board members and members of the Supervisory Board. The Core Elite Group is intended to safeguard the long-term interests of Huawei, and also is entrusted with the authority to select governance leaders. We drew inspiration from a famous European management guru, Fredmund Malik, when we designed this governance structure. We also drew inspiration from the governance structure of other established companies throughout Europe and around the world.

Board members are selected based on meritocracy. Their responsibility is to grow more crops or increase the fertility of our soil. They are supposed to lead the company forward. Seniority does not matter when we select board members. Members of the Supervisory Board are selected based on integrity. They oversee the performance of the board members and other senior executives. This is what we mean by authority flowing in a closed loop and renewing itself through every circulation.

We currently have three rotating chairmen. Each of these takes turns to be in charge for six months. During those six months, that individual is the highest leader in Huawei. But this highest leader is also subject to the law of our company. The law is our Articles of Governance, and the authority of the Rotating and Acting Chairman is also subject to our collective decision-making mechanism. In other words, the Rotating and Acting Chairman has the right to propose a motion. These motions are then subject to discussion among the three rotating chairmen before they can be presented to the Executive Committee of the Board of Directors.

The Executive Committee consists of seven executives. They will vote, and a majority must be achieved before any motion can be then presented to a plenary session of the Board of Directors. During a plenary session of the Board of Directors, we also follow the principle of majority. No motion can become a board resolution until it passes voting or a decision is made at the plenary session.

Apart from the rotating chairmen, we also have a Chairman of the Board. The Chairman of the Board chairs the Representatives' Commission to ensure rules set out in the Articles of Governance are followed by the Executive Committee and the whole Board of Directors.

We also have the Supervisory Board, which supervises

the behavior of board members. So to your question, I don't know exactly who my successor will be. Successors will naturally appear during this circulation, and this process of renewing authority. It's not someone that I appoint. I am not a king.

**20 I just want to ask about your business outlook for the year. I notice this is not typically being the method for Huawei's business, but how much is at the front of your mind, given that some of your European competitors are struggling, the likes of Ericsson for example? Would that help you to diversify your business? Can you give us your revenue outlook for 2019 that you are targeting?**

**Ren:** In 2019, we might face challenges and difficulties in the international market. That's why I said earlier that our growth next year would be less than 20%, and I think our annual revenue for 2019 will probably be around 125 billion US dollars. We will not take advantage of the difficulties that our peers like Nokia and Ericsson are facing, in order to seize their market shares. I also think that the macro environment is in their favor, because there are restrictions on Huawei in some countries, but there are no restrictions on those companies. Therefore, I believe they may have more opportunities than Huawei.

**21** Several questions related to the PLA. What is the relationship between Madam Sun Yafang and Chinese Ministry of State Security, and how does that relate to Huawei? Second, what is your business collaboration with the PLA, or PLA-related institutions? If yes, what type of products do you provide to them? Third, is there any R&D collaboration or partnerships between Huawei and PLA-affiliated institutions?

**Ren:** For the first question, the biography of Madam Sun Yafang is available on Huawei's website. Second, we are probably selling a small amount of civilian products to the PLA, but I don't know the exact number, because it is not our major customer. Third, we don't have any R&D collaboration or partnerships with the PLA-affiliated institutions.

**22** You were talking about President Donald Trump and the investment environment in the US. What are your views on the issues of trade war which is the access of American companies to the Chinese market? Currently foreign investment in the sector where Huawei is involved, which is cloud, is quite restricted. Do you think China should open up the access for foreign companies, and what impacts will this have on Chinese technology companies?

**Ren:** I'm a person that always advocates open policies; however, I'm not the one who is making decisions.

I can share several stories with you. In 2003, there was litigation between Huawei and Cisco that drew wide attention at the time. Back then, Huawei was still a fairly small company. That was, I would say, an overwhelming case that we had to deal with, and I personally felt enormous pressure, which was mainly attributable to a lack of experience. However, even back then, I didn't try to win the case by inciting nationalistic sentiments against Cisco. Several years later at an airport meeting that I had with John Chambers, he told me that he was aware of Huawei's attitude towards Cisco at the time. This is because we believe that China, as a nation, would only have hope once it opens up and implements reform. The country should not close its door simply because of one company, Huawei.

When unexpected huge incidents happened, like US companies that suddenly decided to stop buying Huawei phones, some people in China said we should do the same to Apple's iPhones in China. My opinion was that the Chinese government should not take similar measures against Apple in China. The national interests or policies around economic reform and opening up cannot be sacrificed for the benefit of Huawei. Even in light of the recent setbacks we encountered in some

Western countries, we still support China, as a country, to become even more open. I think China can become more prosperous only when it becomes more open, and continues to press ahead with its reform agenda.

**Wrap-up by Ren:** I want to thank every one of you for spending so much time listening to me. I know I do not always speak very precisely, but I think this has been a fantastic opportunity for us to get to know each other better.

I also believe there will be future opportunities for us to meet with each other. Maybe we can deep dive into some of your questions in the future. I think today we covered a lot of topics, and by asking broader questions, I think you have done me a favor. I'm usually more concerned about interrogation-type questions with many follow-up questions. After our meeting today, I think we can drink coffee together some time and have some more casual talks. However, please don't make those casual talks into headlines. I believe we will have more heart-to-heart talks. Once again, my sincerest thanks to all of you.

# Ren Zhengfei's Chinese Media Roundtable

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January 17, 2019  
Shenzhen, China

01

**Huawei has run into some difficulties lately. Can I ask, have you done a systematic assessment, internally, to determine whether your years of investment in R&D are going to be enough to overcome these difficulties?**

**Ren:** I would say that more than a decade ago, we foresaw the difficulties that we might encounter today. We have been preparing for more than a decade. So, we have not been caught completely off guard for the challenges we face. We will certainly be affected by these challenges, but the impact will not be very large. They will not cause us any major problems.

**Given the current environment, what do you think about the importance of independent innovation?**

**Ren:** I have never liked the term "independent innovation". I think that science and technology are the shared wealth of humankind. We have to stand on the shoulders of our predecessors. This is the only way to shorten our journey to becoming the world's frontrunner. Aside from farmers who work the land, people shouldn't insist on doing everything by themselves.

If you mean the spirit of independent innovation, then I support it. That means where other people have created something, we should respect their intellectual property, obtain their permission for our use, and pay for it. If we want to do it again, then we still need

permission, and we still need to pay them. That's what the law says. Of course, scientists are all independent innovators. What I'm talking about here are engineering innovations for a company like Huawei.

02

**I would like to follow up on that: What is Huawei's worst-case plan for this current wave of anti-globalization?**

**Ren:** Changes in the external environment don't have that much of an impact on us. We are confident that our products are better than anyone else's. You couldn't make people not want to buy them, even if you wanted to.

I'll give you a few examples: There are very few equipment vendors who can do 5G, and Huawei does it the best. There are not many vendors who can make microwave transmission equipment, and Huawei has the most advanced. Combining a 5G base station with the most advanced microwave technology? There is only one company that can do it, and that's Huawei. We are going to combine our 5G base stations with microwave transport into a single unit. Our 5G base stations don't even need fiber connections. Instead, they can use superfast microwave to support ultra-wide bandwidth backhauled.

In the past, some have said that this technology is only suited for rural areas. But 5G demands ultra-broadband and microwave delivers ultra-broadband. It works for a wide range of Western countries, too. In most Western countries people live in separate, detached houses. If they want to watch high-definition 8K TV, and access high-speed data, then they need to buy our equipment. Of course, they can choose not to buy from us. Then they will have to pay a very high price to set up some other network.

Our technological breakthroughs have also generated many market opportunities for us. They have given us a lot of what we need to survive. So we aren't as worried as everyone outside Huawei seems to imagine.

**03 For a long time now, the most common accusation from the West against Chinese companies, including Huawei, has been that they steal intellectual property. What do you think about this?**

**Ren:** I can't speak on behalf of all Chinese companies. I can only represent Huawei. Huawei has been involved in several major legal cases in the US, and they have all been resolved with positive results. Huawei today has 87,805 patents, of which 11,152 are US patents. Our technologies and patents are valuable to the

information society in the US. We have reached patent cross-licensing agreements with many Western companies. Huawei cannot speak for other companies, but for ourselves, we absolutely respect other people's intellectual property.

**04** **Why does China not have companies like Qualcomm, which use their intellectual property to grow? There are some companies in Shenzhen that do have their own intellectual property, but have been blocked by lawsuits and foreign companies, so in the end they cannot break free, and end up at the bottom of the value chain. I'd like to know how you think China's intellectual property systems ought to be adjusted.**

**Ren:** If we thought of intellectual property rights as being just the same as other property rights, then maybe China would be better at technological innovation and development. That is to say, we need to state that intellectual property rights are a kind of property right. When you infringe someone's intellectual property rights, you are taking their property. This type of environment would be conducive to innovation.

And without innovation, how can we have a Qualcomm here in China? We should recognize that protecting intellectual property is good for the country's

long-term growth, and not an excuse by some Western countries to block us. Therefore, our country should not support counterfeit goods or knock-offs, and instead should support and protect creativity. Possibly the growth rate will slow a little, but the quality of the growth will be better, and we will see much more competitive companies emerging.

**05** **There is a feeling out there that we are returning to the McCarthy era: That companies and people are subject to attack because they have been branded with a communist label. Do you have the sense that the National Intelligence Law of the People's Republic of China, particularly clause 7, hinders Huawei in any way in the international markets? Do you feel that there is a need to provide some reasonable interpretation of the law?**

**Ren:** First of all, we aren't in a position to interpret the law. But the Chinese government has made its position clear, and the Ministry of Foreign Affairs of the PRC has clarified that no Chinese law obliges any company to install backdoors.

Secondly, the Chinese government also points out that all companies are obliged to comply with the applicable laws and regulations wherever they operate.

That includes export control and sanction laws by the UN, US, and EU.

**06 Hello, Mr. Ren. I've been reporting on the news in Shenzhen for many years, and as I recall, over the last 30 years, it's very rare for you to come out and give several interviews over the course of just a few days. Even the international media has remarked on it, saying it's unusual for you to come and meet the media. Is this in response to the unusual difficulties that Huawei is facing? Would you agree with this assessment? What is the message that you are conveying in these meetings? My second question is: Certain Western governments have made accusations about Huawei's cyber security. Do you think that these are simply the result of historical prejudice, or are there some areas where Huawei still needs to improve? How can Huawei dispel the doubts in these Western countries?**

**Ren:** To your first question, these meetings with the media were at the request of our public relations department. They said, at this time, we want to send a message of confidence to our 180,000 employees and to our many customers. We want them to understand us and to trust us. And we want to reassure the general public that we haven't actually run into very major

difficulties.

You probably haven't been to any of our internal meetings. Internally, the mood is very upbeat. We don't feel as if we're in the middle of some great difficulty. But the outside world doesn't know this, so we need to send a message of confidence. They want me to come and talk, because that has more impact. So when I talk to the media, the message I am sending to the public is a message of confidence. Of course, our growth this year may slow a little. I expect it will be less than 20%.

To your second question, on cyber security, we need to distinguish between information security and cyber security. Right now they're all mixed up, and they aren't the same thing. For 30 years, Huawei has provided network services to over three billion people in more than 170 countries and regions, and has maintained a very good track record in security. But of course, we still need to keep improving. We are currently looking at redesigning our software architecture to achieve four goals: simplified network architecture; simplified transaction models; the most secure networks; and GDPR-compliant privacy. Over the next five years, we will be investing heavily in R&D so that we can build the world's best networks. In five years' time, our annual sales revenue will probably double what it is now.

**07** I remember the first time I interviewed you, in 2014, you said, "What is mysterious about Huawei? Lift the veil, and you will only see our wrinkles." I remember that very clearly, but do you think that in the last five years Huawei has really lifted its veil? The questioning voices seem to be only growing in volume, internationally.

**Ren:** That's because they are seeing more wrinkles! The bigger we get, the more problems we have. If we shrank down to just a tiny point, if we were just the size of a potato, just like a farmer working in his fields, then everyone would know what we were about, and no one would have any doubts about us. As we've got bigger, people can't see the whole picture any more. And even we can't see where the next 10 or 20 years of innovation are going to take us. So people may continue to have questions. But these questions are valuable to us. Scientists love questions – they have to have questions, or they won't ever discover anything new! A scientist doesn't believe everything blindly, so he makes new discoveries. This tells us that questions are a necessary side-effect of progress.

Changes in the information society of the future are beyond our imagination. Over the next 20 to 30 years, there will be a massive transformation, which will dramatically change the way we live. For example,

AI is being applied in our industrial processes, and will greatly increase our production efficiency. You have all visited our production lines. That facility today is not fully intelligent; it's just partially intelligent. But already you saw there aren't many people on the production line. In five years' time, that line may only need five or six people, perhaps even just two or three. And they will mainly be there to carry out maintenance. Of course, many of the people on our lines are PhDs. They're not ordinary machine operators, particularly on the optical chip production line. PhDs with good practical skills are very hard to find.

For any country in the world right now, the focus has to be on education, mainly basic education, and especially in rural areas. A country can't have successful basic research programs unless it provides solid basic education to its children. If we spend a bit more money on rural schools, we will be able to attract outstanding teachers to go and teach there, and motivate outstanding students to go to teachers' colleges. Think back to the older generation like Mao Zedong, Su Yu, Huang Kecheng, Xu Guangda, and Yun Daiying. They all went to teachers' colleges. There was a virtuous cycle of letting the brightest minds develop even brighter minds. Today, that cycle has been broken. Teachers' pay is low. Children see that learning does not lead to high pay, so they don't want to study. This will not provide a strong

basis for the next 20 to 30 years. Society may very well become divided.

Manufacturing that has been completely automated with AI may just return to the West, because there will no longer be problems with labor: no unions, no expensive employee benefits, no strikes.... Production that can't be automated may relocate to Southeast Asia, Latin America, southern Europe, and other locations with relatively low labor costs.

That's the type of polarization that China is facing. We ought to make basic education a matter of vital national strategy in order to face up to the coming transformation in society. Raising the education level of every single Chinese person should be the primary responsibility of the CPC and the government, and the duty of every citizen. Every apartment block and skyscraper around us will be old and rusting in two or three decades' time. If we invest in education, low-income children will be PhDs in two or three decades. They will be leading the way, and the country can march into a period of greater prosperity.

At this crucial moment in history, all Huawei can do is put our own house in order. We can't impose our will on anyone else. So we are investing heavily and charging forward. Just now a journalist from CCTV asked me, "You aren't making very much money, so why invest

so much in research?" For example, our profits this year were 9 billion US dollars, but we invested 15 to 20 billion US dollars in research. But in reality, those 15 billion US dollars aren't an investment—they're a cost. In reality it came from our customers. The money our customers give us isn't for generating profits, it's for generating investment.

Why do we stay ahead of the competition? The lifecycle of new technologies is getting shorter and shorter. In the past, scientists would invent new equations, and then it would be 50 or 60 years before anyone realized that these equations were of any use. After electromagnetism was discovered, it took five or six decades before people found it could be used in radio communications. After that it was another few decades... But that sort of thing is not possible any more. The process has been dramatically shortened. It may not be quite at the millisecond level, but it's very short indeed. If we don't conduct basic research ourselves, and just sit and wait for others to do it, we may end up far behind the times.

China is the most populous nation on earth. If we can turn ourselves into a human capital superpower then we could confidently compete with anyone. That is why elementary school teachers ought to be more respected. Of course, teachers are much better paid today than

they used to be. But to give this country hope for the future – to succeed amid global competition – we should make teaching a profession of real honor.

Today, everyone can see how successful Huawei is. But a very important part of that success can be attributed to scientists from other countries. Huawei offers higher salaries than Western companies, so a lot of scientists have come to work for us. We have at least 700 mathematicians, over 800 physicists, 120 or more chemists, and 6,000 to 7,000 basic researchers. We also have over 60,000 engineers and senior engineers. This is the team we put together to forge ahead. So if this country wants to compete with the West, the only way is to invest 50 or 60 years, or even a century, in transforming our education.

Transforming education isn't about building fancy schools, it's about teachers. The Whampoa Military Academy was known for nothing more than the leg wrappings their students wore and Kangda University in Yan'an for nothing more than its wooden benches. You've seen movies about Kangda University – they set up their benches out in the fields and listened to Mao Zedong lecturing. And out of that they were able to build a new China. Weren't Whampoa and Kangda two of the world's great military schools? So, it's not about the quality of the hardware or the environment.

It's about the people. Teachers are the soul of humanity, and if a country wants to have any hope, it should give the utmost respect to its teachers.

**When you talk about basic education, are you trying to give a warning to society?**

**Ren:** I think that we as a society should live by two mottos: Let the brightest minds develop even brighter minds. And no matter how poor we are, we can't let our teachers be poor.

**Do you plan to do something in particular to address this?**

**Ren:** Our job is to run Huawei as best we can, to be an example for everyone. What does Huawei have? Nothing! Huawei has no political connections, no unique resources. We have nothing except for the brains of our employees. What we have done is bring together a cohort of Chinese minds and foreign minds, so that we can achieve the success we have today. This just goes to show you the power of education.

**08 In the 4G era, Huawei outperformed its competitors and became a leader. We thought then that Huawei would target a broader market in the 5G era. Up until now, though, Huawei has had to face many**

**external barriers. You just mentioned that Huawei actually anticipated these barriers. My first question is: What measures will Huawei take to overcome these barriers? We visited two of Huawei's labs this morning and clearly saw Huawei has invested heavily in basic research. The Chinese government also encourages businesses and universities to conduct this kind of basic research. So my second question is: What do you think about basic research?**

**Ren:** A teacher once said in her letter of resignation, "The world is large and I want to have a look." It's true, the world is large, and there are many places where we can do 5G, but we can't do all of them at the moment. The exclusion of Huawei from a few markets does not mean that we are excluded from most. The role of 5G has actually been exaggerated, so have Huawei's accomplishments. We have been moving really quickly, and some of our young people are so excited that they just keep talking. This has resulted in a bit of hyperbole.

Honestly, the world isn't in such urgent need of 5G. What people need most right now is broadband, which isn't the primary value of 5G. 5G means much more than broadband. To make full use of 5G, we need to wait for more market needs to develop, and this will take time. Don't think of 5G as a tide that ebbs and flows with the moon. And don't think that if you miss it,

you will miss the opportunity to make a fortune. Instead, 5G will develop over time.

Japan and South Korea are making great use of 4G, which is enough for the time being. This is not the case in China, though. Our smartphones can only reach speeds of about 20 to 30 Mbit/s, even though the 4G networks we provide can deliver speeds up to 300 to 400 Mbit/s, fast enough to support 8K video. The reality in China is that, during the day, our networks can only deliver 20 to 30 Mbit/s, so we can only watch 4K video. 8K video is impossible.

Why? It's because the network architecture isn't great. Because the country doesn't have mathematicians dedicated to researching telecom carrier network architecture. If we can't solve these network architecture problems, there will be no fundamental difference between our 5G and 4G networks. It's like if I have a big mouth, but a small throat. Even if I could fit a huge chunk of steak in my mouth, I wouldn't be able to swallow it. 5G base stations aren't a cure-all, so we need to be more patient.

In the future, 5G will work on millimeter waves. When that happens, for twice cost you can get 100 times greater bandwidth. In other words, you can download dozens of high-definition videos in just a second. We have been able to prove this in our labs. 5G's potential

has not yet been brought into full play. We are going too fast. Shenzhen's use of 5G for live broadcasting of the CCTV Spring Festival Gala is only one demonstration of 5G capabilities; for the time being, it's not enough for large-scale commercial application.

When it comes to technological research, we have a saying at Huawei: "absorbing the energy of the universe over a cup of coffee". What does that mean? It means discussing and working with others, like Google. Google's parent company reinvests its profits into the research of things that seem impossible, for example, the immortality project. They are contributing to social progress and reinvesting their wealth in exploring the future. The same is true at Huawei.

So when we say "absorbing the energy of the universe over a cup of coffee", we are learning from Google: We invest our money to explore the future of humanity. We fund the basic research of university professors because they are the lighthouses of the world. They light the way for us, and for others outside the company too. The difference is, at Huawei we learn things faster, so we develop things faster as well. That's it.

We have over 15,000 scientists and experts dedicated to basic research. Their job is to turn money into knowledge. We also have more than 60,000 people dedicated to product development. They are turning

knowledge into money. We also provide the support external scientists need to explore their own fields.

**If this is the case, then it doesn't seem suitable for basic research to come from companies.**

**Ren:** If companies don't do basic research, we would be unable to take the lead in our fields or stay ahead of others and earn extra money. We wouldn't be able to make extra investments, and we would end up being an OEM. Why are we confident that we will continue to stay ahead of the competition? In electronics, we have already developed the most advanced chips – our ARM-based CPU and AI chips. In photonic switching, we are also the most advanced. In quantum computing, we are not yet an industry leader, but at least we are studying how to use quantum computers once they are developed by others.

In electronics, photonics, and quantum communications, we are ahead of others in the first two domains and a follower in the third. We have seen that only when we do basic research can we earn extra profits, have enough money for strategic investment, and lead society forward. External scientists often welcome Huawei, because we see them as lighthouses. We don't infringe upon any of their interests.

According to the US Bayh-Dole Act, universities and

non-profit organizations are entitled to apply for patents and own the patents of their inventions funded by the federal government. This provides a strong impetus for them to translate scientific research into commercial applications.

We learn from the Bayh-Dole Act. We aren't after anyone's property. We choose to work with professors who are top experts in their domains, not the schools themselves.

**09** **What do you think of Huawei's basic research? What's your personal goal? I remember two years ago when you attended China's Science and Technology Innovation Conference, you said Huawei had entered into uncharted territory. Is Huawei still at this level?**

**Ren:** Overall, we are still unsatisfied with our own basic research. Why do I say this? Over the past 30 years, we have made breakthroughs in mathematics, because it is critical to mobile phones and systems. However, in disciplines like physics, chemistry, neurology, and brain science, we are a late comer and are still trying to catch up. Future electronic sciences will be a combination of all these disciplines. Not many people who currently work in these disciplines want to join us. So we still have a long way to go when it comes to building an

information society through science.

When I spoke of uncharted territory, I was mostly talking about latency. Autonomous driving for example is all about latency. Not long ago, my wife and my younger daughter rode in an autonomous car for over two hours down an expressway in Germany. Europe now has Level 3 autonomous driving. As you might have noticed, Huawei and Audi are working together on Level 3 autonomous driving solutions. Level 5 is the highest level for autonomous driving. When that becomes a reality, 5G will have a role to play, but latency will still be an issue.

So right now, our exploration into uncharted territory is about reducing latency. Every circuit has capacitors and resistors, which cause latency. It is impossible to have zero latency. Our world is now running on a saturation curve, and we happen to be on the top of the curve. Newcomers can easily catch up. This is a risk that we face. It's very easy to develop new electronics these days. It's all about stacking up chips. So the things we currently excel at will no longer be our strengths in the future. In this domain, we are also worried that, eventually, we may not be able to continue moving forward.

When the Chinese Premier visited an Imec design platform during his trip to Belgium, they showed him that this platform could produce three-or even one-

nanometer chips. If we have already reached our physical limits and we still can't meet people's needs, what should we do? Especially now, since we can't use grapheme to replace silicon just yet.

We can only stack up chips. But then we have to figure out how to dissipate the heat between these chips. This also requires cutting-edge technology. So thermology will be on the most cutting edge of scientific research in the electronics industry. Huawei also stays ahead in research in this domain, but the things we do are too abstract. We are still finding our path forward to address future challenges. If we keep looking here and there, and we can't find the path forward, then our followers will soon catch up.

**10 In one of my previous conversations with an entrepreneur, he said everyday he feels jittery, like he is walking on thin ice, worrying about being overtaken by his peers and being abandoned by his customers. I want to ask if you have similar worries.**

**Ren:** We also say similar things in our daily work. But if we truly felt that way, we wouldn't be able to move forward. In actuality, we know what we're doing, but we always tend to exaggerate our concerns, as if we were really worried. Don't take those words too seriously.

**Will Huawei be the next to fall?**

**Ren:** Definitely.

**But not necessarily the next one?**

**Others are talking about making their companies a century-old brand and creating a lasting heritage. What do you think about this?**

**Ren:** It is very hard to create a century-old brand. The key is to get rid of slackness. A senior government official once told me he wanted to summarize takeaways from Huawei's management system. I asked him not to. We did enjoy rapid growth in our first 20 years, but over the past 10 years we have also seen a decline in growth. Why is that?

The main reason is that our employees slack off when they get rich. They are reluctant to go to hardship regions and they are no longer willing to take challenging jobs. Getting rid of this slackness is a challenge for us. That's why we put such great emphasis on self-reflection within our company. We want to gradually weed out slackness through self-reflection. But I don't think this process is easy. In truth, reinventing ourselves is much more difficult than helping others reinvent themselves.

11

**Last year at a Huawei human resource workshop, your employees submitted a lot of suggestions to you, which they summarized into a list called "Ten Things Ren Zhengfei Should Improve". Do you think their suggestions made sense? Have you improved based on these suggestions?**

**Ren:** We published this list openly on our Xinsheng Community, an internal online forum we use at Huawei. All of our 180,000 employees were invited to brainstorm and discuss how to make changes. The aim of this exercise is to create a company culture that will gradually transform some of our internal mechanisms. Usually, I only read critical comments on Xinsheng Community, and skip the good ones. I want to see what happens on the ground, and whether our management is doing the right thing. If I find something wrong, I send someone to investigate whether there is really a problem.

12

**You talked a lot about basic research. Did you ever think of becoming a scientist when you were young? Have you ever thought that you might have taken the wrong path in life? As you just mentioned, Huawei has a lot of money and does not know how to spend it. Huawei has developed very compelling products. Now, there was a rumor that Huawei planned to cooperate with Yuan Longping, the Father of Hybrid Rice, to**

**develop rice that can grow in seawater. Huawei denied this rumor, but the rumor may reflect the desire that many people have for Huawei to deliver more and better products. Does Huawei have plans to expand into other sectors?**

**Ren:** Ever since we were a relatively small company, with just a few hundred employees, we have focused all of our efforts on one direction. Even as we grew larger, from several thousand employees, to tens of thousands, and now today with over 100,000, we have maintained this same focus as we move forward.

Our annual R&D investment alone has reached somewhere between 15 and 20 billion US dollars. And that's just investment in R&D. Other departments are charging forward too, so our spending is far more than just 15 to 20 billion. Only by focusing on a single direction can we secure a strong foothold in this world. If we had too many distractions, we wouldn't be able to run fast like a high-speed train.

When we say we have too much money to spend, what we are trying to emphasize is our desire to increase our investment for the future. We need to spend our money, but it's not easy to spend that money in the right way. Every department needs to spend money, and we have an extremely strict budget review process. For example, we have allocated 3.68 billion US dollars for strategic

purposes. Our departments are under great pressure to spend the money we allocate them effectively.

I'd like to share another example. Many of our trainees within our Huawei University are PhDs and masters, including graduates from top universities overseas. Outstanding employees who have successful field experience come back to Huawei University to receive further training, and then they go back to the field again to further gain hands-on experience. This process constantly repeats itself, and that takes a lot of money. Huawei University is still under restoration right now, or we would give you a tour. You are welcome to visit it next time though.

**13 Mr. Ren, you mentioned that there may be many opportunities in the future intelligent world. Huawei has become a leader in many fields like chips, servers, and cloud, and it seems that there are no benchmarks for Huawei worldwide. Does Huawei have business boundaries? If yes, what are the boundaries? Many partners are worried that Huawei will take away their business.**

**Ren:** In fact, all Huawei does is make piping, providing infrastructure for the flow of information. Aren't the servers and storage equipment that we provide like a

pool? Aren't the devices we provide like water taps? All these technologies are interconnected.

Why has Huawei made such rapid progress in consumer technologies? Because we have a lot of strategic reserves in pipe technology, and we allocate our surplus resources, including our scientists, to serve our consumer business. So our consumer business has taken huge leaps forward.

We will never expand into sectors beyond these business boundaries. The day before yesterday, a foreign journalist asked me if Huawei would make cars. I said never. We only develop individual modules that can be used in connected cars. We provide electronic modules, like edge computing, for cars. We might be the world's best in this domain, but we will not expand into making cars. What we will do is enable carmakers to use our modules to make autonomous driving a reality.

But again, we will never make cars. We have boundaries, and we will never cross those boundaries. We only focus on the fields that revolve around information pipes, and lop off anything that strays beyond these boundaries.

**14** **Recently, I've seen a lot of reports or speeches, including those from US think tanks, saying that China**

**and the US, may lead two separate camps when it comes to technology in the future. What are your views on this? We know that Huawei never takes sides, but will it be possible for Huawei to remain independent from this game between the world's largest players?**

**Ren:** If there is a competition between China and the US, China's top priority will be education. We have assigned more than 40,000 Chinese employees to overseas postings over the years, and most of them have been reluctant to return to China. Why? Their children's education. How could they get their children enrolled in schools in China? China's educational system is totally different from the rest of world.

There are also many other issues that hinder the return of our employees and their children. Even in Africa, our employees' children can go to the best schools available. Here in Shenzhen though, they just can't. This is just one example of how education is the most pressing issue for China. We must protect our children's right to education. As parents, what we care most about is our children. Therefore, it's wrong to blindly pursue demographic dividends, as AI is reshaping our way of production.

In response to a question from Mr. Zhu Yanfeng, the President of Dongfeng Motor, I once said that China

can start with tractors to advance its autonomous driving agenda. We should avoid competing neck-to-neck with the West. We can make tractors that work 24/7, without worrying about mosquitoes, heavy rain, or high mountains. Can't we improve our agricultural productivity this way?

**15 You have mentioned AI many times during the interview. Many companies currently view AI as a major target and are talking a lot about it. Are you concerned that this trend will turn AI into a bubble?**

**Ren:** We may see an AI bubble, but we shouldn't be afraid of it bursting. Huawei is happy to hire experts and engineers that fail as the bubble bursts. Why? Because we need to change our production structures and our global service structures. We need people like them. Why do we need people who have failed? Their ideals are more often than not too big for the platforms they work on. Huawei's platform is big – big enough for them to dance to their heart's content.

Why might AI bubble? When there are too many companies creating the same thing all at once, even if the market only needs one of them, that's when bubbles occur. For example, who could replace Microsoft's Office systems? When a robot that fits the definition of "robot"

in every sense appears, 90% of robot companies will be in trouble. Therefore, it's difficult for me to say whether AI will bubble.

Let me tell you about how Huawei deploys base stations on mountains in Xinjiang, China. Couriers from JD, China's largest online retailer, go up the mountains on motorcycles, and install our equipment using our product guides. Our engineers in Xi'an then commission the equipment and run acceptance tests. Once acceptance reports and invoices are generated, we pay the JD couriers.

If we don't use AI to raise efficiency, there is no way we can reduce costs, generate high profits, or increase future-oriented strategic investment.

## 16 **What do you think are the major difficulties facing Huawei right now?**

**Ren:** It's hard to say, beyond difficulties, there's nothing but difficulty. There are difficulties everywhere.

## 17 **What's your plan for international business expansion?**

**Ren:** There won't be any change [to our current plan]. We will continue with what we have been doing.

## What areas do you plan to focus on?

**Ren:** We won't change our direction or enter into domains that we are not familiar with.

18

**Western media agencies have already asked questions about Ms. Meng Wanzhou, but I still would like to talk about this. I hope you can answer my questions as a father. When did you first hear that your daughter was detained in Canada? Are you currently able to communicate freely with her? How is she doing? US authorities have until January 29 to formally request extradition. Do you currently foresee any difficulties?**

**Ren:** Meng Wanzhou and I were both going to Argentina to attend a meeting. She was supposed to be a primary host for the meeting. Unfortunately, she was detained when transferring flights in Canada. I set off two days later and transferred through another country.

We will settle the case through legal procedures. As a father, I'd like to first thank the Chinese government for safeguarding my daughter's rights and interests as a Chinese citizen and providing her with consular protection. I also want to thank the general public for their support for and attention to Meng Wanzhou's case.

I am currently able to reach my daughter by phone.

Over the phone, we tend to just joke around with each other. Wanzhou is very tough.

**19**

**You are against the idea of independent innovation behind closed doors, right? But you have acknowledged in the past that the first inventor of quantum computers will probably be IBM or Microsoft.**

**Ren:** That is my personal opinion.

**Huawei may not be the first inventor [of quantum computers].**

**Ren:** I'm sure we will not be.

**Huawei has been pouring huge sums of money into research and innovation every year. You also said that Huawei must stand on the shoulders of its predecessors in order to move ahead. How do you strike a balance between joint technological innovation and independent innovation?**

**Ren:** I support the spirit of independent innovation. The innovation of all scientists is inherently independent. It is part of the spirit of innovation. I think it's feasible to emphasize independent innovation in cutting-edge domains with a lot of unknowns. An example is China's Chang'e 4 Lunar Probe. If others don't give you what you need most, you have to be independent and create

it on your own.

But we shouldn't overemphasize independent innovation at lower levels. Trying to independently innovate a simple screw doesn't make sense. Small and medium-sized companies in Japan and Germany are great. There is a Japanese company out there that has been making screws for decades. They have good screws that never become loose, and are perfect for high-speed equipment, high-speed rails, and aircrafts all over the world.

I once visited Leica. Its factory is located in a small village. One lady there had been working on surface painting for 35 years. She said machines cannot replace her because her technique is more refined, so she can continue to do the work. I think it's definitely feasible for a person to completely focus on a single job in a down-to-earth manner. As long as someone is already great at a job, we don't have to reinvent the wheel in order to prove how great we are. I think openness is the only way we can reach our targets rapidly.

**20**

**The US may be the cause of many problems. Using our magazine as a platform, what would you like to say most to the US government or people?**

**Ren:** I think opposition [against Huawei] only really

comes from a few politicians in the US. These few people cannot truly represent the whole of the American people. They cannot represent all of its industries, companies, or science and technology communities. The US industry and business communities still firmly support us. They are committed to enhancing cooperation with Huawei. The voices of a few politicians may be loud, but we need to wait and see what role they will end up really playing.

**21**

**Why did you call Donald Trump a great president?  
Your comment has generated a lot of discussion.**

**Ren:** President Trump has reduced tax rates to extremely low levels. This is good for industrial development, potentially giving the US a hundred-year edge. However, the US economy will decline sharply if Mr. Trump continues to pick fights, intimidate other countries, and arrest people without any justification. These actions will scare away investors. If that happens, no one will be able to make up for the lost tax revenue, eventually leading to a significant slowdown in the US economy.

The US may truly flourish if the next president maintains low tax rates and focuses on improving relationships with other countries. The next president might say, "Come invest in the US. We have a good

business environment for you: low tax rates and cheap land. Everything is cheap."

Mr. Trump has done a great job in tax cuts. Similarly, Deng Xiaoping dug a "trench" [in Shenzhen] so that water (investment) would flow into it, giving a strong boost to the Chinese economy. For this reason, I said Mr. Trump is a great president. But he also faces fair criticism in other aspects. No one dares to invest in the US right now. So you see, there are two sides to that coin.

In the UK, former Prime Minister David Cameron and former Chancellor George Osborne told me that they wanted to cut taxes and reduce welfare a bit. These two would offset each other and result in a balanced economy. How would they reduce welfare? They wanted people living on government-backed benefit plans to first apply for a job. Those who couldn't get a job would be provided community service positions, such as looking after the elderly, providing housework services, or cleaning streets. If people didn't work, they wouldn't be entitled to government benefits. The UK is pressing ahead with tax cuts, lowering the tax rate down to 17%. As a result, the UK is re-opening its door to investment.

**22**

**You just mentioned that Huawei will invest 100 billion US dollars to restructure networks. Could you**

**please elaborate on this? Which systems will you restructure? Is there a timetable for this? This kind of restructuring can't possibly be a response to changes in the international market or public opinion. This initiative must involve your strategic assessment of future opportunities. In your opinion, what important opportunities will emerge from the global communications market?**

**Ren:** Our plan is to simplify networks, simplify network transaction models, build the world's most secure networks, and enable privacy protection in line with Europe's GDPR standards. As long as we can meet these four objectives, we will still be able to grow.

**How about future opportunities?**

**Ren:** Network architecture restructuring and future demands for video will present us with tremendous room for development. In our exhibition halls, you were able to watch 8K TV. It was amazing, wasn't it? Economically, Beijing, Shanghai, Guangzhou, and Shenzhen in China are primed for these technologies, so why shouldn't we take a crack at it?

23

**Huawei currently looks like it has a bright future ahead of it. Why did you say that Huawei will be the next to fall?**

**Ren:** It's bound to happen sooner or later. It is a philosophical proposition, not a realistic one.

24

**Huawei is one of the few companies, if not the only company, that is very successful in both B2B and B2C businesses. How did you make that happen?**

**Ren:** We applied our technological know-how from our network business to our mobile phone business. Take the imaging systems of our mobile phones as an example. They were originally developed using our mathematical research for network imaging systems. Moving forward, our network connectivity business will be even more successful. Our networks will support the best and most intelligent connections. All of these domains are interconnected.

25

**Is your success in the consumer business accidental?**

**Ren:** As you know, we are moving into an intelligent world. How can we give that world the ability to sense? We must use devices, which rely on sensors and screens to sense. Therefore, there will be an avenue for the development of the device sector, including the Internet of Things. Mobile phones are just a sub-section of the device sector.

**26** **When you were interviewed by the international media two days ago, you commented that Apple is an example you look up to in terms of privacy protection. Huawei also advocated "learning from Ericsson" in the past. Given your current business structure and scale, is there still a role model for Huawei to learn from? What do you think Huawei should do now and how will you determine the direction of your business presence?**

**Ren:** First of all, Amazon's development model is worth learning from. Originally a bookstore, Amazon has suddenly become the world's biggest competitor to carriers and telecom equipment vendors. Second, Google is also a marvelous company to look to. Let's just see how Google taps into the full potential of its army of PhDs. Third, Microsoft is also a good role model. How is it possible to say there are no role models left for us to learn from? Teachers are everywhere. There is always someone for us to learn from.

**27** **Apple is also currently caught in an innovation dilemma and its performance and stock price are declining. What are your comments on this?**

**Ren:** Apple is a great company, as it has driven the development of mobile Internet and led to dramatic structural changes to society.

28

**How do you want Chinese netizens to perceive Huawei? What kind of image do you want Huawei to establish outside of China?**

**Ren:** I think Chinese netizens should have more tolerance. As you are aware, some scientists were lambasted by people on the Internet for their unconventional insights. These scientists are just like Copernicus. His heliocentric theory was considered nonsense when he first proposed it. People thought, "How dare you challenge commonly accepted beliefs? Do you have some kind of god complex?" We need to tolerate the Copernicuses of our day, so that our country can create new things. Scientists may come up with a lot of new ideas, and some of them may not be easy to understand. We must show tolerance.

29

**You have a military background. You are also a CPC member. Is this experience and identity an advantage or a burden for you when you manage such a large multinational company?**

**Ren:** There is no necessary link between these two things. Please do not confuse business models with ideology. Let me give you an example. In the West, many people believe in a higher power. However, they designed the first coal-powered train. We are in

a business world today. Being a CPC member doesn't mean we have to be like Lei Feng, fully devoting ourselves to work and never asking for anything in return. It doesn't mean we shouldn't go out and evolve our business models. Why do we need to develop a market economy? We want to use laws of economics to deal with laws of economics.

**30** **You placed cyber security and privacy protection at the top of Huawei's agenda for this year. What's the reason behind this?**

**Ren:** This is a permanent requirement, not just a part of this year's agenda. Why? In the age of transmission and switching, no virus could compromise network security. Therefore, in the 1980s, we did not need to worry about cyber security in our communications systems. The emergence of IP networks later involved different routing paths and presented us with several new vulnerabilities. In the future, we will enter the cloud age, where vulnerabilities exist everywhere. Customers will buy from those who can ensure cyber security. The reason we place cyber security at the top of the company's agenda is that we will need to support the new cloud age. So this is not just a requirement for this year; it is a permanent requirement.

# Ren Zhengfei's Japanese Media Roundtable

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January 18, 2019  
Shenzhen, China

01

**Before we begin, I'd like to ask a question on behalf of some of my colleagues in the media. Several people have told me that you are a fan of Japan, Mr. Ren, and that you like the song *Spring in the North Country* (by Sen Masao). When did you first go to Japan? What are your impressions of Japan? Why do you like *Spring in the North Country*?**

**Ren:** I first went to Japan over 30 years ago, when I was still very young. I have visited many times since, and of course, the country has left a deep impression on me. After the Second World War, Japan was in an even more difficult situation than China has faced in its history of natural disasters. That Japan has been able to develop into the flourishing country it is today is clearly due to the hard work of the Japanese people.

I only have a very simple understanding of the song *Spring in the North Country*. A young man leaves his home for work, and forgets to write to the girl back in his home village. When he returns home a few years later, she is already married. Marriage is a narrow bridge, so when one person is walking on it, there isn't room for anyone else. Losing love because of the pressures of work – I think a lot of people have experienced this. It speaks to me, what the Japanese people experienced while trying to raise themselves up through hard work. In China, it is often understood as a love song, but I

don't think that's quite what it is. I think this is a song about dedication. Everyone has to leave home and find a job. Who will be the one to suffer the most? Mothers. Mothers always worry about whether their children are eating properly. Japan and China both have experienced poverty. Not every family could send all of their children to university. Mothers would often ask the elder brother or sister to get a job and earn some money, so that perhaps a younger brother or sister could get more of an education. Fathers and big brothers would both work in the fields, so elder brothers would look just like their fathers, faces full of deep-set wrinkles, not talking much but smoking their cigarettes, and having a few drinks to relax when they have the time. Spring in the North Country is the story of Japan's culture of hard work. We understand that very well, because we have experienced poverty, too.

Everyone knows how beautiful the Japanese cherry blossom is, but how should we understand that cherry blossoms being a symbol of the Japanese spirit? A single pink petal of a cherry blossom is not particularly beautiful. A full flower is not beautiful, either. One cherry blossom tree alone is not beautiful, nor is a small grove of sakura trees. What is beautiful is an entire landscape covered with cherry blossoms. And it is this whole landscape of cherry blossoms that represents the spirit of the Japanese nation. The unity of the Japanese people

is rare, and it is the source of Japan's beauty.

Everyone sees how China has been transformed in the last 30 years; of course, we have not progressed enough. We need to redouble our efforts for the next 30 years or even longer. Every nation has its unique strengths, and we can all learn from each other. We have plenty to learn from the conscientiousness of the Japanese, and their high-quality management.

**02 We visited your Songshan Lake campus yesterday, and saw the black swans. We thought Huawei may now be facing a "black swan" moment. As I understand it, Mr. Ren, you very rarely give press interviews, but in the past few days you have met with Western media and Chinese media as well as with us, the Japanese media. I'd like to ask, are you talking to the media because of certain crises?**

**Ren:** First, thank you for visiting our Songshan Lake campus, known as Xi Liu Bei Po Cun. We are building Huawei University there, at a site called Sanya Slope. The Songshan Lake campus was designed by Nikken Sekkei Ltd. A Japanese architect named Okamoto led the design of the entire campus. The artistry and architectural design are all Japanese. We're just residents!

Secondly, the reason for my recent series of interviews

is that our public relations department asked me to do so. They believe that at this moment we need to boost the confidence of our 180,000 employees, so that they remain committed. We also hope to help our customers understand us better. We are sending a positive message to the world, so that the public understands us even better, and we also aim to inspire confidence in partnerships with Huawei in certain regions.

**03** **Yesterday we visited Huawei's Cyber Security Lab, and saw a lot of the work that Huawei has been doing on cyber security. But it seemed to us as though this work is all going on at the technical level. The suspicions of certain countries, led by the US, focus on whether Huawei is truly free from government control. When you spoke with the Chinese media yesterday, you also said "please don't confuse business models with ideology". In the past you have said, "Huawei has never received any improper requests from the Chinese government." Huawei has a presence in more than 170 countries, and you may well obtain top secret information. I would like to ask, what is the standard that you apply to distinguish proper from improper? If the Chinese government made requests that were legal under Chinese law, then would Huawei provide information to the government?**

**Ren:** First, Huawei has stood the test of time for 30 years now. Huawei provides network services to over three billion people in 170 countries and regions. For three decades, we have maintained a very strong security record. Our values are that we are customer-centric. We aim to do whatever is best for our customers. We would not do anything that goes against their interests. Someone might ask me, "In the future, will you comply if the rules require a transfer of customer data?" I would tell them, no. Anyone who requires us to do something like that, we would refuse. I won't do it, and this company won't do it.

Secondly, we are just an equipment vendor. Control of networks is in the hands of the carriers, not ours. We don't hold any customer data.

**04 Huawei is a very democratic company, with globally unique operating models that we can discuss and learn from. I think that in Huawei's corporate governance, there is a gap in information disclosure, and that is around the Party committee. Applying the values of European, American, and Japanese companies, if a company has this organization, then key information about it should be disclosed. Could you talk about the Party committee within Huawei? You are a CPC member yourself; what is your position in the**

## **Communist Party of China? What role do you play?**

**Ren:** First, Huawei is owned entirely by its 96,768 shareholding employees. There is not one yen of stock held by a non-employee. Not one yen of stock is held by any external organization. No government body holds even one yen of our stock. My personal holding is the largest, at 1.14% of the stock. Steve Jobs held 0.58% of Apple, so I think my personal holding could be reduced a little further.

At Huawei, each department nominates candidates to be representatives of our shareholding employees, and then feedback is solicited level by level. The latest round of elections took all of 2018 to complete. On January 12, 2019, we finished the voting process at 416 polling stations across more than 170 countries. A total of 115 representatives were elected.

Second, under the CPC constitution, all companies in China are obliged to set up a Party committee. The Party committee is democratically elected by Party members. It's not an administrative department within Huawei. The committee members are not appointed through any administrative process within the company. I myself do not hold any Party position. The Party does not get involved in any of the company's decisions or operations. Its main function is educating employees and increasing employee awareness. It reminds our staff to comply with

regulations and obey the law, to help ensure internal and external compliance.

We have an internal network called the Xinsheng Community. The Xinsheng Community is managed by the Party committee. It's completely open. Anyone can read it, any time.

**05** **There is a rumor that certain countries, including Japan, are making moves to exclude Huawei. What is the company doing to respond to these moves? Second, we believe that these suspicions are not really directed at Huawei, but are a result of a lack of trust in the Chinese government. How do you see the situation?**

**Ren:** The only solution is to ensure we make the best products and deliver the best services, to help our customers maximize their value. That way our customers will continue to accept us. I am not too worried about these issues.

**06** **There is a line in the Huawei Charter that says, "Huawei is only a communications equipment provider; it does not offer information services." Today, Huawei is the world's second largest vendor of smartphones, and the largest vendor of communications equipment.**

**You have also set targets in AI and cloud services. I am struggling to understand, given this excellent foundation, why Huawei doesn't offer information services.**

**Ren:** If we offer information services, then we might begin competing with our customers. Then they would no longer buy our equipment, and we would quickly wither away. Everyone has seen that we are entering the cloud service domain, but in fact, we are providing the fertile soil in which cloud services grow. All the crops, the corn, the soybeans, the sorghum, the sweet potatoes, the peanuts...we don't grow any of them. They are all delivered by information service providers. But we provide the platform – the fertile soil in which these services can grow.

**07 I understand, but might a future generation change this rule? For example, when another executive takes your place?**

**Ren:** We have a governance structure that very effectively transmits our corporate values, and we have our Articles of Governance. This document is like the company's constitution. All managers in the company have to swear an oath to uphold the Articles of Governance before they are appointed above a certain

level. Might individual plotters and schemers sneak in there? No, that would be impossible, because as soon as they betray the spirit of our Articles of Governance, everyone will see it and will push them out. We will never follow any one person like a cult. We will always move forward towards our shared values. We'll never go against these goals.

**08 It is not just the US government now. The Japanese government may well follow the US's decision. Will that affect Huawei?**

**Ren:** I have never felt that Huawei has been excluded by the Japanese government. I am sure that China and Japan will stay on friendly terms, because the two countries reinforce and depend on each other. China and Japan will be richer and stronger if we work together. So I have never felt as though Japan is a cold place. I think that Japan will continue to embrace us.

**09 Last month Ms. Meng Wanzhou was detained in Canada. How did you feel when you heard about that? And how does Huawei intend to handle this incident?**

**Ren:** I was shocked when I heard that Meng Wanzhou had been detained in Canada. She and I were both

going to Argentina to attend the same meeting. She was supposed to be the main host for the meeting. I set off two days later and transferred through another country. The meeting was still a success in the end, which was some consolation to Ms. Meng, because she had been preparing for this meeting for a full year.

Meng Wanzhou's incident is in legal proceedings. I won't say too much about it here. I'm grateful for the concern and attention our Japanese friends here, and the Japanese people in general, have shown for Ms. Meng. Huawei is a responsible company, and we have a very good record on cyber security in Japan. We are working hard to ensure that our customers' networks function as normal under any circumstances.

Throughout the earthquake, tsunami, and Fukushima nuclear leakage crisis, Huawei staff ran towards the dangerous zone as everyone else was running away. We restored 668 base stations within two weeks in order to support rescue and relief efforts. At that time, Wanzhou flew from London back to Hong Kong and then from Hong Kong to Tokyo. On that flight from Hong Kong to Tokyo, there were only two passengers, and she was one of them.

When she was detained in Canada, a Tokyo resident wrote her a letter. Wanzhou and all our family choked up when we read it, and Wanzhou wrote back to the

sender. At least the people of Japan still remember us. The friendship between China and Japan is built on connections between individuals like that. As long as people are making connections, that relationship is lasting.

We also have much to learn from the way the Japanese deal with hardship. For example, when I went to Japan, I noticed that people eating out would always order one dish from Fukushima. It was their small way of supporting the disaster-hit area. We should learn from this spirit of solidarity, and buy more vegetables and pork from China's poor, mountainous regions. It could be part of our poverty relief efforts. In the aftermath of the Wenchuan earthquake in China, we all saw the dedication and heroism of the rescue teams from Japan.

**10**

**Which countries might make moves to "oust" Huawei in light of the trade war between China and the US? How do you feel about this situation? What impact will it have on Huawei and the Chinese economy in the mid- to long-term?**

**Ren:** In the past there were some customers who didn't buy Huawei's equipment. That didn't mean that all customers around the world were against us. Now, there are a few customers who are no longer buying from

us. But at the same time, those who didn't buy from us are now beginning to buy our equipment. For us, it all balances out in the end. This year we will continue to grow, but I predict that our growth rate will be slower than 20%.

11

**This is the first time you've given an interview to the Japanese media, Mr. Ren. I've always wanted to ask you something that we are very interested in: Given your age, what are your instructions to your successors, including Meng Wanzhou?**

**Ren:** First, my successor will certainly not be Meng Wanzhou. Ms. Meng is a manager. She is very skilled at handling internal management issues. But my successor will definitely be a fighter. It will be someone with deep insight into the markets, someone with a very strong technical background, and plenty of experience out there in the marketplace. They will have to have a profound understanding of philosophy and sociology. A leader is not someone who works at the coalface day after day, shoulder to shoulder with the workmen. A leader's most important ability as well as their most important responsibility is to have a clear vision of the path forward.

Our succession mechanisms are different from any

other company. It's not up to an executive to decide who will be their successor. Instead, the leadership team as a whole recommends the candidates. The representatives of our shareholding employees will consider and select the next leadership team from among them. It won't be one person, it will be seven people. They will form the Executive Committee of the Board of Directors. Among those seven, there will be three who rotate to chair the Executive Committee meetings. Each person will get just six months as the rotating chair each term. When the Executive Committee meets, the chair must be the last to speak. If they speak first, then everyone may just be guided by their opinions. The group of seven should have full and frank discussions, even a few arguments, and then vote and come to a decision. Four votes will constitute a majority in the Executive Committee. But this will not yet be a board resolution. It is a proposal to the board, which will be presented to the full 17-member Board of Directors for discussion. Only after that discussion does the full Board of Directors vote and come to a resolution.

All of these rules and procedures are monitored by the Representatives' Commission, which is led by the company's chairman of the Board of Directors, and also by the Supervisory Board. The company's highest leaders are subject to the "rule of law", which means our Articles of Governance. And these leaders are also subject

to a democratic decision-making process. With this mechanism in place, the leadership team can gradually be replaced with the next generation. So we don't need one successor; we need a group of successors.

**12**

**This year is the 40th anniversary of China's reform and opening up. Deng Xiaoping once said, "China will not seek hegemony", which helped China attract investment from foreign countries. Japanese companies are also very willing to work with Chinese companies. But now new obstacles are emerging, in the form of information security and cyber security. The trade issue between China and the US is in nature a competition for hegemony. Huawei is a great company, but in recent years it has seemed as though it wants to do everything and can do everything. It has grown incredibly fast, and this has provoked fear in Japanese business. What do you think about economic hegemony?**

**Ren:** In the 1980s, the friendly relations between China and Japan were a really wonderful thing. Japan invested heavily in China, and helped to drive China's economic development. For many years, there have been many missteps in the relationship between the two countries, but with the recent meeting between President Xi and Prime Minister Abe, China and Japan have restored

friendly relations. China has also amended its own commitments at the WTO. We believe that China is becoming more open. It's important not to confuse public opinion with what we can see and hear with our own eyes and ears. We should seize the opportunity and grow even faster.

Huawei will continue to grow. First, Huawei will never make cars. The products that Huawei manufactures are highly complementary to those made in Japan. A lot of our materials and components are sourced in Japan. Last year Huawei procured 6.6 billion US dollars of materials and components in Japan. This year, that figure will be about 8 billion US dollars, and in five years' time, our procurement will top 20 billion. So Huawei is not seeking hegemony. We are a buyer. And we also help press for improvements in Japan's precision manufacturing of components and materials. We are setting increasingly higher requirements for our Japanese partners, so we are a factor for advancement in Japanese industry. Huawei brings long-term, sustainable growth for our Japanese suppliers.

**13 The US is placing restrictions on the business that its companies can do with Chinese vendors. Last year ZTE was hit with an order banning US producers from supplying it semiconductors, causing great difficulty**

**to the company's production. If the US were to impose embargoes on Huawei, what response would Huawei have, or what would you do?**

**Ren:** We would never find ourselves in the same situation as ZTE. These kinds of restrictions would have some impact on us, but not that big. If the US really decided to take those steps, it would force us to develop our own replacement products. The end result wouldn't be good for the US.

**14** **There are now a series of allegations that have been made against Huawei around the world, for example, the claim that Ms. Meng Wanzhou broke US law, some issues in Poland, and claims in the US that Huawei has stolen technology. In Poland, Huawei very quickly terminated the involved employee's contract. Is that because an internal investigation corroborated the accusations or some other misconduct of this employee?**

**Ren:** On the civil suit between Huawei and T-Mobile, all of the disputed issues have already been resolved in court. Neither side has suffered any loss. As to whether the US plans to file criminal charges, we have not been informed yet. That's just media reporting.

The Meng Wanzhou incident is undergoing legal

proceedings, so I can't comment on it. In Poland, we have issued a lot of company regulations demanding that our staff always comply with the law and regulate their personal conduct. If this person is found innocent in court, we can rehire him and compensate him for his losses.

**15 Huawei invests a lot of money in R&D. In the Japanese business world, many people are curious: How does Huawei secure sufficient cash flow? Can you confirm that you don't receive funding from the Chinese government or the CPC? In this series of interviews with the media, you've tried to show us that Huawei is open and transparent, and I do think you've been very open on the subject of cyber security. But in terms of finances, I think Huawei could be a little more open and transparent, as a multinational company.**

**Ren:** Our financial reports are audited annually by KPMG. And our annual financial reports are all published online, going back many years. You can check them all. KPMG certainly isn't hiding anything.

Everyone knows that we invest a lot in research, but this investment is all accounted for in our costs. We set aside a certain proportion of our revenue specifically for R&D. We turn our profits into capital, so that we are able

to support our heavy investment in R&D. We've never had any serious barriers or difficulties with cash flow.

**16**

**Last year was Huawei's 30th anniversary. I understand that you had been through the Cultural Revolution, and that when you came to Shenzhen you were hungry for something different. Today's new hires have a very different experience. Perhaps they are not as hungry as you once were. You once said, "It will take 50 to 60 years for Huawei to catch up with the US." Do you think that Huawei can narrow the gap with the US?**

**Ren:** I said that there is still a 50-to-60-year gap between China and the US, not between Huawei and the US.

Huawei has many employees who are now very wealthy. If they don't want to work hard any more, they are welcome to retire. Our regulations say they are allowed to retain some of their company shares, and they will be able to live on the dividends. If they don't want to work, but stay in their positions, then our young people will not have opportunities for advancement. Huawei needs a constant turnover of new blood to keep us in fighting form.

I actually find that young people are more committed

than we are. They are not driven by hunger. They are driven by a sense of mission. Of course, there are some young people who are lazy. They don't have much to do, so they go online and spout off. The Internet has a very powerful amplification effect, so the result is that everyone thinks young people are lazy. In fact, there are still a lot of hard workers.

Five thousand years from now, there will still be presidents, and they will be elected from the youth of that time. I am confident that young people will prove even more dedicated than us. I think we are getting better, generation after generation, not getting worse.

Thank you, our friends in the media, for visiting Huawei. Now that we know each other, we will have more opportunities to meet and talk in the future. Talking more is the only way for us to really understand each other. Huawei remains open and transparent to the media and the public. Thank you all for coming.

# **Liang Hua's International Media Roundtable at 2019 Winter Davos**

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January 22, 2019  
Davos, Switzerland

01

**I just want to get your thoughts on the report from this morning that the US will file for an extradition request for Meng Wanzhou. Have you had any contact with the authorities? What have you heard on this matter?**

**Liang Hua:** We're aware of the report in question and are closely monitoring the situation. We do not have channels for direct communication with the US authorities.

We comply with all applicable laws and regulations in the countries and regions where we operate, including all export control and sanction laws and regulations of the UN, the US, and the EU.

Huawei established a trade compliance management system in 2007, which covers procurement, manufacturing, supply, delivery, and marketing & sales. This system supports effective operations of the company.

As for the issue that you raised in your question, we are closely monitoring the situation. We urge that the case be resolved as soon as possible so that Ms. Meng can regain her personal freedom. We have every confidence that the Canadian and US legal systems will ultimately reach a fair and just conclusion.

02

**I would like to know how worried Huawei is about being banned from 5G development in several**

**countries. What are you doing to avert this situation?**

**Liang Hua:** Huawei has been investing in 5G technology and products for 10 years, and our 5G products and solutions can help our customers build their market competitiveness.

From the market perspective, there will always be countries that choose Huawei and there will always be countries that do not choose Huawei. That's quite normal. The key is that these decisions are made based on technology, not politics.

Restrictions enforced by certain countries will have no significant impact on Huawei's business. There are only a few countries that choose to do so.

I believe that as long as we provide excellent products and solutions, customers will keep buying our products. We are not worried at all.

We focus on providing the best possible networks for customers that choose to work with Huawei.

Our 5G products have been widely deployed by many global operators, and we are confident that we can provide innovative, trustworthy, and secure products to our customers. We will offer simplified networks with excellent performance to serve our customers better.

03

**I wonder, given the allegations that various Western countries have made about Huawei, whether officials have asked to tour your campuses and labs? And if they were to do so now, would you give them access?**

**Liang Hua:** If they had made such requests before, we must have welcomed them to visit our campuses and labs. If they have such requests in the future, we will again really welcome them to visit our campuses and labs, and see our product development platforms and processes.

I think communication, exchanges, and dialogue can further facilitate mutual understanding of each other. And that can help dispel misunderstanding. Huawei is very open to that.

04

**Since the arrest in Canada of Ms. Meng, we've seen actions being taken against Canadian nationals in China. Are you worried that Huawei is now taking on the reputation of a political player that might affect your reputation around the world, given these disputes between the Chinese and Canadian governments?**

**Liang Hua:** As for Huawei, we will remain focused on our business performance. In the past three decades, we have created a global footprint covering more than 170 countries and serving more than 3 billion people around

the world. And in every country we operate, we have built a relationship of trust with the local community and will continue to do so. In every country where we operate, we comply with all applicable laws and regulations, ensure operational compliance, and fulfill our corporate social responsibilities.

**05** **So how does it explain the current crises, if I can call them this way? What do you think about that? How do you react?**

**Liang Hua:** I think there are difficulties in crises, but there are also opportunities in them. Our development will not be influenced by the current situation. We will continue to focus on the areas that we have chosen, and continue to deliver more competitive products to better serve our customers. Without competitive products, everything else will just be empty talk. There will always be ups and downs as a company continues to grow, but we will meet the difficulties head-on and address them.

**06** **Recently, Mr. Ren, the founder of the company, has received media interviews from Chinese media and international media. It seems that Mr. Ren has full confidence in Huawei's 5G technology. Other than the issue of market access in Western countries, there is**

**also an increasing concern of the labs that Huawei has built globally and it is reported that there is discussion of a ban on technology exports to Huawei. My question is, in comparison to the concern over trade frictions, does Huawei have an even greater concern in the issue of technology access?**

**Liang Hua:** Huawei has been making intensive and long-term investments in technological innovation and product development. In the past year alone, we invested 15 billion US dollars in research and development, making us the 5th largest R&D investor worldwide. In the next five years, our R&D spending will exceed 100 billion US dollars. This heavy investment in technological innovation will yield results that light the way forward for Huawei and the world at large.

We have cooperated immensely with local talent, universities, and research institutions to conduct joint research programs in countries around the world. These programs not only help Huawei, but also help local communities.

We advocate openness and collaboration for shared success. Huawei is a contributor to the future digital and intelligent world. Huawei is not a threat.

As you mentioned, some countries might put a certain ban on technological exports to Huawei. To

answer that question specifically, we will move our research centers and facilities to countries and regions where we are welcomed and where we can participate in collaboration.

**07** **There was a recent remark on the Internet made by Mr. Ren where he said we should encourage more partnerships with Russian scientists. Is that remark also related to the question I asked before?**

**Liang Hua:** We build research and development facilities based on business requirements and the availability of talent. For example, we have a microwave R&D center in Milan. This is because on one hand, Huawei wants to develop microwave technologies, and on the other hand, Milan has a large pool of such talent.

**08** **The IMF has warned that the global economy is slowing. China has reported a major slowdown in growth. What does the global slowdown mean for your business? And how can your company weather the storm or the potential storm? That's my first question. Second question, Japan wants to open this free trade on its G20 agenda, and do you think you can collaborate or your government can collaborate with Japan in calling for more open trade? What is**

## **your take? How can Japan contribute to this friction between the US and China?**

**Liang Hua:** With the slowdown of the world economy, it is becoming even more important for us to create greater value, especially in driving the development of the digital economy and an intelligent world.

Huawei focuses on the following three main business areas where we will enhance our investment: first, intelligent computing; second, ubiquitous connectivity; and third, smart devices.

In terms of intelligent computing, computing power will become an important production factor for building an intelligent world. Through technological innovation, Huawei has launched the Kunpeng 920 low-power chip for data centers, as well as TaiShan data center servers, which are powered by this chip. These products provide a rich diversity of computing capabilities and enable an intelligent world.

We also provide full-stack and all-scenario AI chipsets to make computing power more affordable and accessible to more people.

Our second business focus is ubiquitous connectivity. ICT will make up core infrastructure in the future intelligent world. Huawei will help build that ICT infrastructure, so that all applications can run properly

on it. Our ICT infrastructure will be like fertile soil, a platform where everyone can grow their own crops. We offer equipment that provides ultra-high bandwidth and enables massive numbers of connections.

Our third focus is smart devices. They feature sensory capabilities through which users can experience services. Huawei focuses on providing premium experiences by offering smart devices for all scenarios.

Through innovation, Huawei smartphones have integrated advanced camera functions that enrich lives and allow users to capture every special moment. Nowadays, shooting 4K videos requires specialized equipment, making it impossible for everyone to record the special moments of their lives in 4K anytime, anywhere. As smartphone camera technology continues to evolve, we will all be able to shoot 4K videos with our smartphones. This will, of course, raise the requirements for network transmission capabilities. When 5G services are available, live videos and photos, especially 4K videos and high-definition photos taken with our phones, can be transmitted and uploaded to social media platforms in the blink of an eye.

Battery life is a major area of concern for all smartphone users. I can assure you that even if you are a heavy smartphone user, you won't have any problems with a Huawei phone's battery life lasting the whole day.

Huawei smartphones can offer such good battery life because we leverage our energy saving technologies. Imagine a smartphone as a multi-room apartment. We can monitor whether there are people in each room, automatically powering on and off based on where people are. If there is no one in the room, we can automatically save energy, achieving very high energy efficiency and a very long phone battery life. Even during intensive use, we have another feature to support that – our super charge technology. Within 30 minutes, you can charge your battery to 70%. This is the result of breakthroughs in graphene technologies.

You talked about global economic slowdown and fluctuations in the market. Whatever happens, Huawei will remain committed to investing in the abovementioned three areas.

Globalization 4.0 is the theme of this year's World Economic Forum. We believe the importance of free trade will only continue to grow in the globalized world. Huawei hopes that globalization will continue and that all players will act in the spirit of free trade, open collaboration, and technological innovation, which will drive global economic growth.

**09**

**You mentioned you are concerned that trade continues to remain open and that there are no**

**disruptions to supply chains. In that context, we face the possibility that the UK might leave the European Union without future arrangements in place. Are you concerned that might impact your business in the UK and Europe?**

**Liang Hua:** We do not have any particular concerns about this. We offer network products and solutions to our customers and we have a global supply chain.

10

**First, could you give us some details about how your business is being affected by the tariff war, the China-US trade war? Second, after a Huawei employee in Poland was arrested, Huawei is not defending at all and fired him immediately, but you have a very different response with Sabrina Meng. You insist on her innocence. I am wondering whether it is an unequal treatment between an ordinary Huawei employee and the founder's daughter. What findings from internal investigation do you have to support these very different responses?**

**Liang Hua:** Regarding your first question, I'd like to stress that a global industry chain is critical to global economic development, and will require the collaboration of everyone and every company. That's why Huawei works closely with its partners, customers,

and suppliers to achieve shared success.

Huawei has a very focused strategy. We invest our strategic resources in areas where we have an advantage and we do not spread resources into non-strategic areas. Only by having a focused strategy can we generate enormous strength and support sustained development.

Technological innovation and customer needs have always been the two primary driving forces for Huawei's continued development. Even when faced with an unfavorable environment like what you mentioned, as long as Huawei stays committed to technological innovation and serving our customers' needs, we can continue to see strong development.

As for your second question, both cases are in legal proceedings, so I do not have any further comments.

**11**

**I am curious about American executives expressing this morning that they think that China is winning the AI battle with the United States. I am curious if you think that's true. And are you worried about job losses in China from broad-based automation?**

**Liang Hua:** AI may play an important role in our future society, but we shouldn't overstate that role. We believe that the future will require close human-machine

collaboration. Human beings will do what they are good at, and machines will also do what they are good at.

AI has to be applied to specific scenarios. In other words, AI must be able to solve real-world problems. You cannot simply say you will learn to swim by standing on dry land. You have to jump into the pool and practice. We need to see whether there are tangible results after AI is applied.

**12** **You mentioned that you will transfer your partnerships to countries where you are more welcomed if you continue to have some barriers in certain countries. I wonder how close you are to doing that, in particular markets like the US and the UK where you have quite a lot of pushback. And what will it take for you to actually withdraw from these countries?**

**Liang Hua:** Huawei provides competitive products and solutions to help customers solve problems and bring customers value, but ultimately it is customers, rather than just countries, that make decisions at their own discretion.

**13** **The US accuses Huawei of being a national security concern because the equipment could be used as a**

**backdoor for the Chinese government. Obviously, that is something that Huawei has denied. But have you ever seen evidence produced by the US or other governments that says this is the case? And on the flip side, what evidence have you got that you can show to the US and say your equipment is safe and should be able to be used. What could you actually present to the US as concrete evidence to deny all of the allegations?**

**Liang Hua:** In the past three decades, Huawei has been operating in more than 170 countries and regions around the world. We have a solid and proven track record in cyber security. Huawei is an independent company. We have never and will never damage any country or individual. When it comes to cyber security and user privacy protection, we stay customer-centric and will never compromise on these issues.

Huawei gives top priority to cyber security and privacy protection. In the next five years, we will invest US\$2 billion to enhance our software engineering capabilities, so that our products and solutions will become more reliable, trustworthy, and of higher quality.

As for the allegations from the US that you just mentioned, we have not seen any evidence provided by the US to explain how Huawei is not safe. We have extensive global partnerships, and we find that people

believe that in the future digital and intelligent world, cyber security will be a common challenge. It is a technical issue. It is not an issue about any one particular company. Huawei provides products and solutions to telecom operators, and it is the telecom operators who operate the networks.

**14**

**Does the Chinese government or military have any backdoors into Huawei products? So what do you think you can do to convince Western governments that this is true?**

**Liang Hua:** No. There are no backdoors in any Huawei equipment. If someone believes there are backdoors, they should offer the evidence to prove it. Huawei is a commercial company. We focus on safeguarding our customers' interests, and protecting the security of our products and user privacy.

In terms of product development (hardware and software development), Huawei follows a very strict process. We also have many tools, platforms, and an established mechanism to safeguard the security of our products. In terms of company policy, we have not and will never accept any request to install backdoors, and we do not allow anyone else to do so in our equipment.

As I said, we have a proven track record in cyber

security, and we have never had a single cyber security incident in the past 30 years. We have served numerous customers throughout these years. Our products have been verified by more than one third party, attesting to the security of our products. At Huawei, we consider cyber security and privacy protection our top priorities.

Paul Wiseman: Given your track record, why is Huawei viewed with suspicion in the United States and other Western countries?

Liang Hua: I think you have to direct that question to the US and other Western countries. Huawei has invested heavily in cyber security. We have a well-established cyber security management mechanism in place, and we comply with all applicable laws and regulations in the countries and regions where we operate.

It is much easier for us to discuss the technical issues of cyber security, because there are clear rules and standards to describe them. The technology is based on these rules and standards, so it's very easy to tell whether you have already achieved a certain level of security.

15

**My question is about the concern that Huawei is not being transparent with its shareholding structure,**

**especially since Huawei has virtual shares. I note that Huawei is now reforming that structure, and I wonder whether the objective of this reform is to entirely remove the existing employee shareholding structure, or whether Huawei aims to establish a transparent shareholding structure that is comparable with a public company. And my second question is, "Is Huawei still 100% confident to say that it will never consider going public?"**

**Liang Hua:** Huawei is a private company with its shares 100% owned by its employees and we have the Representatives' Commission which is comprised of representatives of our shareholding employees. On January 18, we finished our election of a total of 115 shareholding employee representatives. The Representatives' Commission is Huawei's highest decision-making body.

Being a private company, Huawei wants to focus more on long-term development without being influenced by short-term business performance fluctuations. We can then focus on our long-term strategic investment.

To answer your second question, we do not have any plans to go public.

Catherine Chen: Every year, we publish the KPMG-

audited annual report on our website, detailing our management information, corporate governance information, and financial data. So it's not fair to say that Huawei is not transparent. We disclosed that there are more than 97,000 shareholding employees, but we didn't disclose the specific number of shares owned by each shareholding employee. We only disclosed that our founder Mr. Ren owns 1.14% of company shares.

16

**Coming back to 5G. Which countries are you collaborating with to develop 5G? We have reported news about the ones who do not want you to even be a part of the network. What countries are you working with to develop the 5G network?**

**Liang Hua:** For 5G, Huawei has already signed more than 30 commercial contracts and we have already shipped over 25,000 base stations.

5G contains three layers: products, networks, and services.

First, Huawei can provide end-to-end 5G products. We are committed to providing our customers with the simplest possible 5G networks, to create value for them and help them build the best 5G networks as quickly as possible.

Second, Huawei has 30 years of experience in

network planning, design, and commercial deployment of more than 10,000 antennas and base stations. By combining different network standards and accommodating different frequencies, we are able to build the simplest possible 5G base stations. This fundamentally addresses customer challenges regarding limited site space for antennas and adding new frequency bands. With simplified network planning, design, deployment, and O&M, we help customers greatly reduce energy consumption and improve energy efficiency by a factor of 100. This will minimize cost per bit for eMBB networks.

Third, Huawei has launched a Wireless X Labs initiative, through which we explore the development of 5G services together with our customers. We can fully leverage Huawei's capabilities in devices, ICT infrastructure, and cloud to create synergy and offer diversified services via 5G. We call this Cloud X. Many customers from different countries have chosen to work with Huawei. Of course, there are customers who have decided not to work with us. We respect their decisions. For our part, we will focus on providing the best services to those who have chosen to work with us.

**17**

**About cyber security, as we have more and more connected devices, the possibility of hackers, Chinese**

**hackers, Russian hackers, US hackers, hackers from anywhere, to attack connected devices and infiltrate networks or people's privacy is increasing. How does Huawei see that threat and what strategy do you have?**

**Liang Hua:** In the 4G era, there weren't as many concerns about this issue as there are today. In fact, 5G should be more secure than 4G and have higher security requirements than 4G. There are two reasons for this.

First, 5G networks use 256-bit encryption for data transmission while 4G uses 128-bit encryption. It would take a quantum computer several million years to decrypt this 256-bit encryption.

Second, 5G will enable the connection of all things, including production, transportation, and medical facilities, as well as being applied to autonomous driving. In all of these areas, safeguarding lives and property is critical. Any security issues will result in far more serious losses than they would have in the 4G era. Therefore, we must take cyber security more seriously than ever before. How can we guarantee the security of connectivity? The entire industry should work together to discuss this issue. We should encourage academic research, exchanges of ideas, and technological innovation.

We can't simply say one company's 5G equipment is

not secure and another company's is. In 5G, Huawei has also invested heavily in the connection of things. The 5G R16 standards concerning IoT will be released this year. The standards should set clear rules to ensure the security of these connected things.

Catherine Chen: Cyber security and privacy protection are the foundation of the digital world. People will be very concerned if security cannot be ensured. To ensure cyber security and protect privacy, Huawei focuses on two things.

First, we invest heavily in cyber security and privacy protection. Our investment exceeds that of our industry peers. I would like to share two figures with you. We allocate 5% of our R&D investment to security technology, and 1.6 out of every 100 engineers at Huawei are dedicated to cyber security and privacy protection.

Second, when the industry develops technological standards, we promote and advocate the highest and strictest possible security standards. Huawei is ready and willing to contribute more in this area.

**18**

**As I have mentioned, your growth and cellphone sales are very, very strong. There are still a lot of people in the world who don't yet have a cellphone.**

**But eventually you will start to reach the saturation point. Are you already thinking about Huawei's future strategy and areas of business focus, as the world becomes full of cellphones?**

**Liang Hua:** The smartphones we are used to seeing today were invented by Apple. This invention boosted the development of the mobile Internet. Today, we have to set our imaginations free and envision what kind of devices people will use to communicate and exchange information in the future.

We have already laid out a five-year strategic development plan for our consumer business. We have been thinking about what forms smart devices will take to deliver an intelligent experience across all scenarios. In addition to investing in technology, we have also set up research centers that focus on psychology, sociology, and aesthetics.

In doing this, we want to explore and envision what kind of devices people will use in the future intelligent world. For example, people first used feature phones, and then they started to adopt smartphones. Maybe in the future there will be intelligent phones, or there may be some other forms of devices. We have to envision new devices that will facilitate communication and offer even more inspired, user-friendly, and intuitive experiences.

# Ren Zhengfei's Interview with the BBC

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February 18, 2019  
Shenzhen, China

**This is an opportunity for the world to understand your position. These are a lot of misconceptions about Huawei right now around the world. And the BBC and myself, we want to understand your point of view. This is really that chance and that opportunity. We are very grateful to get that opportunity. So I will be pitching questions to you that the whole world wants to know about Huawei. I want you to know that I will be fair and I am very grateful for this opportunity.**

**Ren:** It's my pleasure to answer your questions. I feel as though the eyes of the whole world are on Huawei, and I am grateful to the US government for this. Huawei is a small company. We are not very well-known. But now many senior US government officials are lobbying around the world, saying that Huawei is an important company that has problems. They are drawing the attention of the whole world to Huawei. People begin to know Huawei and will understand with a deeper look that Huawei is a good company. We have rapidly growing sales, and the sales volume of our device business grows 50% on average every month. Therefore, we thank the US government for advertising Huawei.

**It is my responsibility to ask you the questions that the world has. Some of them might sound difficult, but my desire is to understand your position and I want you to feel comfortable in this conversation.**

**Ren:** As we are talking freely, I may give some humorous answers to your questions, so I only hope you and the audience will understand my humorous touch sometimes.

**01 Thank you very much, Mr. Ren, for joining us. I want to start by asking you a little bit about your company. You have built this company in just 30 years. It's a remarkable achievement, but I want to understand: What are some of the challenges you faced when you first began?**

**Ren:** I founded Huawei when China began to implement its reform and opening-up policy. Deng Xiaoping believed that the Chinese military was too large and needed to be significantly downsized. Hundreds of thousands of soldiers, if not more than a million, were released from the military and sought employment in civilian life.

At that time, China was shifting from a planned economy to a market economy. Not only people like myself, but even the most senior government officials, did not have the vaguest idea of what a market economy was. Deng Xiaoping advocated the theory of "crossing the river by feeling the stones on riverbed". The fact is, if something goes wrong when you are in the

river, you might drown. When China shifted to a market economy, we had no idea of what a market was or what to do. It seemed it was hard to survive.

I am an ambitious man. After leaving the military, I came to Shenzhen. The city pioneers open market practices and is probably the most open market in China. When I was in the military, I just did exactly what I was ordered to do. However, when I began to work in a market economy and engage in transactions of products, I felt at a loss. I suffered from unfairness and deception. I stumbled, but had to rise up again, because I had to raise my family. I then thought of the possibility of starting a small business. The registered capital was roughly CNY21,000, which is about 2,000 pounds. Not all the money came from my pocket. The compensation I received upon leaving the military was only about one-fifth of this amount, so I pooled funds from different people and founded Huawei.

These times brought us to the path we are on right now.

By taking this path, our aim was to work for survival, rather than for ideals. Back then, we didn't have any ideals, because we were finding it so difficult to survive as a company. My portion of the registered capital was less than half of the monthly salary a waitress can earn today. How could we possibly have ideals then? Our

priority was to survive.

**02** **You have painted a picture of great difficulty and hardship that you have gone through, but today Huawei is a top telecoms equipment seller in the world. How did you do this?**

**Ren:** After founding Huawei, I did research on what exactly a market economy was all about. I read many books on laws, including those about European and US laws. At that time, there were very few books on Chinese laws, and I had to read those on European and US laws.

I figured out that the market economy was about two things: the customer and the product. And the law governs what's in between – the transaction. We obviously couldn't control our customers, so we had to get hold of the products. I had worked in research. Therefore, we began to do research on products, building products and selling them to customers.

**03** **What is your next goal for Huawei now that you have seen so much success?**

**Ren:** When I founded Huawei, the communication industry was at the start of enormous changes in the 30 years that followed—changes as massive as if mankind

had gone through thousands of years in that period of three decades. Back then, we didn't really have any telephones [in China]. The only phones we had were those hand-cranked phones that you see in old World War II films. We were pretty undeveloped back then.

Huawei started out by making simple equipment for rural markets. Instead of spending the money we'd earned, we invested it back into our business, making more advanced equipment. It was a time when China was in great needs for industrial development, and our equipment, though certainly not the best, still had market appeal. If we were to start Huawei now I don't know if we could succeed. As time went on, we came to realize that we might just be able to succeed, so we focused all of our effort on what we were doing at the time.

If someone can maintain focus on one thing, then they will definitely succeed. I was focused on communications technology. If I had focused on raising pigs, I might have become a pig expert. If I had focused on making tofu, I might have become the king of tofu.

Unfortunately, I chose communications. This industry is very challenging. The bar is too high. Ericsson's CEO once asked me, "The situation in China back then was so difficult. Where did you find the courage to enter such a demanding industry?" I told him that we did this

without really understanding just how high the barrier to entry was. But we started anyway, and there was no way to back off, because if we pulled out then we wouldn't have anything. I had spent all the 21,000 RMB of initial investment, and would have ended up begging on the streets. So we had to keep forging ahead, one step at a time.

We had a very limited amount of strength, so we narrowed our focus to a tiny area, and that's where we chose to strike. Pushing forward little by little, we began to see success. It builds up over time. It's an effective approach, what I call our needle-point strategy. We just focus on a single point, and we've been focusing on that point for 30 years now. From several hundred employees, to several thousand, to tens of thousands, and now with 180,000 people. We put all of our energy behind one single point: information and communications technology.

Every year we invest 15 to 20 billion US dollars in R&D. Huawei is one of the top 5 companies in the world for R&D investment. This focused approach to investment has helped us succeed.

Why have we succeeded while other companies find it difficult? Publicly listed companies have to pay a lot of attention to their balance sheets. They can't invest too much, otherwise profits will drop and so will their share

prices. At Huawei, we fight for our ideals. We know that if we fertilize the "soil", it will become more bountiful, and in the end the land still belongs to us, so we should not hand out the "fertilizers". So we invest, and we invest more heavily than others. That's how we've managed to pull ahead and succeed.

It's different for listed companies. We are not a public company, so we don't have to worry about fluctuations in our balance sheets. If we were a public company, being stuck in a storm of public opinion like today would certainly see our stock price plummet. But we don't really feel it. We just keep pressing forward.

We believe that our consistent focus over the past couple of decades is what paved the way for our success.

**04 Thank you. That was interesting. But your success, according to what you've described, is now under threat, isn't it? The United States has launched an attack that's targeted your company. The Department of Justice has put forward charges saying that Huawei stole technology from an American company. Do you think that's fair?**

**Ren:** To start with, what are our ideals for the next three decades, or even longer? To provide people with information services. In the next 20 to 30 years, we will

see a great technological revolution. The emergence of AI will make the information society intelligent. In the era of cloud and AI, we will see explosive growth in data, bursting forth like a tsunami. This data needs the support of the most advanced connection and computing equipment possible.

I don't think 5G or any other form of data transmission has truly met the pinnacle of people's needs. And I believe there are still more profound needs that must be addressed. Right now human society is only in the early phases of the massive change that lies ahead. And Huawei is only at the starting line of this transformative journey. We still have a long way to go before we can deliver faster, more real-time, more accurate, and more affordable information services.

Over the past three decades, Huawei has helped to bridge the digital divide by providing information services to 3 billion people in more than 170 countries and regions. With affordable ICT services, underprivileged kids living in remote regions can see what the world is like outside, and they can grow better to become the "backbone" of society. Huawei's role is to provide services that make the world a better place.

I think the charges and accusations by the US against Huawei should be handled by the law. I trust the US is an open and transparent country governed by the rule of

law, so they should handle these matters through legal procedures. Sometimes I feel happy [about what the US is doing to Huawei]. The US is the world's most powerful country. Their senior officials are talking about Huawei wherever they go, including in places where Huawei has not yet launched any ad campaigns and the locals don't know about us. Because of this, people all over the world now know Huawei. Huawei is now at the center of global discussion. This is a massive and cheap advertisement for us. When people ultimately realize Huawei is a good company, our sales might be even easier. We don't have difficulties today, and we may have a more favorable environment to sell our products in the future.

I'm not feeling much indignation about the accusations made by the US. These are ongoing legal cases. Just let the law take its due course.

**05 I appreciate that. But I read through some of these charges the DOJ has put against you. The evidence is very compelling. The emails that are there show that Huawei's employees in China asked for specific prototypes from their colleagues in the United States, repeatedly. How are you going to deny this?**

**Ren:** Now that the US Department of Justice has filed the indictment, let's leave it to the court to decide.

06

**I understand, and I appreciate that it's a legal procedure, but the world really wants to understand it. The US is trying to paint you as a company that cannot be trusted. It says you've stolen technology from American companies, not the first time. It says companies like Cisco, Nortel, and Motorola, they all accused Huawei of stealing their ideas, stealing their technology. The United States is trying to say Huawei can't be trusted. What do you have to say about that?**

**Ren:** Many of our technologies, not just our 5G, optical switching, and optical chips, are far ahead of those of Western companies. We have a huge number of leading technologies and those technologies are really complicated, some of which only our peers can really understand. The charges that the US has made against Huawei are fairly marginal. Huawei did not become what it is today by "stealing" US technology. How could we steal a technology from the US that they don't even have? People need to focus on more than just Huawei's problems and weaknesses; they need to also see Huawei's contributions to humanity. Huawei now owns over 80,000 patents. Huawei has contributed to the foundation of a digital society. In other words, part of the foundation of the digital society is built by Huawei.

In the US alone, we have obtained more than 11,000 patents. These are our legitimate rights granted by

the US law. We have offered many services to people around the world, and we are becoming more open. We have submitted more than 54,000 proposals to standards organizations. We consider these a contribution to humanity and this contribution deserves to be recognized. Other problems should be solved according to the law.

## **07** So why do you think the US is trying to paint Huawei as a company that cannot be trusted?

**Ren:** There is virtually no Huawei equipment deployed in the US. Has this solved the US's cyber security issue? If yes, then other countries can also solve this issue by not having Huawei. Sacrificing one company is worth it if it is for the sake of the world. But the truth is that the US has not solved their information security issue. How could they share their experience with other countries? If they say, "We don't use Huawei equipment, but we still have an information security issue," could that argument convince Europe not to use Huawei equipment? Huawei has been serving three billion people in over 170 countries for over 30 years. There is no record of security breaches with Huawei. What is the factual basis for the US's charges? Our customers have experienced our networks over the past two to three decades, and consumers have the ability to make their own choices.

We still have to rely on the law to solve this problem and the court will come to a conclusion.

**08**

**The US is pressuring its allies. It says, "We don't use Huawei's equipment". It's telling the world not to use Huawei equipment, because it says Huawei's equipment could be used to spy for China. Is this true?**

**Ren:** Over the past 30 years, many customers have chosen not to use Huawei equipment. This is not something that has started happening recently. It is understandable that some countries have decided not to use our equipment. As for the charges that our equipment may contain backdoors, as I stated in the interviews from the Wall Street Journal and other international media outlets, we have never installed backdoors in our equipment or engaged in any spying activities. We will not accept any request to do so. If there was such a request, I would rather disband the company.

On February 16, 2019, Yang Jiechi, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and Director of the Office of the Foreign Affairs Commission of the CPC Central Committee, said at the Munich Security Conference that the Chinese law doesn't require companies to install

backdoors. He added that the Chinese government requires all companies to abide by international laws and the laws of the United Nations, and stressed that operational compliance is a must for all companies in countries where they operate. The Chinese government has also officially stated that they have never required companies to install backdoors. I have personally promised and the company as a whole has promised that there is no backdoor in our equipment. Our 30-year track record also proves that our equipment does not contain backdoors.

I don't really understand what the US has in mind. If European companies use Huawei equipment, then the US would be unable to access their data because they wouldn't be able to get in. Europe has also required their data not to be transferred out of the region, so the US won't be able to get in, because our equipment contains no backdoors and the US won't be able to get into European networks.

**09 You say that you have never been asked by the Chinese government to create this backdoor, and that you would shut the company down if you were asked. It's a very big company. You have 180,000 people. If it comes down to the question of survival between your company and perhaps not creating a backdoor, but**

**just giving access to the Chinese government, what would you do in that situation?**

**Ren:** Top officials of the Chinese government have clearly stated that the government has never required companies to install backdoors. Huawei will not do it either. Our sales revenue is hundreds of billions of US dollars, and if we installed backdoors, it would cause our customers all over the world to dislike Huawei, and we would have no business at all. Without business, how would we repay our bank loans then? We cannot take that risk. When I said "disbanding the company", I want to show our determination. I want to show you that we will never do such a thing or hand over any information to the government.

**10 I understand, and I think some of the confusion or the misconceptions out there about Huawei are because of your links to the Chinese military and the Chinese Communist Party. You enjoy special privileges that perhaps some government employees enjoy. You have a Communist Party Committee inside your company. That raises lots of questions about how close Huawei is to the Chinese government. Why do you have this party committee within your company? Why do you need it and what does it do?**

**Ren:** Huawei is registered in China, so we must comply with all applicable laws and regulations in China. We need to pay taxes to the Chinese government, create jobs, and fulfill our social responsibilities, such as contributing to local communities. In fact, before we established a party committee, the Chinese branches of Motorola, IBM, and Coca Cola had already established theirs. This is a requirement of the Chinese law, and we operate in accordance with law. The role of this committee is to unite employees and encourage them to work harder and build their wealth, as this is in the interests of the countries, their people, and the employees themselves. Employees earn money from their work, so this is in their own interests. They also pay taxes, so this is in the interests of the countries. The party committee at Huawei only educates its employees; it is not involved in any business decisions.

According to Chinese law, all companies in China, including Chinese and foreign companies, must establish a party committee, and we must all obey the law. Just like British citizens who love Britain, the Chinese also love China. The British support their ruling party. If they don't, why would they vote for it? If you vote for the ruling party, then you support the ruling party. In China, the ruling party is the Communist Party, so we also support the party. Only when every person loves their country and supports their ruling party can a country

advance. Voters outside China have the right to express their opinions. Chinese netizens are now doing this, too. Our country is making reforms, which is understandable.

**11**

**But Mr. Ren, with all due respect, China is not the United Kingdom. This is a country where people routinely are arrested; they disappear. The Chinese Communist Party has ultimate control over everything here. It even has control over your courts of law. What assurance can you give people watching this program that, if the Communist Party were to ask you to provide them with a backdoor or to give them access to your information, you could say no?**

**Ren:** I don't know whether there are such incidents in China, but nobody at Huawei has disappeared for no reason. We are a company, and never get involved in politics. We gain our customers' trust by working hard and doing every job to the best of our ability. We have never, and will never, take or receive bribes. I have told the Western media that we will never install backdoors. The official media of the Chinese government has also announced that they will never require Chinese companies to do so. Nobody has made such a request to me. This shows that China believes that companies should serve society and the whole world; they cannot break international rules if they want to go global.

Since no such incident has ever happened and we have no experience ourselves, I cannot answer this question.

**12** **With what seem like inconsistencies to the West—the fact that you have had links to the military, the fact that there is a Chinese Communist Party committee in your firm, the fact that China is a one-party state—can you see how difficult it is for many people around the world to believe that you are free of influence from the Chinese Communist Party?**

**Ren:** The Communist Party of China is leading the reform and opening-up of the country. If this meeting took place 30 years ago, it would have been very dangerous for me. Today, I can receive your interview and be straightforward when answering your acute questions. This shows that China has a more open political environment. Of course, our country will become more open and there will be more social changes.

Thirty or forty years ago, I did not have the chance to study in the West, while many of my friends studied in the US and Canada. This is because I served in the military, had no ID card, and thus had no right to do so. Therefore, I missed that great timing to study

abroad. After returning to China, my friends told me what a supermarket was. Back then, I didn't have any idea of what a supermarket was. You could imagine how superficial my understanding of a market economy was. Now China has changed greatly. At least our economic system is pretty close to those of Western countries.

I was a very low-ranking officer in the People's Liberation Army. After leaving the army, I had no connection or interaction with it. I was not a high-ranking officer as the US described. I served in an ordinary civil construction project. I began as a technician of a company in the military, and then I became an engineer. As I performed well, I then became a deputy director of a small research institute with just twenty plus people. That's actually a title equivalent to a deputy-regimental level, the highest military ranking I have ever received. My dream back then was to reach the military rank of Lieutenant-Colonel before China cut down on its military forces. Unfortunately, I didn't realize that dream, leaving me as a veteran without a military rank, and without any connections to the military.

So please don't think that Huawei becomes what it is today because we have special connections. We have seen companies that were 100% state-owned but still failed. Huawei has become what it is today because of our hard work. Of course, during this process, we

have learned from Western philosophies, cultures, and management practices. So when you visit Huawei, you may feel it is more like a Western company, rather than a Chinese one.

**13**

**You mentioned that you have no connections to the military. Our research has shown that when your daughter Meng Wanzhou was traveling through Canada, she was reportedly traveling with a passport that is usually issued to state-owned enterprise employees or government employees. Further to that, our research has also shown that your chairwoman, previously to this, Madam Sun Yafang, had worked at one point in her career with the Ministry of State Security, the intelligence services here in China. Can you help me understand why you say you have no links or connections to the military?**

**Ren:** First, regarding Meng Wanzhou's passports: China went through a long period of reform. Originally, China did not issue personal passports. Ordinary people held "ordinary passports for public affairs" and government workers held "official passports". As China became more open, personal passports were issued. We travel overseas frequently and our passports fill up with stamps. Once all the pages are stamped, we need to apply for a new one. I may have more passports than Wanzhou, because

I need to renew my passport whenever all pages are used up. So altogether, I have had many pages with stamps. I don't know what the legal procedure is to reveal how many passports Wanzhou has held. I myself have many passports. This is because when all the pages are fully stamped, the passport is considered expired and you can keep it. After they cut off a corner from the cover of the expired passport, some country visas on it may still be valid. However, one person can only have one valid passport.

As for Sun Yafang, we have published her profile on the website. Our company has 180,000 employees. They come from a variety of backgrounds. We cannot say that only people with a spotless record as elementary school students can be employed. Our employees come from all different places. We need to assess their behavior, not where they are from. Otherwise, how would it be possible for us to access and hire this many employees? Therefore, you should check her profile on our website. I don't think it's okay to suspect or guess where this person used to be. Are those guys who have returned from the US spies for the US? Definitely not. We have recruited many Chinese graduates from the US.

**14**

**I see. I just want to go to a point about Chinese law. I know you have addressed Chinese law, and that**

**the government has given you assurances that you are not bound by some of the articles in Chinese law. But a lot of people have asked that, given the fact that these laws require all individuals and organizations to assist in intelligence gathering, how could you refuse, if asked by the Chinese government, to assist in intelligence gathering? Do you have a choice? Can you refuse?**

**Ren:** You need to ask the Ministry of Justice about this question. I cannot answer questions about Chinese laws. What I can tell you is that we would never do such a thing. We have never done it before. We aren't doing it today. We won't do it tomorrow. Our company is shouldering a great responsibility of bringing the world into the information society. In our process of becoming a world leader, we need to lead by setting consistent rules and standards, so we could not do this kind of thing. Personally, I am resolutely against the behavior. My subordinates and successors wouldn't do such a thing.

Many countries may choose not to believe us or work with us. However, in this large world, there are still many countries that welcome us. We have already won 30 5G contracts and shipped over 30,000 5G base stations. People are increasingly aware of our advanced products and are more willing to accept us. Let the facts speak for themselves. We cannot depend on speculation, as

speculation is not the law and accusations are not court decisions.

**15**

**So, are you saying that, if countries keep raising these sorts of security concerns about you, you will not want to go and do business with them, and you will not enter their markets?**

**Ren:** No. We can understand their concerns. If they are concerned for the time being, we can hold off and wait until their worries have been addressed. We don't want to make trouble for other governments.

The UK also has had concerns about us, but this doesn't affect our investment in the country. We just bought 500 acres of land in Cambridge County to build an optical chip plant. We are leading the world on optical chips. This plant aims to export optical chips to many other countries. Our plant in the UK will receive oversight from the UK. Why can't we sell the chips that have gone through the UK oversight to other Western countries? This way, we don't need to produce these in China. The chips manufactured in China can be sold to China and some other countries that accept Chinese chips. Therefore, our investment in the UK is quite heavy. I am not saying that if you doubt us, we will not invest in your country. These are two different things. We may

not operate in your market, but it won't influence our efforts to deploy strategic resources in a reasonable manner. Sooner or later, people will know that we are honest people.

**16** **The UK government, as I'm sure you know, has said that it can work around or mitigate the risks that they found in your technology. But that doesn't mean it can't still ban Huawei, in the UK, from 5G. What would you do if the UK decided to ban Huawei all together? Would you pull your investment out of the UK? Would you cut jobs over there?**

**Ren:** The UK has been a very friendly place for us. In recent years, we have had a very good partnership with the UK government. We established our security evaluation centre in the UK and volunteered to show all information to the UK government. The UK knows that we have gaps in our software engineering over the past three decades. That is because our software architecture is not scientific enough and our source code is not standardized enough. These gaps must be addressed and our software engineering must improve to ensure that the networks will be more secure. The UK's OB report is not a total negation of us. It just points out the issues that have to be tackled. We are determined to make the changes, and many of our employees have

already started to strengthen the software to bring it in line with the UK's standards.

Starting now, we will invest a total of over 100 billion US dollars in restructuring the whole network over the next five years. To restructure the network is to simplify network architectures, base stations, and transaction models. And it is also about ensuring the highest level of both internal and external network security and observing Europe's GDPR to protect privacy. While we are restructuring the network, we are also making business progress. We believe that five years from now, our sales revenue will exceed 250 billion US dollars. Doubts from the US are not making our market shrink. Instead, our market is growing. When customers see such a major power in fight with our small company, it proves that we are really good at what we do. We can even increase our prices. Some countries not buying from us may result in higher prices for other countries. We may even raise the prices for countries that have turned around to buy from us. It's like shopping in a mall. If you bargain and leave without buying, and turn round to buy it, knowing that you want the clothes, the vendor will not lower the price, but even raise it a bit. These increases in price can be used to ensure better network security, instead of giving it away. We don't want to emphasize these price increases, but we want to stress our efforts to build better networks. In the future,

our networks will be intelligent and the whole world will be driven by the cloud. In an intelligent, cloud-driven world, our company will provide the most secure and trusted products. Until then, you will need to buy from me. There will be no other choices. This way we have the opportunity to invest and reform.

The UK has had some concerns about us. These concerns drive us forward. I don't think they are a bad thing. Instead, I see them as progress. Once we recognize our problems, we need to try our best to improve on them. We are not a company that can do everything just right, so we need to constantly improve. Currently, a group of outstanding employees has engaged in network modernization in the UK. It is highly likely that they will become key pillars for network restructuring following the improvement and will embrace greater responsibilities.

**17** **You sound very confident. And you sound like you don't believe that the US will convince its partners to stop doing business with you. Why are you so confident that the US won't be successful in getting other countries to ban Huawei's equipment?**

**Ren:** Their allies may or may not believe in them. For countries who believe in them, we will hold off. For

countries who feel Huawei is trustworthy, we may move a little faster. The world is so big; we can't walk across every corner of it. If all countries choose to buy our products today, our company would be overwhelmed. We cannot sell or produce enough products for the whole world. Therefore, we believe having countries accept us in one at a time will be best for sustainable development.

**18** **What kind of impact would it have on your business if the US is successful in getting many of its partners in the West to shut your equipment out?**

**Ren:** When the West goes dark, it's bright in the East. When it's dark in the north, we still have the south. The United States doesn't represent the whole world, but only one group of people.

**19** **But the US is a powerful country. It has a lot of influence, even in this part of the world. What would you do if they were successful in convincing your customers, even in Asia Pacific for instance? Isn't that enough to kill your 5G ambitions in the West and around the world?**

**Ren:** There's no way the US can crush us. The world needs Huawei because we're more advanced. I think

even if they convinced more countries not to use us for the time being, we could just scale things down a bit. We are not a listed company, and we aren't fighting for good balance sheets. Downscaling will help us get really good at what we do, so we will be ready to make better products that people will love.

At the same time, the US is constantly hurling accusations at us, finding fault with us. This pushes us to make our products and services better, which makes our customers like us more. That's where our opportunity lies. Only if customers liked us, would they be willing to buy from us despite the difficulties. I'm not too worried about any misgivings in the US or other countries. If they point out any areas where we need to improve, we'll improve.

## **20** How much do you think this is about jealousy of how well Huawei has done or how well China has done?

**Ren:** We're no more than a tiny sprout. I don't think a great nation like the US has much to be jealous of. The US has been in a position of absolute power for decades. And it will maintain its relative strengths for decades to come. Huawei's just a tiny sprout that popped out of nowhere. Would the US get jealous of a sprout? I don't think so. They have such strong technology and such a promising future. So I don't think they're acting out of

jealousy. They probably just don't understand us. If they understood us, they wouldn't be so suspicious. I really wish US government officials could come to visit us like you have. Take a look at our Xi Liu Bei Po Cun, our research and the environment here, meet our scientists, see how devoted they are, the attention they pay to detail. The US is an innovative country. They are open-minded, far more open-minded than I am. I've never been jealous of others, and the US isn't jealous of us.

21

### **What about China? Do you think the US is jealous of China?**

**Ren:** I don't entirely understand the relationship between these two governments and countries. Huawei is a business organization, and we are rarely involved in politics. Instead, we focus on our own development. Personally, I think China should continue to open itself up to the rest of the world. In China, I have never said anything against the US or other Western companies. Even when Huawei was being treated somewhat unfairly by Western companies, I expressed my hope that the Chinese government would refrain from reducing the market share of Western companies in China, and I even required our employees not to attack their market share.

I believe China can benefit from the reform and

opening-up policy. China has more or less tried to close itself off from the outside world for 5,000 years. Yet we had found ourselves poor, lagging behind other nations. It was only in the last 30 years since Deng Xiaoping opened China's doors to the world that China has become more prosperous. Therefore, China must continue to move forward on the path of reform and opening-up. I don't think China should close its doors because of Huawei, and I don't think the US will close its doors, either. The 250-year history of the US has been one of openness. During this period, it has attracted the world's finest talent and civilizations, and made the greatest accomplishments the world has ever seen. This is why I do not believe the US will ever close its doors to the outside world. China should not do this, either. China is a developing country, and we need to learn from Western companies, welcome their investment, and encourage them to do business here. Our population of 1.3 billion represents a huge market. I don't think Western companies will abandon this market and I certainly don't want to see that happen.

After Meng Wanzhou was arrested in Canada, Chinese people were still flocking to purchase clothes from Canada Goose. This shows that Chinese people are not overly emotional or populist. I think this is part of the impact social advances in the last 30 years have had on people's mind. We should acknowledge

that China is an open country, and is becoming increasingly more open, which is great for the world. If everyone sees things from this perspective, there is sure to be less confrontation. Economic globalization is a must, not a choice. During the industrial revolution, a sewing machine, bicycle, car, train, or ship could all be manufactured in one country. However, it is impossible for any country to build an information society all on its own. This must be established by many countries working together, following a set of agreed standards. Therefore, we believe that in the information society, openness and collaboration will enormously benefit every country, and China must continue to open itself up to the world. We don't want China to close itself off because of Huawei. I want China to continue becoming even more open. Perhaps one day we will see that many things in China are comparable to those in the UK. We have seen very clear social progress. For example, many people spat in the street 30 years ago, but far fewer people do this now. In the past, people would swarm to get onto a bus, even pushing others aside. Now, however, people are much more inclined to quietly line up in queues and get on buses in an orderly fashion. These are all signs of progress in China. We must be reminded of such positive progress, and remember it took Western countries several hundred years to get to where they are today. There are many movies about the

frontiers when the US started developing its Western regions, showing that it had many problems of its own back then. However, after remaining open all those years, the US is highly developed today. We believe that China will open up and make progress even faster in the future, and that the entire world will reach the same advanced level of civilization.

**22**

**You've talked about how Chinese companies have come up and how China has changed, really. That is what I've heard you say to me. But the allegations from the US are that many of these companies, many of these changes you described, have come about unfairly, that Chinese companies like you have an unfair advantage here in China, and that's why they are so successful around the world. They get government support. They have connections in the government here as well that help them overseas. What would you say to them?**

**Ren:** First of all, I can't speak on behalf of all Chinese companies. I can only represent Huawei. I have never managed or taken the time to get to know other companies, and therefore cannot speak on their behalf. But any company would be hit hard overseas if they don't follow international laws and the laws of the countries in which they operate. If this occurred, they

would have to learn from those experiences.

When Huawei started operating outside of China, we learned a lot about management from Western companies. Our financial reports are audited by KPMG in accordance with strict procedures. All issues will be identified and must be corrected. It took us 30 years to build ourselves into an orderly company. I believe other Chinese companies have learned a lot from their setbacks and other experiences outside of China. Huawei does not receive government subsidies, and the audit reports from KPMG are publicly available. We would be happy to provide you with a copy of an audit report so that you can see how KPMG audits Huawei and illustrates what Huawei is like.

I think Chinese society as a whole is gradually progressing. There are, of course, always bad people out there. We can see from newspapers every day that bad people get arrested. This means China is gradually adopting a very effective rule of law and optimizing the relevant systems.

**23** **Do you see now, as a result of the US pressure on some of the countries around you, that you will be forced to go into other markets? What are the other markets that might oppose you?**

**Ren:** One of Huawei's core values is staying customer-centric. If customers choose Huawei, we provide them with excellent services. If they do not choose us, then we simply don't provide services to them. Regarding which countries accept or refuse us, that choice has not been made in many countries. Press stories do not represent government policy or the law. If a law was put in place to ban Huawei, then we must comply with such laws, and can stop doing business in those countries. Personal remarks from government officials are not law or government policy. The US has not promulgated any laws regarding Huawei. If they had such a law, we would follow it, but no such laws have been passed yet.

**24** **Given the fact that the US is trying to go around the world convincing its allies not to do business with you, what are some of the other markets that you are looking at? I know that you say those countries have not banned you yet, but are you looking at other markets?**

**Ren:** We don't pay attention to particular countries. Instead, we pay attention to our customers. If our customers choose Huawei, we will do our best to meet their requirements. If customers do not choose us, we will try to serve them in the future.

**25** So the UK is a country that is still considering using Huawei. It wants to work with you, and it's looking through trying to mitigate some of the technological risks. What would you say to UK consumers to reassure them of some of the security concerns that we've talked about, that you are not a company helping China to spy on the world?

**Ren:** Our issue in the UK is mainly related to software. There is software that was written when we were a smaller company, which needs to be more resilient. But there are no backdoors, security issues, or privacy-related issues. The software needs to be more robust; otherwise, the networks might be more vulnerable or break down in the event of an attack. However, this has not happened over the past 20-plus years. Networks are massive. No country or company can say for sure that their equipment is absolutely reliable. That's just impossible. The UK government is giving us an early warning that Huawei's networks might be vulnerable and may break down in the future in the case of an attack if we don't act to improve. We are working to address this issue, and it does not have an impact on the consumers.

**26** I want to just continue with the UK point for a second. Given the fact that the decision has still not been

**made there, how important is the future of Huawei in the UK with regards to your investment plans and jobs? Are you able to guarantee that you will not be pulling out of the UK, you will not be taking jobs out of the UK?**

**Ren:** Huawei employs around 1,500 locals and has directly and indirectly created 7,500 jobs in the UK. We have R&D centres in Edinburgh, Bristol, and Ipswich. Recently, we decided to establish a factory for optical chips in Cambridge. We also have a training centre in Birmingham. We will not withdraw these investments. We remain committed. Why? We believe the UK will buy our equipment sooner or later. We cannot cut our ties to it because they do not purchase from us for the time being. If we see a jacket in a shopping mall that we really like, but could not buy it because it has been reserved for someone else, does that mean we will never shop in that mall again? We would visit it again to see whether more came into stock, and would buy it as soon as it was available. For us, the UK will offer us many "clothes" sooner or later, and we will visit this "shopping mall" again. We won't withdraw our investment. On the contrary, we will continue to invest. We have our confidence in the UK, and we hope the UK will have more confidence in us so that we can continue to make more investment in the country.

If the US does not trust us, we will turn to invest more in the UK. Take a look at the size of the land we bought in Cambridge, and you'll see how ambitious we are in the UK. We will not stop visiting the mall just because it doesn't sell us the jacket for the time being. We won't do that.

The UK has remained open over the years, and I'm really impressed about it. I believe all the issues we face in the UK can be addressed.

## **27** Are you hoping that the UK example will help to convince other European allies as well?

**Ren:** We don't want to use the example in one country to convince others. If the UK government makes the right decision and places its trust in Huawei, we may make bigger investments in the country. In fact, we have big investments in many other countries, including Germany, Hungary, France, and Italy. But still the UK is in the leading position.

As you know, the UK is home to Arm, a company that specializes in developing CPUs. Years ago, Huawei was worried that the US would not sell CPUs to us, so we chose to strengthen our partnership with Arm at a time when it was not as big. Arm was sold for 32 billion US dollars in 2017. With the money, it has achieved greater

development. Today, the UK, or Europe has earned its place in CPU, next to the US. In the communications space, there are electrons, photonics, and quantum. With the photonics chip factory we are planning to build in the UK, the UK, or Europe will gain a leading position versus the US, as no US companies are currently working on the same technology. Therefore, Huawei has created many opportunities for the UK and for Europe to stand up equally [as the US]. There were once concerns in Europe that there were no European IT or software companies as successful as the US companies. Success can be expected with our future collaboration. Because of Huawei's involvement in these two projects, Europe has gained an equal footing at the forefront. Europe should understand what we are doing there. We view Europe as a home market. We want to be deeply integrated into local communities and develop like a local company in Europe. If we were to withdraw our investment, all our prior efforts over the years would go in vain.

**28**

**Mr. Ren, I would like to raise the issue of your daughter. This is a personally a very challenging time for you. She is in Canada, she's been arrested by the US's request, and she faces extradition. How do you feel about this and what will you do if she is sent to jail?**

**Ren:** I object to what the US has done. This kind of politically motivated act is not acceptable. The US likes to sanction others whenever there's an issue. They will use such methods, we object to this. But now that it has come to this stage, we'd better leave it to the court.

29

**You say you are against this and you say this is politically motivated. China is now saying that the release of your daughter could be a factor between the United States and China in their trade war. How do you feel about your family being dragged into this conflict between the US and china?**

**Ren:** I don't know whether the Chinese government has said that. I only know Trump had said something to this effect. I don't think Meng Wanzhou's case is part of the trade talks between China and the US. I've never seen a single word about this in any press or public announcements beyond Trump's statement that this could be considered during the trade talks. He said the US would consider it, but the Chinese government hasn't. Personally, I would not like to see Huawei stand in the way of China's reform and opening up process. I hope China remains open to the US, the UK, and the rest of the world, so that we can work together to drive the world forward.

**30 Why do you think Huawei is being dragged into the trade war in this way?**

**Ren:** I have no idea. I don't think Huawei has anything to do with the China-US trade war. The fight between the two countries is intense, but our sales revenue is growing rapidly. In my opinion, the trade war hasn't had any impact on us.

**31 What is it like as a father to see your daughter in such a difficult situation?**

**Ren:** Great men are made through hardships. Throughout history, many great people had suffered many hardships. Hardships are an important asset of our lives. We accept that this has happened and trust in the law to solve the problem.

**32 Was she a successor that you were grooming, that you were hoping to see become the CEO one day? How much loss has the absence of her cost your company?**

**Ren:** First, she could never become my successor, because she has no technical background. My successor must have the ability to gain technical insights and be able to make judgments about future technologies and

customer needs. She comes from a financial background and is an exemplary manager. However, she does not have that particular quality that is required for strong leadership, to point the way forward like a beacon. She is not my successor for sure.

To answer your second question. There is no impact on Huawei's business due to Meng Wanzhou's loss of freedom. The company is actually growing faster and better. It may have been a mistake to arrest Meng Wanzhou. They may have thought Huawei would fall apart if they arrest Wanzhou, but this arrest didn't beat us. We are still moving forward. Our company operates based on established processes and procedures and does not rely on any one individual. Even though I am gone one day, the company will not stop moving forward.

**33** **It does though seem that the world is heading to a sort of split, where the technology or Chinese companies are welcome, like yourself, and where they might not be, like in the United States. How do you see that kind of impact in the future with regards to the success of Huawei, if this division exists in the world?**

**Ren:** I don't think we are ready in our mind to lead the world. I think the US still leads the world in technology

and science. We simply don't have the ability to dominate. We are still one of the many players that are trying to do its part to serve mankind. We don't really aim to grab more market share. We just plan to keep moving forward at our own pace and will not hinder the development of other companies. We don't have the intent, nor the capacity to dominate the world.

**34 I understand what you have been trying to tell me, and I really appreciate it. I want to understand what kind of relationship the Chinese companies have with their government. It's quite different from the way companies in the US and Europe operate. Can you explain to us that kind of relationship?**

**Ren:** I don't know about other companies. I only know my own company. I think any company must operate according to the law, and must pay taxes. If we don't pay enough in taxes, we would be in trouble. Huawei is a company that operates in compliance with all applicable laws. I don't know about other companies. I cannot speak for them.

**35 Do you think the damage to Huawei's reputation has already been done?**

**Ren:** No. I'd actually like to thank the US government

for the great advertising they've done for us. We feel very proud that we could face off with such a powerful country.

**36 Do you think that the Chinese system and the perception of how it operates make it harder for Chinese companies to succeed globally?**

**Ren:** I don't know much about other companies and their management systems. However, we comply with all applicable laws in countries where we operate, including UN resolutions. I'm not concerned about what other companies do, because they do not pay me money. Why should I care about them? I'm only concerned about Huawei. We will remain true to customer interests and never hold any other intentions.

**37 I appreciate what you are saying and why you, as a business, take care about politics. But the rest of the world looks at China and it looks at the way this government operates. It sees that it's becoming more oppressive. It's wondering how a company like yours, operating in China, won't be free of that influence when it goes out to the rest of the world. What would you say to that?**

**Ren:** We do business in other countries to make money. The Chinese government has nothing to do with our overseas development. In no way whatsoever. We comply with all applicable laws in countries where we operate, and all of the money we make in other countries is subject to the management of the State Administration of Foreign Exchange of China. That's all the pressure we face from the government. I'm not clear yet whether our tax rate will drop when we pay taxes to the Chinese government for our overseas profits. As far as I'm concerned, I don't think there are such requirements. But I cannot represent other companies.

I know nothing about other companies and do not have personal relationships with any of them. I devote my heart and soul to Huawei and read some books. Therefore I don't know about other companies and cannot answer questions about them.

In China, we study the laws that are applicable to our operations, and don't have much knowledge about others. I'm not a politician who can comment on the law. I'm a businessman, not an entrepreneur yet.

**38**

**I know you say it's not your place to comment from a political perspective, but the Chinese government has been quite vocal in defending Huawei to the rest**

**of the world. They have been very strident when they go around the world saying Huawei is innocent, and Meng Wanzhou's arrest is not the right thing to do. Does that make it more challenging for you as a Chinese company trying to operate overseas?**

**Ren:** First, it is the Chinese government's duty to protect its people. If the US attempts to gain competitive edge by undermining China's most outstanding hi-tech talent, then it is understandable if the Chinese government, in turn, protects its hi-tech companies. This is good for China's economic development.

Now that our case is already in legal proceedings, I will not make any further comments on it. The laws of the US and Canada should first be open and transparent, and then be just and fair. The US should make all correspondence about Huawei public, so that we can understand the entire process, and the reason for their actions against Huawei, and then make judgments and defend ourselves at court. Now that we've begun the judicial process, I will not make any further comments on this.

**39**

**If there is one thing you would say to the world right now, what would it be?**

**Ren:** Moving forward, the future information society

will be characterized by collaboration for shared success. We are in an Internet era, where knowledge and culture cannot be constrained to one place, or only available to the few people who will use them to create something. This was the case only when transportation was not fully developed, when the train, ferry, or car was not invented. Back then, it was understandable that those places that understood how to effectively grow crops would become rich while others wouldn't. But today, the means of transportation are developed. Communications tools and the Internet are all well developed. Advanced civilizations may emerge in any place. Only when these advanced civilizations are put together, will the future intelligent world and the cloud era come into shape. This era will be jointly created by the whole world, not a single country or a company. Together, we should jointly create a better society for mankind, and at Huawei we believe we are only making our due contributions.

#### **40** **Do you think the West misunderstands Chinese companies like Huawei or China itself?**

**Ren:** In the West, it is only politicians who do not understand us. Western companies and scientists know Huawei very well. Just this morning, I met with the CEO of a huge Western company and we had a very good discussion. Such people are not hostile to any company,

because we are in the same industry, and we understand where we are. Politicians, however, might not understand us well. They may wonder how it is possible for such an advanced company to come from what was previously such a poor country. They should come to visit Huawei as well, so I can receive them and answer any questions they may have. I welcome them.

I gave you honest answers today without any pre-conceived answers, and I will happily do the same with them. Over time, they will come to understand us.

**41**

**As I was saying to you earlier, I read your secrets to leadership: be humble, have passion, and always be learning. Am I correct?**

**Ren:** Yes, you are right.

**42**

**And you believe in the element of fire, because you want everyone to have fire in their passion. But you also think that fire must be constrained. That's why you like fireplaces. Is that true?**

**Ren:** Both fireplaces and fires have nothing to do with me. They are ultimately just decorations in a building. Sometimes sitting by the fireplace for a chat has added to the atmosphere, but it has nothing to do with my

love for fireplaces. I love a lot of things. The countryside is my favorite. My greatest regret is that I did not become a farmer. I read a lot of books and news about agriculture and how to grow crops. What I do and what I like reading are in conflict. Fire doesn't necessarily relate to me.

This is our annual report audited by a US accounting firm. This tells the truth about us.

**43**

**What I've heard from you over the interview is, it seems to me, that you are a very committed businessman, and you just want to run your company. You want to get down to serving your customers, you want to have the best technology in the world, and you want to invest in research and development. It's become very difficult for you to just focus on your business, right? It's become very challenging for you to just focus on your business, because of all of these controversies and allegations surrounding you.**

**Ren:** I also care about my daughter. I have three kids, and I care about all of them. They have their own personalities though, and we don't always get along with each other. When Meng Wanzhou was young, I was in the military and often far from home. Her mom took care of her. I had to be away from home for 11 months

every year, and when I was home for only one month she was in school during the day and did her homework at night and then went to sleep. We haven't spent much time together, but she has always worked hard and she is great with people and things.

I still remember when she was studying in the Huazhong University of Science and Technology, her mom told me to give her some money and I gave her 10,000 RMB. When she graduated, she gave back 9,500 RMB to me. She is very frugal. The first time she went to Moscow for an exhibition, I gave her about 5,000 US dollars. When she came back, she returned more than 4,000 US dollars to me. She spent only a little money. She is also very independent. When we started working with IBM consultants on the Integrated Financial Services (IFS) program, she was the program manager and worked very hard. She threw herself into the program for ten or twenty years. She has a deep understanding of project management, so she has done a great job in finance.

Those who do an excellent job in finance are interested in balance, management, and efficiency. Huawei's leaders are not expected to focus on horizontal balance, but dive vertically for breakthroughs. So it's impossible for my daughter to be the CEO or chairman. This is going back to your previous question.

When Meng Wanzhou was detained, as her father, my heart broke. How could I watch my child suffer like this? But it happened. What could I do? We can only solve the case through legal proceedings. We don't believe that we have any wrongdoing, because we have been so strict with ourselves at Huawei. How could there be any wrongdoing?

The United States will disclose their evidence in the future, and the court will come to a conclusion. For now, Wanzhou is under house arrest, but she still has a strong will and is studying multiple courses online every day. Some of our colleagues still communicate with her online regarding the company's strategy issues.

As a father, I can't let myself be overwhelmed by emotion. I want to see my children fly high and free. All of my children have strong characters. They are all working hard to become better. As parents, we cannot ask our children to stay by our side forever. I think their personal development is more important.

I think this hardship is a valuable opportunity for her. Undergoing such a big issue will give her strength for the future. I think I should thank the US government for that. I believe that she will reach even greater heights because of this.

44

**It's been said that it has taken you long time to talk to the media. You have been very quiet, you have stayed away from the press. People say that's because you are secretive, that Huawei is secretive. Why did it take you so long to come and open yourself and Huawei to the world? Why has it taken this crisis to open to the world?**

**Ren:** Honestly, Huawei has always maintained a pretty high profile. All our leaders are out there, people like Richard Yu and Eric Xu, speaking publicly every day. So why haven't they become an Internet celebrity? Why has everyone zeroed in on me? I tend to be shy, not good in big groups of strangers. I'm good at poring over documents.

My wife once asked me what I loved. I said that I loved working with paper. She asked why. I said that documents and manuscripts are full of philosophy, logic, and real substance. When you write something and send it out, it might not have any impact for three to five years. However, 30 years later, when you look back and read them again, you realize that we've progressed with such consistency of purpose. This is what philosophy, logic, and management bring.

I wish I could spend more time on internal affairs, not external ones. So I didn't go for Chairman of the Board. The chairman has to be responsible for all of the company's

business registration, signing this and that. Those are all a bunch of chores. It's like cleaning, and that's not what I want to do. I don't want to do anything but manage this company. My character has determined this.

Sometimes people ask me why I'm so great. I tell them: I'm not a squirrel; I don't have a big tail. (Note: This is a pun, "great" sounds the same as "big tail" in Chinese). If I say I'm not great, they say I'm pretending to be humble. Therefore, I can't talk to the media. If I say I'm great, they don't believe it. If not, I'm being fake.

At this historic moment, our public affairs team is forcing me to speak out more. They say when I speak, people pay more attention, that other corporate executives can't draw that much attention. If the CEO is out there having coffee in public, why not take a picture? I don't really speak in public, and am not much for socializing. If I go out for coffee, I don't feel free to be myself. Inevitably many people take pictures and put them on the Internet.

"Wow, Ren leads such a plain life!" I don't know why people think drinking coffee is plain living. They say the same when I eat. Maybe I'm not in the mood for meat, so I have some vegetables instead. And then you've got people saying how great I am.

What you see in the media isn't really me sometimes.

And I don't really have time to explain myself, so I don't meet with the media all that often. That's not true, actually. I did do an interview with the BBC in Davos several years ago, and it was broadcasted live. So I do meet with the media, but not so frequently.

Our public affairs team is getting squeezed by you media folks, and now they're squeezing me. So I have to come out and put on a show. Sometimes I say the wrong thing. I have never received media training, and I always speak what's on my mind. So I can't help but say the wrong thing sometimes. If I do, I hope you can forgive me.

45

**I have one final question to ask. You have talked in the past about being inspired, in your leadership, by the West. What was it about European history that inspired you? Why were you drawn to it? And now that you are getting this resistance from the West, have you changed your mind?**

**Ren:** First, I think the UK has had a deep impact on me. This is the country where the constitutional monarchy was established. Under this framework, kings and queens are placed under law, and the law is in the hands of parliament. The king is not the most powerful, and is subject to legal restrictions. He's subject to collective

decisions in parliament. This has created a well-balanced country. The Glorious Revolution in the UK made it possible for the country to avoid conflict for 350 years. This has made the UK a very developed nation today, and it has had a great impact on me.

Second, the Puritans. After they sailed across the ocean to America, they inherited the rule of law from Britain. America is a large continent. During its rapid expansion, the West was in chaos, so it was impossible for them to establish very detailed laws. People in Britain, however, were super attendant to details in their legal system. This weakened the momentum of their innovation. Right now the overall management frameworks in the US are all quite standardized, but with a lot of flexibility at the end points. This has led to a dynamic society.

We have a similar system at Huawei, with a very rigid overall system, but very flexible end points. We give people the freedom to grow, so we've got not only order, but also democracy and freedom in our company. It looks like a miracle to people outside Huawei.

I actually learn from two cultures. One is the British culture. In this culture, clear and standardized management is the backbone of society. Second, it is the American culture. This is a culture that is open at the end points and that encourages openness and

competition. We don't manage everything to death. All of this has had an impact on me. So much philosophy in the West is rich with meaning. I've learned a lot from it. Everything I write these days is at once standard, but also a little mischievous around the edges.

Some of our people have taken the time to read and understand what I write, and those are the ones who become key employees at Huawei. Those who don't quite understand continue doing their part at other levels in the company, and in this way we've created an organization with a certain order to it.

**Thanks so much for your time. I could talk to you all day and it has been a really interesting conversation. We really appreciate the time that you have given us to try and understand where you are coming from. I think it is a very difficult situation that you are in.**

# Ren Zhengfei's Interview with CBS

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February 19, 2019  
Shenzhen, China

01

**Thank you so much for sitting down with us. You rarely give interviews. Why have you decided to give one now?**

**Ren:** For the most part I speak within the company. I speak with different teams almost every day, actually. I tend to pay more attention to internal management at Huawei, and I don't feel as though I should take on external communications. I think that should come from our rotating chairmen, people who actually do the work. I want to do more in terms of internal management, so I don't engage with the media all that often.

We're in a unique situation right now. Our public relations department thinks I have a lot of influence, so they've asked me to speak out more to help us communicate better with the outside world.

02

**Your company's name is making a lot of headlines. There are a lot of charges and accusations against your company, specifically, your daughter, who is under house-arrest in Vancouver, charged with Iran sanctions violation. How was she doing?**

**Ren:** In the past, Huawei was not a well-known company. We build telecoms networks, and our customers were only about 300 large companies around the world. When we started making consumer

products, our name started to become known. Now a lot of people know us as a smartphone manufacturer. Of course, some people like our phones and some don't. Those who don't like our stuff don't pay that much attention to us. Now the US is bringing charges against us. They're an incredibly powerful country, and in a way they've made Huawei known around the world. Of course, the US may not be able to tell whether or not Huawei is a good company for the time being, but it helped us get our name out. Now everyone knows about that company called Huawei, so we'd like to thank them for the advertising.

The charges made against us are not a verdict. They are only the first steps in a legal process. We can resolve these issues through legal proceedings. Let the courts decide. I believe the arrest of Meng Wanzhou in Canada was politically motivated. My daughter is a very nice person who studies hard and works hard. She was responsible for building Huawei's financial management system, which is one of the best in the world.

Wanzhou is also very brave. Right after the huge earthquake in Japan, the one with the tsunami and the nuclear crisis, she hopped on a plane from Hong Kong to Tokyo to help with the disaster relief work. There were only two passengers on that flight, and she was one of them. After Wanzhou was arrested in Canada, a

young girl in Tokyo even wrote her a thank-you letter, which was published in the Japanese media. Wanzhou is currently under house arrest, and is using this time to take multiple online courses to improve herself. She feels time is precious, and she doesn't want to waste it.

Sometimes we talk over the phone. Our calls aren't private, so we just shoot the breeze and joke around with each other. From what I can tell, she is in good spirits.

**03 And I know she also had a birthday last week. It must be hard for you to miss your daughter's birthday.**

**Ren:** I think this birthday is very meaningful for her. As an old Chinese saying goes, "Great men are made through hardship." These scars will ultimately give her thicker skin. The hardship she's going through right now will be a turning point. It will give her wings, and I think she'll come out of it more mature.

Wanzhou has been a very hard worker ever since she was a child, but she has never experienced any major setbacks. This setback will leave an indelible mark in her memory. It will make her more mature. It will make her stronger. In this sense, I think this is a very meaningful birthday for her.

**04** You said that the charges against her are politically motivated. Obviously, she is facing extradition to the United States. These are serious charges leveled against her. If convicted, she could spend 30 years in jail in the United States. Why do you call these charges politically motivated?

**Ren:** The legal systems in the US and Canada are open, just, and equitable. They will ultimately disclose their evidence and remain transparent throughout the entire process. I'm afraid I will only be able to answer your questions once they've reached a verdict in court.

**05** The indictment claimed that Huawei defrauded four large banks, including HSBC, into clearing transactions with Iran, and that of course would be in violation of international sanctions and that they did it through a subsidiary company called Skycom. What is your relationship with Skycom?

**Ren:** These issues are currently in legal proceedings. We're going to have to wait for a verdict before we can answer questions like this.

**06** Do you have a statement as to whether or not Huawei violated international sanctions?

**Ren:** Again, that's for the courts to decide.

**07** **You said in the past that you felt guilty about your daughter's predicament, why?**

**Ren:** I think I was not around enough when my children were young. I spent most of my time working.

**08** **You said that you felt guilty as a father, why?**

**Ren:** I joined the military when my children were still very young, and I was not at home for 11 months out of the year. During the month I was at home, they had homework, and they had school. I didn't have a lot of time with them. Their mother was mainly responsible for their education and upbringing. We weren't very close.

After I started Huawei, it was very difficult to ensure the company's survival. I had to do 16-hour days in the office, or working on other business activities. This meant I wasn't able to take care of my children when they were growing up and going to school. I was lacking in that respect.

**09** **It must be hard for you, not only as CEO possibly losing your CFO essentially, but also as a father to**

**see your daughter facing extradition and potentially prison-time. How does that make you feel wearing both hats, as CEO and as a father?**

**Ren:** I'm actually okay, I think. Because I believe the legal system will respect the facts and evidence, and the courts will adhere to their principles of openness, justice, and fairness. I will wait for the courts' decision. It won't affect the company's work at all, because we operate based on a mature set of processes and systems. No single person can affect the operations of the whole company.

**10** **I want to go back to what you said earlier, calling your daughter's arrest politically motivated. I'm wondering if you consider the timing of her arrest, happening in the middle of trade negotiation, and a trade war potentially between China and the United States, do you feel that you, your company, or your daughter is used as a tool?**

**Ren:** Both China and the US are major powers, like two massive wrecking balls. Huawei is more like a small tomato. If those two want to collide, how could we possibly stand in the way? It's just not possible. And trying to do so wouldn't create any value. Meng Wanzhou isn't a valuable tool in that equation. I would say that her case doesn't have much to do with the

China-US trade war. The two countries need to adjust their relationship through politics, laws, and institutions. Individuals like us don't play a big role in matters like this.

Meanwhile, as the China-US trade war has grown more intense, Huawei saw much higher growth in January 2019 than we did in the same month last year. So the trade war hasn't had much impact on us. And there's no way that Huawei could possibly have an impact on the trade war, either.

**11**

**President Trump reportedly said that he would consider intervening on your daughter's behalf and many believe that would be part of a larger trade deal. What was your reaction when you heard that from President Trump?**

**Ren:** I didn't have a reaction to that. President Trump loves tweeting his thoughts. He is a straightforward president. But I still think that the situation with Meng Wanzhou should be handled by law.

Mr. Trump is a great president. He was able to cut US taxes in such a short period of time. This is difficult to do, especially in a democratic country. All democratic countries are big on debate: People debate and argue for a long time to reach a consensus. US taxes went

from high to low, and they reached a consensus relatively quickly, forming it into law. This will be good for the US economy over the next one hundred years. When tax rates are lower, there's less of a burden on companies, so they can grow faster. This will prime society for a period of rapid growth. President Trump's approach [to taxes] is a great initiative.

I've been saying all along that China should cut taxes. This gives companies a breather so they can gather their strength and create more competition. Tax cuts are relatively slow in China. The country has a heavy burden. Many regions in China are still impoverished. The country needs quite a bit of money to help solve this, so they can't cut taxes all at once, only little by little. So what President Trump has done in this respect is pretty great.

There is something else I would like to say, though. If President Trump keeps on intimidating other countries and companies, and randomly grabbing people, it's going to scare off investors. And then how are they going to make up for lost tax revenue?

They cut taxes to encourage investment. Tax revenue from new investors can help fill that gap and the US will continue to thrive. I think the US should change its policies. It should be friendlier to businesses. If they're not, no one will want to invest because there's risk. It

has an impact. Resolving this issue is also important for the US's image overseas.

**12 Do you hope that President Trump would intervene on your daughter's behalf?**

**Ren:** I don't know about this, because I don't know him. I've never had any contact with him, so I don't think I'm really in a position to comment on this one way or another. If he were my friend, I would be able to fully understand him. The fact is, I only know about him from his tweets and speeches. I think he made some good points in his recent State of the Union address. I read through it – it's good.

**13 You speak very highly at President Trump, yet he's likely to issue an executive order banning your company from doing any business in the United States. How do you square the two?**

**Ren:** To be honest, we haven't had too much business in the US over the years, but we've never given up on this country. We keep on trying, and this is because we respect the US. If they don't let us sell, then we won't sell.

However, some US politicians are saying that Huawei is a security threat. We barely have any equipment

over there, how could we pose a security threat? If the US is secure without Huawei, maybe they can use this to convince other countries around the world. But are US networks really secure without Huawei? Is their information secure?

If they can't manage security even when Huawei isn't there, it's wrong to believe that the US can secure itself just by keeping us out. Every country and every customer has the choice to work with us or not. We operate in a market economy, and we can accept that. We sell our products in many countries around the world, and plenty of operators don't buy our stuff. It's not like we hold it against them. There are many reasons not to buy from someone, and there's no way that Huawei can take hold of every single market. There are markets everywhere out there, but we don't have enough products to serve them all. If the US bans us, it means that US law doesn't allow us to sell there. And if that's the case, we won't sell there. And that's that.

But other companies might go to the US market, which is still good for the US economy. I believe that the new tax policy [of the US] is great. It's very difficult to achieve, but the US did it. It's difficult in any country. You have to balance tax cuts with other factors, including spending, the social safety net, and things like that. But the US made it happen. It's a great nation.

**14 You talked about the big issue here, and that is the United States government and the security agencies believing that you provide a backdoor to Chinese intelligence. Can you refute that categorically?**

**Ren:** As I have stated in previous interviews, we absolutely have not and will never do anything like that. One, we have never engaged in any form of espionage, and would never allow our employees to engage in that type of behavior. Two, we have not and will never install backdoors in our equipment.

Some ask, what if Chinese law requires you to install backdoors? I would categorically refuse. Absolutely I will not respond to any demands for us to install backdoors.

At the Munich Security Conference on February 16, 2019, Yang Jiechi, a member of the Political Bureau of the Communist Party of China (CPC) Central Committee and Director of the Office of the Foreign Affairs Commission of the CPC Central Committee, made it very clear:

First: Chinese law does not require companies to install backdoors.

Second: The Chinese government always requires Chinese companies to abide by international rules and the laws and regulations of the countries where they operate.

The Chinese government has made itself clear, and I have made myself clear. Our message is the same: There are no backdoors.

Over the past 30 years, Huawei has served three billion people in more than 170 countries and regions. We have maintained a fantastic track record in cyber security for three decades now, and this attests to the fact that our equipment doesn't have backdoors. And it will stay that way for the next 30 years. We are unequivocal about this.

I can clearly state here: No one has ever instructed us to do this, and no one will. We have made ourselves very clear, and the Chinese government reiterated this at the Munich Security Conference.

**15**

**You said you would never take any instruction like that from the Chinese government, even if they came to you. Wouldn't that put you out of business? How can you say no to the Chinese government?**

**Ren:** As I just said, Yang Jiechi, a member of the Political Bureau of the Communist Party of China Central Committee, stated expressly at the Munich Security Conference that no such requirements exist within Chinese law.

He is a senior official of the Community Party of China,

and he speaks on behalf of the Chinese government. So when I say "no," that's in line with what the state requires. No security issues exist.

**16 Your current chairman said that Huawei is being accused of lying, and unjust and immoral bullying. Do you believe that the United States is currently bullying Huawei?**

**Ren:** I think it's normal for a country to question a company. But this needs to be done through a legal process and the US legal system. We need an open and just process to determine who's right and who's wrong.

Over the past 30 years, we have been involved in a number of lawsuits in the US, and we did not lose any of them. This at least shows that Huawei has done relatively well in this respect.

If we are able to use the courts to resolve issues like this, I think that our Chairman's comments will be proven correct. We should let the legal process take its due course, as the US is a country that follows the rule of law.

**17 Do you believe that the United States is trying to put Huawei out of business?**

**Ren:** Will Huawei go out of business? I don't think so.

We're full of life. It's possible that pressure from the US is actually making us more motivated and driving us to work harder.

Someone once said, "The easiest way to collapse a fortress is to attack it from within." I want to say that external pressure will only make a fortress more united, resilient, and effective. How could it collapse?

Many of our customers have been working with us for over two decades. They know Huawei best and know what motivates us. Consumers make their own decisions, and they won't decide to buy something or not just because someone else told them to. We are confident that we will continue to survive and thrive. This will not have a large impact on us.

**18** I asked this because Vice President Pence and Secretary Pompeo were both in Europe last week, trying to persuade the US allies not to use Huawei as they roll out 5G technology. Vice President Pence at the Munich Security Conference said, "We cannot ensure the defense of the West if our allies grow dependent on the East." Do you view that as a threat?

**Ren:** First, I need to thank them. They are both taking on a great task for their country. I have seen Mike

Pence's financial disclosures. He only has about 15,000 US dollars in personal savings, and 15,000 US dollars for his two children's education. As a government official, he is fighting for politics and his ideals. This, in my opinion, makes him great. Mike Pompeo is also a great man, with a PhD degree in political science from Harvard University.

They are advertising Huawei's 5G all over the world. Before, no one really knew what 5G was for. Now the entire world knows about 5G, and when they look into it more closely, they realize that only Huawei does 5G the best. Only our 5G is the best in the world. This has helped amplify our impact. We are seeing more contracts, not less. And we're getting them faster than before, including in Europe.

That's why I said I need to thank them for getting our name out there – and for free. So I am very grateful to them. Please give them my thanks.

**19**

**That's a little bit of sarcasm there.**

**Ren:** No, I'm not being sarcastic at all. Huawei is a company, and the US is a great nation. Our conflict with the US and its top officials has helped get our name out there.

20

**I'm sure they will watch our interview and they can interpret that however they might. One of the concerns that they're trying to espouse to the allies in Europe is that Huawei's 5G is closely related to military technology. The US appears to be saying that they may reconsider sending US troops in certain European countries if they continue using Huawei technology. What is your response to that?**

**Ren:** To start with, they seem to view 5G as a type of equipment for military control. 5G is not an atomic bomb. Atomic bombs hurt people and cause safety problems, but 5G brings benefits to people and offers us information channels and pipes. These channels and pipes are controlled by operators and governments. We provide equipment only, similar to water pipes and taps. They won't be a big threat to security. After all the hypes, people will ultimately calm down and see what our equipment is really like. We think that Europe will make their own assessment. I don't mean any sarcasm. I have never said otherwise to the media. We are happy to see the publicity they have done for us. In fact, many countries don't take Huawei very seriously, not even knowing who we are. This publicity has helped Huawei raise our profile and expand our markets. We are getting more contracts faster. Due to the recent events, the sales of our consumer products in January rose by 68%. So I believe that this will not be a big crisis for us and it will

not greatly impact us.

Before Western countries say Huawei poses a threat to the West, they should first assess Huawei's contributions to society. First, we provide services to three billion people in 170 countries and regions, and we have contributed greatly to bridging the digital divide, like giving poor countries access to information and education opportunities. China is ahead of many countries in terms of network development, and China is now seeing a decline in poverty. This is because people have access to new information, new technologies, new jobs, and new sales techniques. We bring benefits to humanity; we are not a threat to society, and would never cause it harm.

Second, we have more than 80,000 patents. These are our contribution to the foundation of the digital society. More than 11,500 of these core patents were granted by the US government, giving us legitimate rights. We are a big contributor to the US's information development, not a threat.

As for the backdoor question, I have clarified many times that there are absolutely no backdoors in our equipment. We would never take that risk and do something that we shouldn't do.

**21** **Have you ever given any information to the Chinese government in any way, shape, or form from your clients, your customers, even if it's a local, domestic customer?**

**Ren:** Over the past 30 years, Huawei has never done that. And I believe that we will never do this in the future.

**22** **Could Huawei possibly have a backdoor without your knowledge?**

**Ren:** It is impossible. All of our departments, from the top down, have emphasized that no backdoors are allowed. Huawei equipment contains no backdoors. If any backdoors did exist, the US would have discovered them long ago as they have such advanced technologies.

**23** **Despite warnings from the United States, you had the intelligence agencies from the United Kingdom say that they can mitigate the risk and they will likely continue to do business with Huawei as they roll out 5G technology, and New Zealand also said that they will look at your agreement; they had once banned it. Do you view that as vindication against the accusations from the United States?**

**Ren:** I don't think so. I think the US is reminding everyone that there may be some issues and that they need to assess them. We have established a cyber security evaluation centre in the UK where our source code is subject to inspection by the UK government. During our 10-year partnership with the UK, there has never been a security incident. Huawei has built very strong "walls". We have the world's best defense capacity. US company Cigital made an assessment, saying our systems are the strongest in terms of attack prevention. When the UK government checked our software in detail, they found that the code was not up to their standards. But why was this the case? Because we were a small company 30 years ago. The code we wrote in the past, is not up to today's standards. Now we are asked to make improvements on the code running on the live networks of the UK and restructure the networks using new software standards designed for the next 30 years. So we have decided to spend 2 billion dollars to improve the source code on these networks. The UK has concluded that the issue surrounding Huawei is manageable, since we've had ten years of partnership. The UK has made its point: People say there may be some issues surrounding Huawei, but they are manageable.

Moving forward, technology will only develop faster and information traffic will increase, requiring equipment

with large capacity. We remain wary about this. In the past, one floor of a building was required to house the equipment that served 100,000 users. Now, a much smaller space like this would be enough to house the equipment that serve millions of users. We are also concerned about security incidents or faults caused by network technologies. A small incident can have a huge impact, but there has not been any.

Recently, the networks of some companies have experienced outages in many countries. I don't think these companies deserve harsh blame. However, they need to accept what has happened and make improvements. No single company will always be successful in the network field, including Huawei. But we have well-designed systems in place to prevent and tackle network issues. Cyber security and information security are two different things. We sell network pipes, and we sell equipment to carriers who decide what passes through these pipes. It is not in our hands.

**24**

**So then what is your response when you hear the director of CIA Gina Haspel say that she would never use a Huawei product because of the safety and intelligence concerns; the director of the NSA also said that he would not use your products, and former director of CIA Michael Hayden said he has enough**

## **evidence to persuade him that Huawei is spying for China?**

**Ren:** These people may not directly use our equipment. However, the US government spends 85 billion US dollars on IT equipment every year, and numerous Huawei patents are used in the creation of this equipment. Huawei is a significant contributor to IT development, and we may be one of the top companies in terms of IT. 5G will be used widely worldwide, and 5G products, no matter where they are from, are built on the back of Huawei's contributions.

We think it's understandable if some customers say they won't use our products. The world is huge. We can't expect everyone to use our products, and we don't have the capacity to serve everyone, either. Their opinions are understandable, and we accept that people have different views regarding us. We only strive to serve customers well where the opportunity to do so exists, and will pull out where we face rejection.

25

**They maybe find it hard to believe, as much that you deny, that China if ever approached you about using backdoor access to any customer information, that you would say no or would have any opportunity to say no.**

**Ren:** A senior Chinese government official made a statement at the recent Munich Security Conference. These US politicians should trust in what the Chinese government has said. It's wrong to use assumptions as evidence for alleged crimes. Evidence should be something real. It's natural if someone refuses to use Huawei's products out of concerns. This is not really any different to choosing clothes in a shopping mall. You won't like all of the clothes out there, and if you don't like them, don't buy them.

**26**

**We know for a fact that President Trump has not always believed the intelligence that his intelligence committee has provided him. Is there anything that you would want to tell President Trump to refute what his intelligence advisors are telling him now about Huawei?**

**Ren:** First of all, Huawei's financial reports have been audited by KPMG, and this has been the case for nearly two decades. These audit reports are available online and reveal Huawei's matters regarding finance and management.

Second, Huawei is a member of more than 300 standards bodies, and has submitted tens of thousands of proposals. These memberships and submissions attest

to what we have done and what we have contributed to these organizations. Mr. Trump doesn't have to ask me what Huawei is like. He only needs to talk to major companies and scientists in the US. They are more familiar with Huawei than US politicians are because they have engaged with Huawei for several decades. This is the best way to find the right examples to make correct judgments about Huawei. Mr. Trump could even invite Huawei's competitors for a cup of coffee, and learn what they think of Huawei. Huawei is like an open book, and being open is not an easy task.

**27** **Your competition in the past however has accused you of stealing intellectual property and technology, in particular T-Mobile. You settled a lawsuit with the company when they accused you of stealing an arm of its robot called Tappy. You said this was the work of a few agents, but there is evidence that FBI found, they found internal e-mail suggesting that the company rewarded stealing intellectual property. Is that the case?**

**Ren:** We have made it very clear that we have not and do not reward employees for any misconduct. We will take disciplinary action against anyone with this type of behavior. The T-Mobile and San Diego cases are already in legal proceedings, so we need to wait for the court's

decisions.

**28** **Let's just be clear. You never authorized internal e-mails that rewarded employees who stole intellectual property from competitors?**

**Ren:** We would definitely take disciplinary action against employees who do this. Any employees who engage in this type of misconduct must be disciplined. If this type of behavior were to go unpunished, our company wouldn't be able to survive in this world.

Huawei is a large company. We have more than 180,000 employees, and our sales revenue is more than 100 billion US dollars. If we condoned misconduct, we'd have a lot more problems ahead of us, not just one or two lawsuits. We wouldn't be able to keep our doors open. That's why we would never reward this type of behavior. There's no way.

We have a lot of respect for intellectual property. We are pushing for the Chinese government to strengthen its protection of intellectual property rights, and I think China needs to continue protecting these rights. China can only become an innovative country if it protects intellectual property rights in the same way as it protects other property rights.

The US has risen to be the world's most powerful nation in just over 200 years. This is attributable to its strong protection of intellectual property rights. We need to respect the US for that and learn from them.

**29** **And you're quickly following suit and catching up; [you're] the second largest economy now. It's very impressive, the scale and size of Huawei, you're in 170 countries, and you're a privately owned company. Do you currently or have you in the past received or relied on any subsidies from the Chinese government?**

**Ren:** Huawei doesn't receive subsidies from the Chinese government, except for a few that support scientific research. These are clearly listed in our KPMG-audited annual reports. For the most part, though, we don't accept any subsidies from the government. We do accept some for basic research, national standards research projects, or other things the country's working on, but they are very few in number. Again, you can see those in our financial reports. We also received some subsidies from European governments for basic research.

**30** **The allegation is that there is not a level-playing field for your competitors, and in fact, Huawei is guaranteed at least a third of China's 5G network**

**contracts, foreign competitors are not. Is that fair in your opinion?**

**Ren:** No one is guaranteed a market share like this. All companies have to compete for it.

**31 Why not? I'm curious, let's go down this road. Why shouldn't Huawei and ZTE be compared?**

**Ren:** Because Huawei and ZTE are completely different companies. I don't know much about ZTE. Why is everyone always lumping Huawei and ZTE together? I don't really know what kind of company they are. We actually engage more with Ericsson and Nokia. A company's market share is determined through competition, and our market share outside China is larger than it is in China. We have mostly focused on our business overseas.

**32 Do you think there's a level-playing field for competitors in China right now?**

**Ren:** I think we compete based on who makes the best products. History will prove that. In the 1980s when China began to implement the reform and opening-up policy, nearly all products in the Chinese market were from foreign companies. It's no longer up to the

government to decide where people get their products from. All procurement today follows market-economy rules. Bids are evaluated openly and fairly. I don't think there's any special treatment for domestic vendors here.

**33****Do you think that's the policy that President Xi espouses to?**

**Ren:** I think that China is advocating more openness in its policy. You may have heard some of President Xi Jinping's remarks at the China International Import Expo. He said that China would allow foreign capital in the financial sector, gradually lower the tariffs for the automobile sector over the next five years, approve fully foreign-owned automobile companies, and open up all manufacturing sectors. We'll have exactly the same policies for both Chinese and foreign companies. The expo is a good example of China's openness in policy.

Last December, during the celebration of China's 40th anniversary of reform and opening up, the country showed greater consideration for private companies, so they could receive fairer treatment. In the past three decades, foreign companies have been treated as "VIPs", state-owned enterprises have been treated as "sons", and private enterprises as "nephews". We're lower on the totem pole than you guys. I wish we were in the

same position as foreign companies. However, this focus on foreign companies has actually helped China grow out of poverty and begin to develop. In addition, the inflow of foreign companies has also stimulated China's industrial progress and development. Chinese companies have realized how strong their foreign counterparts are and have learned a lot from them.

Being open is key to China's future. And only through reforms will Chinese companies prosper. I firmly believe that. I have never supported the idea of excluding foreign companies. Even when some foreign companies were trying to give us a hard time, at Huawei, we never saw them as our enemies. Instead, we called them peers, which in Chinese, literally means our business friends. We don't treat them badly, and this has won us respect from our customers. Maybe our market share is a bit higher because of this. But if we take too much, I'd feel bad. There's no reason to take that much. We need to leave some of the market for others.

**34****Is this a view that you've shared with President Xi?**

**Ren:** I didn't have the opportunity to share these points with President Xi. These are some of our thoughts drawn from our experience lawfully doing business in China. I wouldn't have the opportunity to share our views, and

even if I did, they may not listen.

**35** **Because there is a view in the West that he's taking more of a nationalist turn in controlling state enterprises as opposed to leaving companies more independent. Do you think that's hurting your brand, your name, and your view points?**

**Ren:** We need to look to what President Xi has said to better understand his ideas. At the Boao Forum for Asia, he announced many policies for opening up. Then in November last year, at the China International Import Expo, he announced many measures China will take to open its market to the West. In December, during the celebration of China's 40th anniversary of reform and opening up, he announced that China will enhance the reformation of state-owned enterprises. These are all nothing more than reforms and opening up. In my opinion, China will become more open, not close its door to the world. Viewing China as a foreigner, you probably can't feel that. But we were born here and grew up in China, so we know how the environment has been gradually changing over the past 30 years.

When China just started opening up, it was very difficult for us to get a loan of 10,000 US dollars (about CNY80,000). We did everything we could but we still

couldn't get a loan as big as we needed. Later, we were able to get loans like this, and things gradually changed. So I don't think China will take a path that centers on state-owned enterprises. The biggest weakness of state-owned enterprise is their inefficiency, which leads to high operating costs. China hasn't built a complete system of resource taxes yet, so state-owned enterprises may have advantages in some resource-related industries. But in industries of open and free trade, state-owned enterprises will face much greater pressure.

**36**

**Many Americans are just hearing about your company and your name recently. What would you like the American public to know about Huawei, and what Huawei brings with 5G?**

**Ren:** First of all, I would like to express my thanks to the US government. Without their high-profile campaign, most people wouldn't have any idea who Huawei is. We basically have few sales in the US, and our market presence there is very small, so consumers don't know much about Huawei.

The message we want to convey to the American people is that we can work together and share the success. An information society is different from an industrial society. In an industrial society, a country could

close up its doors and make sewing machines all on its own, for example. They could do it themselves without the help of other countries. The same is true of tractors, cars, trains, and even ships.

But we're in an information society now. Everyone has to work together and build a global network, piece by piece. No single country can do it alone. All countries around the world need to work together to build a society for the future.

What contributions can we make to benefit the American people? Our networks are great, so some of our equipment might be suitable for the US. It's up to the US to decide whether or not to use our networks. If they choose not to use them, we can provide our products to other markets, and then come back to the US at a later date. Sooner or later we will be able to make our contributions to the US.

**37**

**There are two more questions for you. Thank you so much for your time. This is more about you personally. I read your biography, I know you came from one of the poorest provinces in the country, your parents were teachers, and your grandfather cured pork. How did somebody who came from so little become one of the richest men in the country?**

**Ren:** I grew up in a remote mountainous region of Guizhou Province, which is a poor region of China. Both of my parents were school teachers, and devoted their lives to rural education because they believed that teaching children in rural areas was the only way our country would become prosperous.

I had many siblings, and my parents struggled financially. They could not spend much time with us, so we were naughty children. They gave us more freedom, and let us fly high and free, leading us to develop strong characters. Today, most children in China are only children. Their parents have high expectations of them, and people in general are much better off now, so they tend to overprotect their children. When our generation was young, nobody controlled us. We grew up in a carefree environment, which allowed us to fully develop our unique characters. We may not have studied that much, but we were under less pressure.

Once we grew up, we knew that we had to work hard to earn a place in society. That's exactly what we did.

I studied every night until 1 a.m. in the morning every day for almost 50 years. Many people think that I've stopped learning, but that's not true. I would be unable to run Huawei if I stopped learning. Decades ago, I was somewhat left behind by the fast-moving times. When I left the military, computers had been widely adopted

in society, but I didn't know what a computer was. About 30 or 40 years ago, many of my friends went to study in the US or Canada. When they returned and shared their stories with us and told us about things like supermarkets, I didn't have a clue what they were talking about. They said that in a supermarket you just took the things you wanted from shelves. How did that work? I really didn't understand the concept.

Take another example. We didn't understand how a bathroom was attached to the bedroom. Was that even possible? Didn't it smell? I couldn't imagine this sort of bathroom. That's what it was like when I was young. Back then, China was somewhat closed off from the rest of the world, and we did not know the US was so advanced.

When did I start getting to know the US better? It was during the Cultural Revolution, when China sent a military delegation to visit West Point. After that, the way West Point was run was covered in China. This broadened my horizons for the first time. I was greatly impressed by the management style. We originally thought US soldiers were spoiled and soft. They even drank coffee during the war in Korea, while we didn't even have water. I realized that much of what I understood about the US was incorrect.

It took a long time for us to shift from a closed-

off era to an open one. Before my first visit to the US, I thought everything would be extremely expensive there, and we might not be able to afford many things. As we did not have any credit cards, we took a lot of cash with us. After arriving in the US, we found that it was impossible for us to spend all of the cash we had brought with us because things were actually very affordable. It was unbelievable. We didn't understand how the market economy helped greatly reduce prices, and saw many new things that we had never seen before.

The prosperity in the US wasn't taken, it was built. It can be attributed to the hard work of numerous outstanding people. Many talented individuals around the world have come to the US to make inventions and create wealth.

What should Huawei learn from the US? We need to be open-minded and attract the best people to come and contribute to the company's growth. The company's not about creating wealth for me or my family. Nobody can get wealthy if the company isn't profitable. This allowed us to unite many people who worked hard together and gradually made Huawei into what it is today.

My life is actually very simple. My wife often criticizes me and says that I don't have many friends or hobbies.

I reply that I do have hobbies: reading and writing documents. I especially enjoy working on documents. I come to work every morning after having breakfast at 7:30. I find I am most efficient between 8 a.m. and 9 a.m., and I always choose to review and sign documents during this period. I'm also in high spirits between 9 a.m. and noon, and often attend meetings or listen to work reports. In the afternoons, I'm not that energetic, so I grab a cup of coffee and talk with colleagues to hear their thoughts, including any critical comments.

I've seen a lot of criticism of Huawei and myself on our Xinsheng Community. If I think a critical comment makes sense, I want to sit down with that person and listen to what they have to say. If someone is really great at criticizing, I would probably ask the HR department to do some research and find out whether that individual is performing well in their own job, as they are so good at criticism.

If they've done great in the past few years, and they've also given some great criticism, then they're clearly an outstanding employee and we should fast-track their promotion.

When I recommend fast-tracking people, our other executives might not agree, but mentioning it has an impact. They may start paying more attention to that person, and eventually some of our people are fast-

tracked.

We have a really great employee in a small country in Africa. When my wife and I visited him, he told me, "Boss, this year I was promoted by three grades." But later the president of his regional office told me that this guy was actually promoted by four grades.

Why the discrepancy? The general manager of his country office said that they had already decided to promote him again in December, but they hadn't told him yet.

This guy is only 26 years old, but he is already managing a country office at Huawei. When it comes to making the most of talent, we don't limit ourselves to a super rigid system. We're like the US in that respect.

The US is a great country. Many great minds like Brzezinski, Kissinger, Madeleine Albright, and George Soros all come from Eastern Europe, but they have managed to serve in important positions in the US government. They have made great contributions to the US. This is a result of US openness. We need to learn from the US, and be more open. This will make us stronger, and that's the direction we're working towards.

Me, I have a very narrow focus. It's in my personality. So our company has a narrow focus too. We're not interested in things like real estate, and we will never

reach beyond our focus to make easy money in other areas. We do the things that are the most difficult and the least profitable, because others aren't willing to do them. The most difficult and least profitable thing is telecoms. It's 5G. We are currently rolling out 5G, and soon we'll see 6G too.

Soon we'll have some new equipment that is a great fit for the US. For example we're leading the industry in both 5G and microwave. We are creating millimeter wave equipment, and our antennas are as small as a dinner plate. We have combined both 5G and microwave to deliver ultra-broadband services for spread-out neighborhoods. Microwave can support 100 Gbps, and a 5G base station can support 10 Gbps. Combined, these two can provide ultra-broadband services for the upscale villa districts in the US.

Why can't these villa districts enjoy broadband services now? Because the land in the US is privately owned. There would be complex negotiations over laying fiber lines through the land of every household. Without fiber, many wealthy people in the US can't enjoy 8K TV. Right now we have 4K TV in China, but the US doesn't have it yet. The Japanese have access to 8K right now. Our equipment will only need an iron pole, and we can cover all of the houses within a few kilometers. No other country or company can do it. But we can, and we are

more than happy to sell it to the US in the future if they welcome us.

Sooner or later, the US will get to know us and find that they actually like us. How does the saying go? "No discord, no concord." We might fight a bit, but the more we fight, the more they'll come to realize that we're not that bad after all. I think we can become good friends. Then we can shake hands, and we'll be solid. You don't have to worry about Huawei posing a threat. What threats can we possibly pose to the world? A world in peace benefits everyone. Why in the world would we want to get involved in any of that bad stuff?

There is no fundamental conflict of interest between China and the US. With the Boxer Indemnity program, the US started providing funding to Tsinghua University, helping develop talent in China. During World War II, many US citizens sacrificed their lives to halt the spread of fascism. These are great contributions to humanity.

Since the reform and opening-up policy was launched by Deng Xiaoping, China and the US began talking again. China has grown from a backward country into what it is today. There is no fundamental conflict of interest between Huawei and the US.

Even if the US came to us and said, "Hey, we're opening our market to Huawei," we might not be able

to handle it. The US is huge. It's highly developed, and has massive demand. We might not be able to keep up.

See, we've got problems with supply. I guess our planning system is outdated. A lot of people yell at our consumer group. They say our phones are out of stock, so they come to me for help. But I can't get my hands on them either! You have to buy them online, and our website has no idea who I am. Why would it help me jump the line?

We're still developing, step by step. One day, I trust we will be able to make our contribution to the US.

**38**

**So, final question: To anybody who says the United States and China are inevitably headed for a collision course in cyber warfare, you say what?**

**Ren:** I hope never to see collisions between countries. Peaceful coexistence should be our ultimate goal, and I don't support an arms race. By spending less on the military, countries can spend more to make living conditions better for their people.

There shouldn't be a fight for cyberspace. Huawei has licensed our intellectual property rights to both Apple and Qualcomm. We have signed non-disclosure agreements, so I can't disclose business secrets. We

have signed IPR licensing agreements with numerous US companies. We peacefully coexist with them, and there are no disagreements between Huawei and these companies.

At social levels, there shouldn't be any collisions either. If I assume that you are my imaginary enemy, and you hold the same view of me, then we might end up becoming true enemies. But if I assume that you are my friend, I might be nicer to you. You might invite me for a cup of coffee, and I might take you for a steak meal. Such interactions can strengthen our friendship.

China and the US should safeguard world peace. This is a great responsibility for both countries. China is still far behind the US, and many products made in China are of low value and fill some of the gaps [left by US players]. Many products made in the US are technologically sophisticated and have huge value. This means both countries can trade their products. Some US politicians said that the US should not sell chips to China. I find this ridiculous. Why wouldn't you sell your products if you can earn money? If you don't sell your product to a company, you are actually forcing it to make a similar product one day, and you will not be able to sell your product any longer.

Our world should be a convergent world. The Internet shouldn't be a battleground. Why should there

be cyberwar? I don't think such a thing will ever happen, and if it did happen, I would never engage in it.

Huawei's products are like water pipes, and water – or data, so to speak – flows through them. Our 5G base stations are like water taps that control the flow of water. We don't have any control over network equipment. Only telecom operators have such control. They manage their equipment through Huawei products, and ultimate authority still resides with the countries where the equipment is used.

We don't support any potential [cyber] war. Every country wants to possess more intellectual property rights and do more things, but they are also worried about paying too much for the IPRs of others. Apple and Qualcomm are filing against each other because Apple wants to pay less while Qualcomm wants to earn more. This is a conflict of commercial interests, not a political conflict, and I believe it will be solved in a way that creates benefits for society.

Our ideal is to work for the greater good of all humanity. Otherwise, we wouldn't have climbed 6,500 meters to install base stations on Mount Everest. We had to lug all that equipment 6,500 meters up in the air. It was enormously difficult. I have been to some of the base stations at the base camp of Mount Everest. That's 5,200 meters above sea level. Everyone told me

I couldn't go. I said if I was too afraid to risk my neck, how could we ask our engineers to? Even in war-torn countries, you can see Huawei people. Without properly functioning networks, there would be even more casualties.

Huawei people remained at their posts in malaria-stricken African countries. When the earthquake hit Japan, there was nuclear disaster. Everyone was worried about the radiation. They called me. I asked how bad it was. When the first atomic bomb was tested in China, many Chinese people went to watch. They had no idea what nuclear radiation was, but they went out to hoot and holler about it. At the time it caused very few health issues. So when Japanese people were being evacuated, our engineers were going in the opposite direction. They restored more than 600 base stations. The Japanese government saw what we did, and they praised us. They said "Huawei is a Japanese company". This is one of the reasons why we have been doing well in Japan all these years.

The tsunami in Indonesia claimed tens of thousands of lives. Our team, which was only a few dozen of people, managed to get their networks up and running again within just a few days. My wife and I also went to visit our staff on a Bolivia plateau at an altitude of more than 4,000 meters. There were several thousand base

stations there.

To be honest, we didn't make a lot doing this kind of work in underdeveloped countries. A lot of times we can't exchange the money we get for US dollars. In Sudan, for example, there's plenty of money that we're never going to see again. It's the same in many countries. But we work for our ideals; we work to serve mankind's needs. If we were a listed company, a capital-driven company, we would only work in lucrative countries, not the ones where we can't make any money. If this was the case, many countries would be left with poor network coverage. This is not how we operate. We work to serve people's needs. It's fine if we earn less. In fact, we didn't earn less. You just said that I am a wealthy person. You are right, I am.

**(Closing) Ren:** Thank you. I'd like to take this opportunity to say hello to the American people. Through their hard work, they have set a good example for the rest of the world over the past few centuries. We greatly admire their down-to-earth spirit. We should all learn from them.

# Liang Hua's Interview with The Globe and Mail

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February 1, 2019  
Shenzhen, China

**01** Okay, so thank you very much sir. Thank you for agreeing to meet with me today. I really appreciate your time. I wanted to start by asking, there's been a lot of interest in Canada about Meng Wanzhou. Can you tell me how is she doing right now and is she still doing work for the company?

**Liang Hua:** There are ongoing legal proceedings regarding the case, so I don't have further comments on it. Now, Huawei's business operations are sound and normal.

**02** About Meng Wanzhou herself – I mean, she is a colleague. How is she personally doing at this point of time?

**Liang Hua:** According to the legal proceedings and their status, she is now out on bail. As a coworker of Ms. Meng's for over 20 years, of course I care about and miss her very much.

**03** Is she still doing work for the company during this time?

**Liang Hua:** If it is related to the group financial strategy issues, it's possible that some colleagues would communicate with her. But the bottom line is, all of

these communications are compliant with laws and regulations.

**04 You have 25 carrier sales agreements for 5G at the moment. What is the status of your talks with Bell and TELUS in Canada at the moment?**

**Liang Hua:** Huawei has been making investments in 5G for over ten years. That has helped us build up strong competitiveness in our 5G products and solutions. Now we have secured 30 commercial 5G contracts, and we have already shipped 25,000 5G base stations. Regarding the status of the talks with Bell and TELUS, I think it all comes down to the needs of the customers.

**05 So at this point, are those talks ongoing or are those talks difficult with Bell and TELUS?**

**Liang Hua:** I think the best way to put it is that both parties are in the process of communication.

**06 You have spoken in the past about the cost, to, for example, Australia of not using Huawei's technology in 5G. I wonder if you can talk about Canada in that context. If Canada as a country were to decide not to**

**use Huawei's 5G technology, can you tell me what sort of costs you would expect Canada to incur from that?**

**Liang Hua:** To start with, we have to understand 5G in the context of products, networks, and services. I think when it comes to the specific choice of a vendor, the telecom operators will have to consider several factors. First, the advancement of the products themselves. Second, the performance of the networks. And third, the overall operational efficiency of the entire solution.

Regarding the cooperation on 5G products and solutions, if Huawei is selected as a vendor, Huawei will do our best to deliver digital benefits through 5G, including optimal performance of the networks that can actually solve the customer's business pain points.

As for 5G network rollout, I would like to highlight the base stations and what we call a "simplified site solution" to you. Let me further explain what we mean by simplified sites. Building on our extensive experience in network planning and network design over the past 20 years, we have been able to come up with a solution that can integrate 2G, 3G, and 4G together. In the future, in the rollout of 5G, there will be one integrated AAU. That is the combination of radio and microwave radio technologies, and it will be the most efficient 5G AAU with strong competitiveness. That's what we call a

simplified site solution.

Ultimately telecom operators will have to look at the big picture in their overall assessment. They have to evaluate different factors, including the performance of the product and the total cost of ownership of the entire solution, so they have to look at not just the competitiveness of the product itself, but also the vendor's ability in network planning and network design, and the overall operational cost of the 5G solutions. That will be the comprehensive assessment that the telecom operators will have to make.

Huawei is very confident in our overall competitiveness in 5G products and solutions. And this is the same result found in third-party surveys and evaluations – they rank Huawei 5G products and solutions in a leading position in terms of overall competitiveness.

07

**But as you understand, the conversation in a country like Canada right now is not just with the carriers. It's also with the public space, with governments, and with the public. I think there's the desire to understand in dollar and cent terms what it would mean. So if a country like Canada were to say no to Huawei 5G technology, would you expect that to cost Canada**

**billions of extra dollars, for example, in installing 5G?**

**Liang Hua:** Currently Huawei provides wireless base station equipment to Canada and there is a mechanism called Security Review Program (SRP) that is led by the Canadian government. This is a mechanism used to provide assurance for the equipment.

Because you asked a hypothetical question and being a hypothetical question, that does not tell me the specific volume of Huawei's business in the 5G network, so it would be very difficult for me to make a monetary assessment of the cost of choosing or not choosing Huawei. I think the telecom operators in Canada are in a better position to make the estimates. When they evaluate the different 5G vendors, they can come up with a comprehensive evaluation including cost analysis, so that they can have the figures in terms of the monetary impact of choosing or not choosing Huawei in the 5G network.

**08**

**You have an enormous company, so I don't know if you know the answer to this question. But I just looked yesterday, Huawei is hiring 181 positions in Canada for artificial intelligence jobs, big data jobs, microwave radio experts. Is Huawei currently expanding in Canada? Is something changing in Canada?**

**Liang Hua:** As Canada is an open and inclusive country, we will continue to enhance our R&D investments there. In 2018, we made an investment of 137 million US dollars in research and development work in Canada. According to a third-party survey, Huawei's R&D spending is ranked 22nd among the top 100 companies in Canada. Because of the investment in R&D in Canada, we have cultivated talent and have produced results, but both the talent and the R&D results stay in Canada.

The domains you have mentioned in the question are exactly the domains where Canada has a lot of talent. The talent is also abundant in universities, in domains such as AI, big data, cyber security, and microwave. We'll continue to enhance our partnerships with Canadian universities in those domains.

As for basic research, it takes a long time for a project to transition from the ideation stage to the marketplace.

We believe our partnerships with Canadian universities are long-term partnerships, so we will continue to enhance cooperation with them. By doing so, we believe it's also a contribution to the local economy, because it helps nurture talent and enhance the ability to innovate.

We have now established partnerships with more than 10 Canadian universities. These are all long-term

partnerships. In the past five years, the partnerships with them amounted to about 89 million Canadian dollars.

As we engage with university partners, I hear their points of view, and I agree very much with them. For example, they think it's very important for Canada to pursue innovation and achieve industries of scale in order to boost further economic development in Canada. I agree with them. It is very important to nurture the local innovative companies, while at the same time attracting global companies to invest in local R&D. Through such means you will be able to enhance Canadians' ability to innovate and achieve scale in the industry.

Another view that I also agree with is that partnerships with global companies can help point out a direction for research at universities. For a university's research to gain a leading edge in a certain domain, it needs to follow a certain direction. Through such partnerships with globally leading companies, they will find that direction and then further achieve the leading position in that domain through research.

Open collaboration of this kind will of course benefit both parties and will also help build up Canada's innovation abilities.

09

**There has been criticism in Canada that these partnerships from Huawei with universities are benefiting Huawei to a greater degree than they are benefiting Canada. Often Canadian university researchers are using Canadian government funds in addition to funds from Huawei, but all of the intellectual property, patents and the like, are going to Huawei. Has that been a mistake by Huawei? Will Huawei change the way it works with universities in Canada?**

**Liang Hua:** First, I would like to clarify one thing. Our partnerships with these professors at these universities will generate results including intellectual property. The results and intellectual property belong to the professors.

I would say the results generated during the course of partnerships have not just illuminated Huawei but also illuminated humanity. This means that other people can benefit from and use those results.

It may be just that Huawei would learn about the results earlier. Professors then publish the results, and then they are available for the whole world to learn and use. It will also promote the development of technology.

10

**If Canada were to make a decision like what Australia has made, that effectively blocks Huawei**

**from Canadian 5G development, will Huawei stop its research spending? Will Huawei stop its 5G, for example, research and development work in Canada?**

**Liang Hua:** In fact, Canada has not made that decision now. I know there are a lot of reports in the media regarding 5G, but a lot of them are not accurate, so I would like to clarify this. So far, only two countries have made that statement. The US has restricted the use of federal funds to purchase networking hardware and services from Huawei. Australia has banned Huawei in its 5G networks. Those are the two countries.

We have partnerships with Canadian universities because we really value, to start with, the talent and competence that Canada has in many domains. Secondly, Canada is a very open and inclusive place with favorable policies.

So we will continue to enhance our partnerships in R&D with Canadian universities.

11

**I understand what you're saying, but there's clearly a conversation underway in Canada. We have had members of the Canadian intelligence establishment who are suggesting that Canada should not use Huawei's 5G technology. If the Canadian government follows that advice from some of its own people, will**

## **Huawei pull out from its research work in Canada?**

**Liang Hua:** As far as Huawei is concerned, markets and technological innovation are two different areas. Market decisions are made by governments and also our customers, that is, telecom operators. As for technological innovation and R&D partnerships, our decisions are based on three factors. First, whether there are business needs. Second, the availability of talent. Third, how the progress in our partnerships is going.

So we will continue to enhance our partnerships in R&D with Canadian universities.

12

**I just want to make sure I understand correctly. If there is no 5G business in Canada, would that mean there is also no business need for technological innovation cooperation in Canada?**

**Liang Hua:** Our research partnerships in 5G with Canada started in 2011. Since then, 5G has become a very vibrant area of research for Canadian universities. Because of our partnerships on many projects in the past seven years, we have boosted the 5G research of Canadian universities.

Market decisions and the choice of telecom operators are different topics that have nothing to do with our

research partnerships. The results that come from our 5G research partnerships with Canadian universities will benefit everyone. Once the projects have generated some results, the professors will publish the research results, and this is for the benefit of the entire world. So people from elsewhere can also benefit from the research results.

**13 Just switching topics. It's been a busy week for Huawei in the United States. Huawei has, over the last number of weeks, or number of months, said a number of times that it has been a trustworthy company. Ken Hu said critics should be able to say there are problems with Huawei's behavior if they want to criticize, but there's no evidence to show that Huawei has problems with its behavior. When we look at, for example, the US indictment, it shows a concerted effort over many months to steal US technology. Does this not show a problem with Huawei's behavior?**

**Liang Hua:** Regarding this, actually the company has issued a media statement, and I will repeat it here: The company denies that Huawei or its subsidiaries or affiliates have committed any of the asserted violations of US law set forth in each of the indictments. Huawei believes the US courts will ultimately reach the same

conclusion. We were very disappointed to learn of the charges brought against Huawei.

**14** **You say that Huawei denies that it committed those violations. Huawei has already been found guilty in the US court of misappropriating trade secrets. Huawei has already paid 4.8 million dollars for this. How can Huawei say that it has not committed violations of US law when it has actually been found guilty in the US court of this?**

**Liang Hua:** Which court ruling are you referring to?

**This is in the civil proceedings between T-Mobile and Huawei.**

**Liang Hua:** Regarding the 2017 civil case between T-Mobile and Huawei, Huawei and T-Mobile settled their disputes through due legal process following a US jury finding neither damages nor willful and malicious conduct by Huawei in T-Mobile's trade secret claim.

**15** **I understand that but the jury did find Huawei guilty for misappropriation of trade secrets. So does that not mean that Huawei has in fact, committed violations of the US law?**

**Liang Hua:** Regarding what you have described, I'm not clear on that, but as the legal proceedings of the indictment are ongoing, I have no further comment on it.

**16** **Then let's talk about something that is not legal. I think the argument from Huawei has been, and I'm paraphrasing here, "We are a trustworthy company. This idea is that we have a clean record. You can trust us as a company". But when people read this indictment, it looks as if this is a company that had worked from a corporate level to conduct theft of trade secrets. So how can you now convince people around the world that this is a trustworthy company?**

**Liang Hua:** Huawei has actually gone through a number of larger-scale intellectual property rights cases in the US. After following due process, we have gained rather good results. We have properly addressed these intellectual property cases by following due process. I think it is a testament to our high level of respect for the intellectual property rights of others. It is also a testament to the importance we attach to protecting our own intellectual property rights. We now have over 80,000 patents around the world. Among these 80,000 patents, over 10,000 patents are important patents that have been licensed by the US.

In 2018, the company invested \$15 billion US dollars in R&D. We plan on investing \$20 billion US dollars in R&D every year. As we further our investment in R&D, we will have more and more patents, which will be a contribution to the entire world, including the US companies. I believe Huawei is a contributor in the digital and intelligent world. Because of our heavy investments in R&D, we have managed to obtain the many patents I have described. At the same time, we respect the intellectual property rights of others.

**17**

**I need to ask, there was one other matter in the indictment. It alleges that Huawei had a system of paying bonuses to employees for the theft of corporate secrets from other companies. When was this program set up? Why and how long did it last?**

**Liang Hua:** Because this is about the specifics of the indictment, I don't have further comment. As for the indictment itself, as I have described, the company denies that Huawei or its subsidiaries or affiliates have committed any of the asserted violations of the US law set forth in each of the indictments. It is Huawei's corporate policy and a fundamental principle of our business operations to follow applicable laws and regulations in countries where we operate. We require our employees to abide by the laws and regulations in

the countries and regions where we operate.

**18** **There has been news this week that in the European Union, there's a discussion about amending some of their laws to prevent EU countries from doing business with any company whose national country is suspected of spying or sabotage. So there's a movement in the entire EU, a discussion in the entire EU, of banning Huawei's equipment. I wonder what you think about that, is that a real risk for the expansion of 5G and Huawei?**

**Liang Hua:** We have made extensive investments in 5G products and solutions in the past ten years, so our 5G products and solutions have very strong competitiveness. I advocate a level playing field in the market. I think we will achieve shared success if we can have open collaboration.

I think that discussions about 5G should return to technical discussion instead of staying at a political level, because if we come back to technical discussions of 5G products, there are guidelines, and very clear standards and rules. By following the clear standards and rules, it will become better and serve the needs of the wider public.

We cannot simply say that one specific 5G product

vendor is secure while the other is insecure.

**19** **If you look at the conversation in the United States right now, it's not just Huawei's name that is being raised as a risk to security. ZTE has also been named. Lately DJI, the drone company, has also been named. You know in China, the rules for companies are different from the rules for companies in, for example, Western countries in Europe or North America. Is it possible, in your view, for a Chinese company that operates in a system where the Communist Party establishes committees inside companies, that operates in a country where the national intelligence laws require companies to aid the collection of national intelligence? Is it possible for a Chinese company, not just Huawei, to convince foreign governments that it operates in a way similar to other Western companies?**

**Liang Hua:** I certainly cannot represent all Chinese companies. I can only speak about Huawei. So Huawei, despite the fact that it's headquartered in China, is a global company with a business presence in over 170 countries and regions.

Our business operations around the world are compliant with local laws and regulations. Huawei is an independent business organization and we uphold the

principle of customer centricity and creating value for customers.

Over the past 20 years, we have established a comprehensive operational system which covers not just research and development but also supply chain, finance, and marketing & sales. This system is all held up to international standards.

Since you mentioned the intelligence laws in China, I think that the spokesperson of the Ministry of Foreign Affairs of China has clarified it in the following way. The spokesperson said there are no laws in China requiring companies to install backdoors for the purpose of collecting information. We have obtained independent opinions from leading legal consultants, and what we have been told is that companies are required to provide assistance only in accordance with the laws. But there are no laws in China requiring companies to install backdoors in devices or networks in order to collect information for the intelligence organization.

Regarding cyber security and privacy protection, Huawei has always been committed to building a well-established compliance system. We will never do anything to harm any country, any organization, or any individual.

20

**Nathan VanderKlippe:** Maybe I'll ask a very big picture question. Obviously, the United States and some of its intelligence allies are leading an effort to block Chinese and specifically Huawei's technology from Western countries. You must spend a lot of time thinking about this. You lead this company. Are you concerned that we are perhaps moving to a world where globalization doesn't work the way it once was? Where we end up with certain parts of the world using more Chinese technology and certain parts of the world using more Western technology? That we are moving towards technological divisions in the world? Are you concerned that is the trend we're on right now?

**Liang Hua:** We support unified global standards for technology because we believe that a unified set of technology standards would be the best for all people.

I think one example is the communications industry. I'm not even talking about the distant past. Around 20 years ago, there were different radio access technologies and different modes, like GSM and CDMA. If you traveled from one country to another, let's say from China to Japan, you would have to change to another phone and use a new SIM card in order to make a phone call. That was the problem with different radio access technologies.

But now things have become very different because there's a unified standard in the communications network. So all you need to do is take your backpack and your phone. As long as you have roaming services, you don't need to change to a new phone with a new SIM card.

Huawei really advocates for and encourages governments and standards organizations to reach unified standards on technologies, instead of moving into the future where there are technological divisions based on different ideologies or viewpoints. Because that would not be beneficial for humanity, nor for technological progress.

When we face challenges and difficulties, one thing that we always bear in mind is to remain strategically focused. Over the past 30 years we've stayed focused on the communications industry, and we'll continue to do so and stay focused on ICT infrastructure and smart devices. Only by adopting a focused strategy will we be able to become stronger.

At the same time, we will make more efforts in technological innovation, including efforts in basic research and efforts in product development. We would like to drive further development of the company with technological innovation.

We will continue to embrace open collaboration with partners, including universities and research institutes, because we believe it is the right approach to achieving shared success.

At the same time, we believe operational compliance is imperative for the company and it's what we are committed to in the long term. And we have taken cyber security and privacy protection as an overarching guideline for the company.

We will continue to enhance our efforts to comply with cyber security and privacy protection requirements, as well as comply with applicable local laws and regulations, including the export controls of the UN, the US, and Europe.

Moving forward, one important thing that we are thinking about is to better energize individuals and the entire organization, so that they can make more contributions to support more business growth. In sum, we will drive further growth in the company through technological innovation and through adherence to customer requirements.

# Liang Hua's Canadian Media Roundtable

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February 21, 2019  
Toronto, Canada

## 01 **What is Huawei's strategy or plan to cope with the difficulties that it is now going through, especially in the Western countries?**

**Liang Hua:** First, Huawei is a company that is operating in over 170 countries around the world. Given the global scale of our operations, it is only to be expected that there could be challenges and difficulties in our business at any time and at any point. But at the same time, we believe there are also a lot of opportunities out there. Our business performance in 2018 was pretty good. The annual sales revenue reached about US\$108.5 billion, year-on-year growth of 20%. We will define our business plans based on our global operations in 2019. I can tell you the business plans and business targets we have set for ourselves so far for the year 2019.

We aim to achieve around US\$125.4 billion by the end of 2019 in terms of annual sales revenue. It will mean around 15% to 20% year-on-year growth compared with that in the previous year. Moving forward, we will embrace challenges and overcome difficulties, and at the same time, we will seize the opportunities in the age of digitization, artificial intelligence, and cloud. We are pretty confident about our business development.

02

**We understand that you have some research and development investments and new jobs. Last week, the BBC interviewed Huawei's president and asked questions regarding whether the UK may ban the company. He said, "We trust the UK and hope that the UK trusts us." Canada is currently doing a review, and there could possibly be a ban. In that case, what would happen to Huawei Canada, since you are expanding your presence here?**

**Liang Hua:** We have been operating in Canada for ten years and we have always maintained good cooperation with our customers. We have made long-term investments in research and development in Canada, with the cumulative R&D spending amounting to US\$500 million there. We don't know what the government's decision will be regarding 5G, but no matter what the decision will be, if our customers choose to work with Huawei, then Huawei will be committed to bringing our 5G technology, solutions, and products to the Canadian market. If Huawei were to be excluded from the deployment of 5G in Canada, then we would continue to focus on providing good services to customers who do choose us.

But at the end of the day, we hope that the decisions on 5G can be made based on technology, instead of other factors. We want it to be a level playing field, and we want

the decisions to be made based on our technological innovations. Huawei has leading technologies and very strong engineering capabilities in 5G.

Coming back to your question, whatever the decision is, we will continue to provide good services to our customers in Canada, because we've had cooperation with customers including TELUS and Bell for a very long time. Even if the decision is not to allow us to work on 5G, we will continue to serve our customers well in other products and networks.

At the same time, we will continue to enhance our investment in research and development in Canada, because Canada is an open and inclusive place that has cultivated a lot of talent. As I mentioned, we have cumulatively invested more than US\$500 million in R&D over the past decade in Canada. In 2018 alone, we invested US\$137 million in R&D in Canada. We will continue to enhance our R&D investment in Canada based on our business strategy and R&D partnerships.

**03** **As you know, three countries, the United States, Australia, and New Zealand have banned the use of Huawei telecommunications gear on security and espionage concerns. In this country, at least three former leaders of intelligence services have urged our**

**government to take the same decision. What kind of assurance can you provide to Canadian policy-makers or citizens that the use of Huawei gear does not pose a security threat to Canadian society?**

**Liang Hua:** To clarify the question, I believe there are two countries, not three. And these two countries are the United States and Australia. New Zealand is not one of the countries that imposed the ban. Just this week, the Prime Minister of New Zealand Jacinda Ardern said they haven't really restricted the use of Huawei equipment in 5G deployment. The US has restricted the use of federal funds to purchase networking hardware and services from Huawei. Australia has restricted the use of Huawei equipment in 5G deployment.

In the Canadian market, Huawei provides only the base stations, and the base stations we provide are under the Security Review Program (SRP), a government-led mechanism to provide assurance for the equipment. This is a concerted effort by different parties including the government, telecom operators, Huawei, and also third parties. Such a mechanism is able to provide assurance for the base stations that we provide in Canada.

At Huawei, cyber security and privacy protection are our top priorities. In the next five years, we will continue to invest US\$2 billion to enhance our software

engineering capabilities and practice. This will help improve our products and solutions in the era of cloud, artificial intelligence, and Software-Defined Everything, so that our solutions can become even more reliable and trustworthy, and be of even higher quality.

In our 30 years of history, we have been operating in over 170 countries and serving over 3 billion customers. We have maintained a solid track record in cyber security. Huawei is an independent business organization. On issues of cyber security, Huawei will not do anything to harm any country, organization or individual. Huawei upholds the principle of customer-centricity. It means we will always be on the side of the customers and partnering with our customers to provide assurances.

Cyber security is a common challenge that calls for the attention of the entire industry and the world at large. Huawei is just an equipment vendor in the industry. Just as GSMA puts it, there needs to be concerted efforts from governments and telecom operators to agree on a consistent testing and certification regime, so as to boost public confidence.

I have one suggestion to make regarding cyber security in Canada. It takes concerted efforts among the government, mobile telecom operators, and equipment vendors to formulate clearly-defined rules or an

assurance mechanism, so that it can help build public confidence in the network products and services. Rules, standards, or the mechanism for vendor and equipment selection should be consistent and fair for all vendors.

**04 My question is about the newly-enacted Chinese intelligence law. The law stipulates that Chinese companies and individuals have the obligation to cooperate with the intelligence agency. Despite the fact that Huawei Canada operates in Canada, Huawei remains a Chinese company, so how will you make sure that data in Canada will not be accessed by the Chinese intelligence agency?**

**Liang Hua:** Regarding the provisions of the Chinese intelligence law that you described in your question, the Ministry of Foreign Affairs of China has provided clear clarifications. They said there is no law in China requiring companies to install backdoors or collect foreign intelligence. Mr. Yang Jiechi, a Chinese government official, repeated the same message at the Munich Security Conference last week. He said that China has no law requiring companies to install backdoors or collect foreign intelligence. At the same time, he stressed the need for Chinese companies to abide by local laws and regulations.

We have also consulted independent legal opinion. The independent legal opinion says that the obligation to cooperate and provide assistance to the intelligence agency is on the premise that it has to be in accordance with the law. Since China has no rules requiring telecom equipment vendors to install backdoors or collect intelligence, as the law does not say so, then it is not abiding by the law should a company need to cooperate or provide assistance.

Over the past 30 years, we have never received such a request. In the future, even if we were to receive such a request, we will not accept it because the law does not require that. Since the law does not require that, we would not be held legally accountable if we refused to accept such a request. On top of that, Huawei only provides the network equipment. It is the telecom operators that operate the equipment.

Huawei Canada has been operating for ten years. We have maintained a good track record. So rest assured.

**05 To what extent is today's announcement a reflection of a recognition that the rules of operations for Chinese companies in other countries have to change? For example, China restricts other telecom companies and technology companies from having greater than**

**30% of the market. There are no restrictions in most other countries. And by making these investments, increasing in research and development, and sharing intellectual property, does Huawei recognize that it has to operate differently in other countries?**

(Interpreter: Could you further explain the question with regard to the operational rules?)

**The announcement you're making today is a different way of operating in Canada by sharing intellectual property with the universities, making a deeper investment in R&D, and a bigger hiring. It suggests that Huawei understands that perhaps it needs to operate differently in some countries to level the playing field, because foreign companies don't have the same opportunity in China.**

**Liang Hua:** In any country where we have business presence, we're always committed to complying with applicable laws and regulations. That is the bottom line of our business.

In specific countries, we will define our operational tactics based on our business strategies and local requirements. To be specific, in Canada, we're enhancing our investments in research and development, because we see that Canada is home to great talent in areas such as artificial intelligence, fundamental algorithms, and

optical components. So that is why we are enhancing our R&D investments here.

Now the United States has imposed some export controls on Huawei in terms of technologies. So in that context, we're moving some of our investments to Canada. I think that is understandable.

Speaking of the research partnerships that Huawei has with Canadian universities, I think that it is important to note the approach being used is one which both the universities and Huawei have thoroughly discussed and agreed on. There isn't a one-size-fits-all approach that can be used for all countries. Specifically, in Canada, we continuously discuss and try to improve our partnerships with Canadian universities. Copyrights on articles and papers belong to the professors who wrote them. If a partnership program results in a new patent, we will share the patent with the university. This is the specific approach that we have agreed upon with our Canadian university partners during our collaboration.

**Can I ask a little bit more about that? Is that fifty-fifty ownership?**

**Liang Hua:** It isn't a simple fifty-fifty split. I know that it is standard in the industry for businesses to claim full ownership of their patents, but we consider our patents co-owned by the universities. The patents themselves are shared between Huawei and universities.

**06 Huawei operates globally, so how does Huawei view the Canadian market from a global perspective? What is unique about the Canadian market? And what are its pros and cons?**

**Liang Hua:** First, I would like to talk about our business performance in the Canadian market last year. Our total annual sales revenue last year was US\$420 million, with our telecom operator business earning US\$270 million and our consumer business earning around US\$150 million.

Globally, Huawei's business strategy focuses on the ICT infrastructure and intelligent device markets. We follow the same strategy in the Canadian market. We sell ICT infrastructure solutions and smart devices to the Canadian market and provide related services.

The Canadian market is unique because the country is so vast but also sparsely populated. This leads to unequal access to digital dividends. We have to work with telecom operators to create innovative technological solutions, so that we can serve people in these different geographical locations. For example, the south is densely populated while the north is very cold and less densely populated. We needed to develop cost-effective solutions with telecom operators to deliver high-quality services to people across the country.

Because of this, our 5G R&D actually originated in Canada, and the international Huawei teams, Huawei Canada R&D teams, and our local partners all work together. The 5G solution they are developing for the future will be able to handle the demands of these different regions. For example, the north will use something we call 5G Air Fiber. Traditionally, things like satellites would be used for this kind of region, and while they could provide good coverage, their signal was pretty poor. A typical fiber solution, on the other hand, would be very costly.

Our 5G Air Fiber solution will be able to provide superior, high-quality home broadband called WTTx (Wireless to the X) services while still being cost-effective. We can develop this solution through cooperation with telecom operators. The operators can recoup their investment in 2 to 3 years because it is so efficient. The payback period of a fiber solution, in comparison, is 8 to 10 years. In the Canadian market, working with partners and telecom operators allows us to provide advanced, cost-effective communications technologies.

**07**

**Last week, although the UK announced that there are ways to address security risks posed by Huawei's systems, Huawei's reputation in Western countries has been impacted given the developments around**

**the world. We are also aware of the unhappy incidents between China and Canada. So my question is, how will Huawei recover its reputation, telling Canadian citizens and customers that Huawei's products and solutions are still safe and can be trusted?**

**Liang Hua:** Regarding our reputation, I don't think the impact you are discussing is as negative as many think. Rather, I think all this media coverage has ultimately just been a lot of free international advertising for us. Now, people all over the world know that the US has called on its allies to stand against our company. The whole world knows our name, and they know that this powerful country is fixated on us.

Regarding what we intend to do, I actually already touched on that in some of my previous answers. I think that cyber security and privacy protection are a challenge that the entire industry and the world at large must face together. If we cannot guarantee cyber security and privacy protection, it's very possible that the digital world we are building will collapse.

Cyber security and privacy protection are not the responsibility of any one single company. The idea that excluding Huawei would solve these challenges is simply not true. That's why I think it is very important for multiple stakeholders to work together and establish

common standards. These stakeholders must include governments, telecom operators, equipment vendors, and other companies with relevant expertise. They must come together to agree on standards, a consistent certification and testing mechanism, and a network assurance mechanism.

Coming back to our business in Canada, as I have said before, Huawei regards cyber security and privacy protection as our top priorities. That reflects in how we do business in Canada.

Huawei is a business organization that holds the interests of customers close to our hearts. That is why we have established rigorous processes and tools to support product development, operations, and sales.

Huawei is only an equipment vendor. We do not own customer data. Nor do we own the networks. Those are all controlled by telecom operators.

The network equipment we provide has been thoroughly tested by telecom operators and governmental organizations. Huawei only provides support services when a customer requests it and we have received explicit authorization from the customer.

In Europe, there is a regulation called GDPR, and Huawei acts in strict accordance with it. We think that the GDPR is a very good example for other countries. It

not only has clearly defined rules, but it is also just, fair, and non-discriminatory. In that sense, as long as we are compliant with the GDPR, our operations in Europe will be sound.

In Canada, our business operations will be compliant with the SRP. At the same time, we are also committed to complying with local cyber security and privacy protection laws.

**08**

**I just want to go back to the IP issue for a minute. So I just wanted to clarify, will Canadian companies be able to access or license IP held by Huawei and the universities? Will they be able to access on favorable terms? I also want to ask: Why are you doing all of this now? Is it related to your company trying to convince the government not to bar Huawei from 5G construction?**

**Liang Hua:** Our approach to IP sharing has nothing to do with the 5G project in Canada. These are two separate discussions.

Our approach to sharing IP was set a long time ago. It is not something new. There are already common industry practices for accessing and licensing of IP, so there are set standards and procedures to achieve that. For the specifics about how our IP sharing works, and

how access will be granted, I'll hand the mic over to my colleague from R&D to answer the question.

**Christian Chua:** The intellectual property created from the partnerships between Huawei Canada and Canadian universities comes in two types. First, the copyrights for papers and other publications. Those rights belong completely to the universities, which include the professors and students. The second type is patents. Keep in mind, not every partnership will generate patents. It is uncertain which partnerships will result in patents. This is one example of how we invest in uncertainties.

We treat all intellectual property created through our partnerships with universities according to standard industry practices, while at the same time complying with any policies or rules of the universities themselves. Over the last decade, the right to the IP resulting from our partnerships has sometimes belonged to the universities, sometimes to the professors themselves, and sometimes it is shared between Huawei and the universities. We started comprehensively sharing all relevant intellectual property with universities in 2018, in a move to demonstrate our direct contributions to Canada through our R&D and collaboration with universities.

09

**Mr. Li, as Mr. Liang pointed out, Huawei is now increasing investment into research and development in Canada and is stepping up efforts to build ties with Canada's three largest network operators. Whether or not Canada will ban Huawei equipment from its 5G networks, is obviously something we are all discussing. If a ban were to be implemented, how would it impact your Canadian partnerships? What impact would you expect it to have on the local job market? I understand that Huawei has also contributed a lot to local communities over the last ten years, through things like aboriginal youth programs and ice hockey programs. I'd like to better understand the exact value of your contributions in these areas.**

**Eric Li:** Huawei Canada has maintained a business presence in Canada for ten years and our business during this time has grown steadily. Last year, we started looking at and preparing for the decisions the government is going to have to make regarding 5G. In Canada though, 5G is just part of our business. 5G is not yet reality; it is still on the horizon. Apart from 5G, we have a lot of other businesses in Canada. As our Chairman has said, in Canada, we sell smartphones, network equipment, and related services.

**Liang Hua:** I would like to add a few things here. Ban or no ban, at the end of the day, this is all about

the government and customers making their choice. Expecting Huawei to serve every market in the world wouldn't be realistic. Some customers have already chosen us, and we will work hard to serve them as best as we can. For customers that have not chosen us, we regret not having the opportunity to provide services to them.

Our end-to-end 5G solutions are more than one year ahead of the competition, according to third-party assessments. I think this shows Huawei's great competitive strengths in the technological sophistication and cost-effectiveness of 5G solutions. Canadian telecom operators also have competitive strengths in networks and end user experiences. Through collaboration with them, we have supported their network development well. So far, we have secured over 30 5G commercial contracts around the world and we have already shipped over 30,000 5G base stations. We also hold over 2,570 patents related to 5G.

**10 Can you comment specifically on whether the recent arrest of your Chief Financial Officer has altered your perspective on doing business in Canada?**

**Liang Hua:** With regards to the arrest of Ms. Meng, there are many comments made by the US and Canadian government officials. As in my knowledge,

charging and arresting a senior executive for corporate violations of US sanctions laws is not common, and rare. Even the former Canadian ambassador said Ms. Meng has a good defense on the political nature of the US extradition request. So I cannot say the US charges against and the extradition request of Ms. Meng are not politically driven.

I've been a colleague of Ms. Meng for many years. She is a very hardworking senior executive, and she is also a mom of young children. I believe she is innocent, and I hope the Canadian legal system could bring justice back to her. I hope that she could be freed and reunite with her family soon. But I'm not a lawyer, so I cannot comment on the substance of the case.

To be honest, the current relationship between China and Canada is not ideal to the expectations of Chinese people and Canadian people. Over the past 10 years, we have invested more than US\$500 million into R&D in Canada, and we currently employ over 1,100 employees here. Over 700 of these employees are locally hired R&D staff. Among those 1,100 employees, over 90% are locals. As a global company, we look forward to a good relationship between these two nations. We are also aware of some problems that need to be addressed.

**Does it change the approach going forward?**

**Liang Hua:** We won't change our approach to R&D investment. We will continue to increase investments in R&D in Canada. Looking at the market, of course, we would like to work more with the telecom operators on projects using our advanced technologies, products, and solutions, and to deliver superior services to their customers.

11

**I wonder if you could say a little bit more regarding the intellectual property decision, specifically coming back to the question that was asked earlier. If this is an arrangement that you've been making with universities since 2018, can you explain more about the announcement now? I guess further to that, this sort of press conference is quite unusual. I know it is your first time coming to Canada, Dr. Liang. I'm just curious as to your thoughts on that.**

**Liang Hua:** Today presents us with an ideal opportunity for press activities. We made this announcement because of the opportunity presented, no other reason. I really look forward to more of these opportunities to speak with you in the future.

12

**Dr. Liang, can you tell us what Huawei's position is in response to the other US charges, not related to Ms.**

## **Meng but to T-Mobile?**

**Liang Hua:** Huawei has officially released a statement on the T-Mobile case. I believe you've read the corporate statement already.

**Yes, but I'm hoping you could address it and specifically what do you think of that as a factor in Canada's review. Would that impact the Canadian government's review of Huawei?**

**Liang Hua:** Since the company has already released a formal statement, I will just make two points: First, the law says a defendant is innocent until proven guilty. Allegations are not convictions. Second, these are ongoing legal proceedings. We must let the courts resolve this case. I don't have further comments on the case itself.

It should be noted though, that the T-Mobile case was actually a civil case in 2017. It was settled according to legal procedures, and the Jury found neither damages nor willful and malicious conduct by Huawei with relation to the trade secret claim.

Regarding intellectual property rights, I would like to say a few more words. We have been involved in a number of IP-related disputes in the US. These disputes have all been properly resolved through due process, and we have gained rather good results. This proves that

we respect a third party's IP rights.

Huawei currently holds a total of 87,000 patents around the world, among which 11,000 of those patents have been granted in the US. So you see, we also hope other parties will respect Huawei's IP rights.

It has always been our corporate policy to respect others' IP rights, and we believe it is only fair to expect the same consideration. Because of this, I would say that IP rights are not a problem in the Canadian market.

13

**Huawei is taking a leading role in 5G networks. There is no debate about that. There have always been allegations though, some conspiracy theories and news reports linking this reality to Huawei's military background. Would you like to take this opportunity to remark on these allegations or clarify any points? Thank you.**

**Liang Hua:** To start, Huawei does not have any kind of military background. Huawei is 100% privately owned by its 97,000 plus employees. There isn't any external organization holding any company share.

Huawei's leading position in 5G, I think, is largely attributed to our investment, our dedicated effort, our technological innovations, and our R&D. We started our

R&D on 5G back in 2009.

Back then, when we were rolling out 4G networks, we started to think about what would be the next generation of wireless technology. That's what 5G is, the 5th generation of wireless technology. Huawei has been investing in this technology at a very early stage, starting with the fundamental technologies, to the prototypes, to product enhancements. I would also say Huawei has been a key contributor to the creation of 5G standards. We are now a leader in 5G because of our hard work pursuing key technologies and innovations, like the chipsets used in 5G base stations. We have another technology called Multiple-Input Multiple-Output (MIMO), which supports multiple radio access technologies. Another example is the technology we call blade base stations. These technological innovations are the result of our own investments, our own hard work, and the partnerships we have built with customers and other industry players.

Huawei is an innovation-driven 5G leader. I myself don't understand why there are so many stories being made up about how we got to where we are. It was simply our hard work in technology and innovation. I would say Huawei is a major contributor to the telecom industry, and I think drivers of innovation and great contributors should be respected.

**14** **What impact do you think a potential ban will have on your current and future partnerships with universities? Will you have to end any of them or hold off on signing future partnerships?**

**Liang Hua:** We will not change our approach regarding our investments and R&D in Canada. We will not change our position on partnerships with the Canadian universities. We will continue to invest more in R&D and enhance our partnerships with the Canadian universities.

**15** **You have mentioned that you hoped that the decision on 5G comes down to technology. You have also made some statements on the political nature of these things. I am wondering, as the chair of the company, are you concerned at all that technology just won't ultimately matter and that these decisions will be made according to partner relationships, trade deals, treaties, and so on?**

**Liang Hua:** We all advocate free trade for a strong economy. Political influences and factors may impact the scale of our business in the short term. In the long run though, we still believe that it will all come down to the technologies that will drive our society, and ultimately humankind, forward. Looking at our history, the impact technology has had on social progress is clear. For

example, the evolution of telecom technologies from second, to third, fourth, and now fifth generation directly correlates to the development of new ways and more efficient methods of interpersonal communication. We have faith in the political figures and people in different countries to make smart decisions on technologies, and we believe they will not let the good technologies go to waste.

**16** **You previously mentioned that you don't think the relationship between Canada and China is ideal. I'm just wondering, what do you think it would take specifically to make that relationship ideal?**

**Liang Hua:** As a business, there is so little we can do in terms of the bilateral relationships between two countries.

Omar Sachedina: But, as a company that is trying to increase its presence in Canada, what would you like to see in terms of that relationship? What do you think could soften the environment?

Liang Hua: Since it operates locally, Huawei Canada will continue to be compliant with Canada's laws and regulations. We will also continue to give back to the local community through our corporate social responsibility programs. We will continue to focus on the

work we do. Our telecom business and also consumer device business would like to bring our advanced products and solutions to consumers and customers in Canada. We want to provide not only advanced technology, but also affordable products and solutions, so that the telecom operators can roll out better networks within Canada.

We want to give Canadians more intelligent devices so they can enjoy all the benefits of a digital society. We still feel Canada is a very free and inclusive country. That's why we will continue to enhance our investment in research and development in Canada. As a company, we expect to operate in an environment that supports free trade, that has a level playing field, and that treats vendors fairly and equally. We believe in cooperation and collaboration because we think that only with these tools can we achieve shared success.

**17**

**We've talked a lot about telecom and 5G. I think we may have killed those subjects. But Huawei is a very big company and produces a lot more than that. When do you plan to bring in more of your devices in Canada, not just phones, and more of your other products we don't see here?**

**Liang Hua:** As long as we are allowed to sell, we are

more than willing to provide various consumer devices to the Canadian market and to the Canadian consumers, including smartphones, personal computers, and other home devices. We position ourselves as a provider of smart devices catering for all scenarios to support smart living.

We are still in the midst of envisioning what form factor devices would take in all scenarios of smart living in the future. We believe that devices will definitely play a crucial role in the future environment, especially when it comes to 5G. 5G provides much greater speed, lower latency, and massive connectivity, and consumers will need the right type of devices to tap into the benefits provided by the network.

The 5G devices include what we have talked about: the CPE and smartphones. Next week at MWC in Barcelona, we will launch our foldable 5G smartphones. It is worth the wait. Stay tuned.

**18**

**I just want to go back to the intellectual property question. Could you say specifically how this is a different policy for you, and whether it is going to be rolled out in other countries as well.**

**Liang Hua:** The specific IP sharing approach that we have adopted with the Canadian universities is a

result of mutual discussions. It's a mechanism that we agree on with the Canadian universities during the course of cooperation. I would say that the different partnerships in different countries would call for differentiated approaches. We would not take a one-size-fits-all approach and replicate it everywhere. I think it has to be a mutually beneficial approach. That is the ultimate principle when it comes to university research partnerships. And we would like to also contribute our value through further investments in research and development. That's what we can further contribute to the partnerships.

It is an industry practice for enterprises to work with universities on research programs, and we follow that industry practice. We have made extensive investments in research and development ourselves. Last year, Huawei invested US\$15 billion in research and development.

In addition to our in-house investment in research and development, we also value the partnerships we have with universities. But it will focus on different domains, depending on which universities in which countries we are talking about. The overall principle is that the approach chosen will fit the specific domains we collaborate in. Huawei will continue to enhance our own investments in research and development as we enhance our partnerships with universities. We believe

by coordinating the two approaches, we will be better able to contribute to the digital and intelligent society so that it can benefit all.

# Eric Xu's UK Media Roundtable

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February 13, 2019  
Shenzhen, China

01

**My question is about how you divide your R&D activities. What is your sort of balance of priority between basic physics and research and customer-led feature development?**

**Eric Xu:** Huawei has established an R&D investment management system that is similar to that of other industry players but is also somewhat different. Our R&D process and management system is called IPD, Integrated Product Development. This process was established in 1998 with the help of IBM, who provided consulting services to Huawei. In this process and management system, there are both investments for the future, essentially research and innovation, and also investments for product development that is oriented toward customer requirements. Part of it is also investment into engineering capabilities and techniques, essentially around how to develop the products that we put to our customers. So, there are three parts of R&D related investments, and we have a separate budget for each piece when we look at our annual business plan. We have dedicated governance teams to make decisions in terms of how to spend those R&D investments.

For the customer requirements oriented part, or what you say the functionalities and the features, the decision-making body is IRB or IPMT, or Investment Review Board and Integrated Portfolio Management Team.

IPMT makes decisions on research into future-oriented innovative technologies. Those bodies would make decisions on what to develop, what not to develop, and when to deliver.

## 02 How long is that review cycle?

**Eric Xu:** The review cycle is not monthly. It's not quarterly. The review cycle is based on what we call checkpoints in the R&D process.

For research, innovation or patents producing investments, our decision-making body is called ITMT, Integrated Technology Management Team. In history, the average percentage of research and innovation related investment was around 10% of our total R&D spending. But we have increased this percentage over the recent years to around 20%. And we hope we can get to 30% in the future. So we have dedicated teams, dedicated budgets, and decision-making mechanisms to govern and manage this future-oriented investment, and that's also where a lot of our patents are produced. At the same time, we have a pretty big team, as well as corresponding decision-making mechanism, for developing products to meet customer needs in the market.

Take 5G for example. It was the ITMT that made the decision in 2009 to initiate our research efforts on 5G.

We announced the news in the UK that Huawei would invest 600 million US dollars in 5G research. Even until today, 5G research has not been fully completed. But 5G product development, based on our research findings, was started three years ago, and that decision was made by our IRB and IPMT.

**03** **If there was any point in history where the lights went on for 5G being strategic and a core strategy for the company. You said in 2009 that the technology doesn't exist yet, but in X number of years, we can win over this market.**

**Eric Xu:** It's not as great as you depicted. There is a certain rule to follow, a certain pattern of history when you look at the mobile communications industry that we are in. After 2G, certainly there would be 3G, certainly 4G would follow and then we have 5G. What's in my mind right now is 6G. After 4G products are out in the market, from a research point of view, certainly our teams would be looking at 5G.

Actually, 5G is not a term of any single technology. It's a generation of technologies for mobile communication. After the research efforts of 4G are completed, naturally our teams would be doing research around the next generation of mobile communication technologies.

5G is the sum of those next-generation mobile communication technologies.

The research effort for 5G would be basically completed by 2019, and our research teams will be looking at questions, such as how mobile communication technologies would evolve in the future? What are the technologies that might be put into the category of the next generation, or 6G? Our research teams are going to organize their research and creative activities around those sort of questions. I anticipate that by 2028 or 2029 or 2030, we are going to see 6G as extensively discussed as we are seeing 5G today. So this is the pattern or the rule of our industry. If you do not work on 5G at all, that means there is no future for you.

For every new generation of technologies, some companies cannot follow up, and some companies will emerge even stronger.

**04** **If you have any response in particular to Mike Pompeo's remarks about the role that Chinese companies can play in the rollout of 5G? Given that we have seen some Germany and France seeming to indicate that they are not necessarily going to follow the US lead on this, whether that's a sign that China is winning the argument?**

**Eric Xu:** I certainly cannot comment on whether China has won the argument or not. I saw Mr. Pompeo's remarks made in Hungary yesterday, and I saw his remarks in Poland today, but of course it was Chinese that I was reading. I think Mr. Pompeo's remarks are just yet another indication that the US government is undertaking a well-coordinated geopolitical campaign against Huawei. It's essentially using a national machine against a small company, as small as a sesame seed.

Huawei is a 30 year old company, serving more than 3 billion people across 170 countries and regions. What kind of a company are we? I think our customers, the partners we work with, and the 3 billion plus people that we serve would have a very good understanding.

So we have been wondering, and I think many other people may have been asking this question, is the recent fixation on Huawei truly about cyber security, or could there be other motivations?

Are they truly considering the cyber security and privacy protection of the people in other nations, or are there possibly other motives?

Some other people argue that they try to find leverage for the US-China trade negotiations. Some other people argue that if Huawei equipment was used in those countries, US agencies would find it harder to

get access to the information of those people, or find it harder to intercept the mobile communications of those countries or their leaders.

I believe in the wisdom of the 7 billion people in the world. I think they clearly can see these different possibilities.

**05**

**I saw your media interview with the German press, and you mentioned that cyber security is partly politics or ideology-related. So if cyber security is about politics, if the US government has political motivations, how would you see the ultimate outcome in, say, five to ten years time down the road, in the sense whether the cyber world, the technology community would be divided into one China-led, the other US-led? Personally, I would agree with you, even though I do not speak on behalf of the Financial Times, whether there is technical viability for that.**

**Eric Xu:** Cyber security in itself is certainly a technical issue that requires expertise to address, and that's also what all the scientists and engineers in the world have been working on, trying to address cyber security. In that context, Huawei has been working with different governments and industry partners to hopefully put in place agreed standards, so that people can take those

standards to measure how secure the products from all of the vendors are.

Recently, we have seen the close coupling between 5G and cyber security, and I think people know clearly what the sources of this coupling are. When we look at major equipment providers for 5G, you have Nokia, Ericsson, Huawei, Samsung, and ZTE. As you can see, there is no American company here. China and Europe have been working together, trying to put into place a unified global standard for 5G and also the future of mobile communication technologies, in order to reduce the overall cost and improve return on investment for all of the players in this industry.

Through the concerted efforts of the industry, we are seeing a unified global standard for 5G. That means all of the players can follow this one standard as they develop 5G-related products. But now, some politicians have turned either 5G or cyber security into political or ideological discussions, which I believe are not sustainable.

I believe technology is technology. Ultimately, it will depend on scientists and engineers to make it happen. I believe scientists and engineers would prefer a unified global standard so that people can follow this standard to develop better products.

Of course, when we look at different countries,

they certainly have the option, considering their own specifics to choose the right vendors they see fit when they deploy their networks. That's natural when we look at the history of the mobile communications industry. Huawei's 4G equipment is not deployed in all of the countries in the world. And we certainly do not expect our 5G equipment to be chosen by all customers in all countries. Rather, we would focus on providing good services to the countries and telecom operators who choose Huawei.

To give you one example, China Mobile Guangzhou did not choose Huawei's 4G equipment, even though Guangzhou city is so close to our headquarters in Shenzhen. So I think this is quite normal. The market size of Australia is even smaller than China Mobile Guangzhou. The market size of New Zealand is even smaller than Yiyang, a small city in China which is my hometown. Our equipment is not used by China Mobile Guangzhou, so I think it's quite okay that we are not chosen in certain countries. We have limited capacity. Certainly, we cannot serve all customers in all the countries. And certainly we cannot dominate the entire market. Even in (some) markets that are very close to our headquarters in Shenzhen, our equipment is not used. This is really normal in our industry. Rather, we would remain focused on serving the countries and customers that are willing to work with Huawei.

**06** **There were reports over the weekends from Politico that Donald Trump is considering an executive order to ban Huawei equipment in the US. I would be interested in hearing your thoughts on what impact that would have on America's ability to roll out 5G and how worrying that is – the prospect of having a global superpower drop the support for Huawei? How worried are you about the prospect of a country of America's size banning Huawei?**

**Eric Xu:** First, I want to share with you that Huawei's infrastructure equipment is basically not present in the US market. And even smartphones now are virtually not present there. In history, Huawei's 4G equipment served rural carriers in the United States, providing universal services to people living in remote rural areas. I saw those stories from the press that you mentioned, but no matter how the outcome turns out, I think it would not have a major impact on Huawei's business. Because, as I mentioned just now, we have virtually no business presence in the US, and we don't have the expectation to build up a major presence there.

**07** **In respect of the UK, at the end of last year, we had the head of MI6 and the defense minister both sort of made vague suggestions that they weren't sure about Huawei's security. And I saw recently the**

**Prince's Trust said it was going to stop accepting donations from the company. I just wanted to get your perspective on how frustrating that side of it is, in terms of still having to deal with things like this, given everything that we have just spoken about as well.**

**Eric Xu:** The UK government has had concerns about the security of Huawei's equipment. That's the very reason that Huawei has worked together with the UK government in putting in place the HCSEC, Huawei Cyber Security Evaluation Centre, to embark on partnerships to address those concerns. So, this is a model of open collaboration between the UK government and Huawei to address the concerns around Huawei equipment deployed in UK networks.

Just this morning, I saw an article authored by Robert Hannigan, who was the director of GCHQ, published on Financial Times. That article well explained all the questions you raised and I would suggest you look at it. In order to protect cyber security of the UK and well serve the British people, GCHQ has put in place a whole series of systems and mechanisms to ensure solid management and regulation of mobile communication networks. And I also agree with what Robert said on the subtitle, that technical judgments should be made on a clear-eyed view of the potential threat. It should not

be simply politicized. I think Robert does a better job in answering your question than I do.

And then is the second part of the question: The Prince's Trust stopped accepting Huawei's donation. I think Huawei does not feel frustrated about that. We made the decision to make donations to the Prince's Trust based on our great respect to the outstanding achievement they have made in helping young people. It had nothing to do with politics. And it is to our regret that they made this decision based on partial and groundless conversations surrounding Huawei, without talking to Huawei in advance at all.

If we take a step back, I think there will be no impact on Huawei if the Prince's Trust accepts or does not accept Huawei's donations. But again as I mentioned just now, we pay our greatest tribute to what the foundation has done in the past in helping young people.

**08**

**I find it interesting that Huawei has a good historic relationship with two of the Five Eyes countries, in particular, being Canada and the UK. So I'm curious if you could expand a little more on the relationship between Huawei and the intelligence agency of the Five Eyes countries. I'm speculating here, but I assume if they have the capabilities to intercept**

**fiber communications, then they probably have the ability to intercept communications from a box, so I'm just wondering to what extent Huawei has already cooperated with the intelligence agencies of the five eyes countries.**

**Eric Xu:** I'm not very clear about Huawei's cooperation with the intelligence agencies of the countries that you mentioned, but I know Huawei's engagement with the GCHQ in the UK. Huawei's collaboration with the UK is a constructive collaboration. It's not simply yes or no. But rather, it's based on respective priorities as we work to find technical and regulatory solutions so that the partnership can proceed.

Huawei's collaboration with the UK government and also the UK industry has been a role model of China-UK cooperation. Huawei's investment and development in the UK, and its engagement with the UK government, have been taken as a case study when people look at governmental and people-to-people engagement between China and the UK. This is a constructive and friendly model of cooperation that has helped to address and bridge the differences of values and cultures of the East and the West. This model has allowed Huawei to constantly invest and develop in the UK, and allowed our telco customers to be able to use Huawei's technologies, products, and solutions in serving the British people.

Because we have seen many cases where in light of differences of values and cultures, parties tend to either go to confrontation or either yes or no without middle ground. It has been quite difficult for related parties to find a constructive and friendly model of collaboration that well addresses each other's concerns and priorities.

Huawei has been enjoying very good collaboration with the UK. This is largely because the UK has been a strong advocate of openness and free trade. The UK uses clear rules and rational regulation to address potential concerns that they may have. And I believe that's a cornerstone for the UK to become a nation of openness and freedom.

**09 I think my question is about "convergence". This morning, we see an enterprise division, which is an IP network service platform. In that space, people are becoming very interested in network monitoring and forensics on networks, because it's difficult, and that's where all of the traffic is. In the telco space, in the communication company space, there's more than just that network. There is ATM, and there is other standard available. But the requirements of the government, to be sure, that you are well behaved, are the same as the requirements of the enterprise. Yet the tools are very different. Do you see**

**a convergence come where 5G traffic uses enterprise standards to travel and, therefore, can make use of enterprise disclosure? Do you think that helps to solve the problem of just a box running with a light on the front of it and no one knows what traffic it generates, which appears to be where the fear comes from? So is the work in enterprise helping to solve problems in telephony infrastructure, if that's a question?**

**Eric Xu:** If all cyber security challenges are technical issues, I think certainly we can find technical or regulatory solutions to address them. And as we all know, cyber security represents a challenge that everyone in the world faces. Therefore, people have paid special attention to cyber security as they work on the selection of 5G-related technologies, as they work on the definition of 5G-related standards. 5G, from technologies chosen and from a standard point of view, is more secure than previous generations of mobile communication technologies, 2G, 3G, or 4G. I think that's something people can easily verify when they talk with experts from either 3GPP or GSMA.

Information being transmitted through 5G networks is protected by 256-bit encryption technology. That means people have to use quantum computers, which are not there yet in today's market, to possibly crack those transmitted information.

10

**But that's what I mean about convergence, because that's over the air. And people's concerns are about the infrastructure.**

**Eric Xu:** If you look at 5G, you have signals coming out from mobile phones and up to base stations and then moving up to the network. In UK networks, Huawei only provides base stations. And for network layers above the base stations, Huawei doesn't provide any equipment. As Robert said in his article, Huawei does not enter the "core" part of the network.

The network layers above the base stations are provided by other vendors, and have nothing to do with Huawei.

11

**Huawei only provides base stations in the UK. Essentially there is encryption of data transmitted from user devices into base stations. Is that information decrypted as it is transmitted from base stations to other network layers?**

**Eric Xu:** As for encryption or decryption, that's the business of telecom operators or governments.

**Is the encryption done through your equipment?**

**Eric Xu:** The keys of encryption are in the hands of governments or telecom operators, certainly not in the hands of Huawei.

12

**So I notice in the 2018 report from NCSC, they pointed to the areas of improvement of third-party components used in Huawei's products. Some people argued that this is related to Huawei's corporate culture. It seems Huawei is more willing to take in components from different sources as you build your products compared to European companies. In some extreme arguments as in the indictment from the US authorities, Huawei even encouraged employees to get technologies from other companies. So you have a US\$2 billion R&D budget to address this third-party component issue. Is this third-party component issue related to Huawei's corporate culture, or are there any other reasons? How do you plan to address those challenges in the next couple of years?**

**Eric Xu:** First, I would say your understanding is not correct. The third-party software that you are referring to is called VxWorks. It's an operating system that is provided by an American company called Wind River. We thought using an operating system from a US company would make it easier for the UK government to believe, and then it turned out it's not the case.

For any product, no matter it is hardware or software, you have to rely on an operating system as you do product development. For example, developers use either Windows or Linux as they develop application

software, so we have to use an operating system as we develop base station software. For Huawei base stations that are deployed in the UK, we chose VxWorks from Wind River. Of course, there are other third-party software and open-source software as well.

What the OB report was essentially saying is that Huawei has to improve in certain areas in the way we manage third-party software. It is not saying that such software cannot be used at all, because if that's the case, that means all of the companies may have to reinvent the wheel, or redevelop the software that is built into their products. That means you have to rebuild Windows, Linux, and databases from Oracle, which is not possible.

After this issue was brought up in the report, we talked to Wind River. And they told us that VxWorks and the very versions that we were using at the time in the UK networks are extensively used in other industries in the UK, some of which are even more sensitive compared with the telecommunications industry. Therefore, in our software development process, we use operating systems and databases from third parties. We also use open-source software. That has nothing to do with our corporate culture. That is something which is absolutely natural for all companies as long as they work on the development of products, because it is simply impossible

for one company to do everything on its own.

Some people may question why Huawei would need three to five years to improve our software engineering capabilities. What's the purpose of the additional 2 billion US dollar investment?

I think I might need a while to well address this question. I am not sure whether you are willing to spend that time with me.

At the time when we established the HCSEC with the UK government, it was primarily to address the concerns of the UK government that there might be backdoors in Huawei's products. Then we delivered our source code to HCSEC, which were then checked by British nationals with DV clearance. They looked at the source code and found no backdoors in our products.

The fact that we delivered the source code to the UK HCSEC and the extensive testing that HCSEC has done verified that there is no backdoor in Huawei's equipment. That is something Robert also talked about in his article, saying that GCHQ has not found any backdoor in Huawei's equipment. The concerns some countries have right now around backdoors have long been addressed in the UK.

And I think this whole discussion around the backdoor was long addressed in the UK when Huawei

decided to deliver our source code to the UK for testing.

And then the next step of HCSEC was to look at Huawei products to see how strong Huawei products are to prevent themselves against attacks, penetration, and other possible threats.

Then we spent eight years improving Huawei products' defensive capabilities against possible attacks and possible penetration. Through the efforts of those past years, Huawei today is the strongest in terms of those dimensions, and that is not something that we ourselves claim. It's based on objective and extensive assessment and testing by Cigital, a US company that is specialized in this area.

Cigital is a specialized company working on software security engineering maturity assessment. They started evaluating Huawei products on product security in 2013. They do this annual testing and review in 12 practice areas. Huawei ranks among the top across the industry in nine practice areas. And in the rest three, Huawei performs better than industry average.

But we are also aware that the security threat environment keeps changing, the technologies around attack and penetration keep evolving, and hackers are becoming stronger. If you only have strong security capabilities or strong defense against possible attacks

and penetration, that's like a coconut, where the shell is very tough. But what if the shell was cracked? It should not be like a real coconut, where you only have water inside.

Then the areas of focus for our collaboration with the UK was expanded to look at not only the shell of the coconut, but also what's inside, which is essentially the resilience of the equipment, not just the outcome but also the high quality and trustworthiness of the product development process. The scope was expanded from security to resilience, from only outcome to outcome plus process.

And remember, HCSEC has access to Huawei's source code, so they can easily tell whether those source codes are written in a way that's readable, easy to modify, and whether the code base is robust. We are like being "naked" in front of HCSEC.

Now HCSEC is saying that our code base is not beautiful. You know, this is a code base that has been built up by Huawei over the past 30 years in the communications industry. It's like Windows software as well. Huawei needs to improve our code readability and modifiability as well as the process of producing code, so that we deliver high quality and trustworthiness on both the outcome and the process. And then that's how the focus has been shifted to the process of software

production or what we call software engineering capabilities and practices. The idea is to take a solid and robust standard that is future-proof to measure and ask for improvement of our legacy code base that has been there for 30 years.

The security risks we faced and the software techniques we used in the past were different from today, and people's coding skills have also improved compared with the past. There are naturally gaps versus the requirements for the future. If we want to refactor and even rewrite the legacy code built up over the past 30 years, the required investment will be massive, and this also has impact on the project schedule in terms of functionalities and features we deliver to our customers today in the market.

On this specific topic, there has been a long strong debate between Huawei and NCSC. We only wanted to focus on the new code, instead of refactoring all of the legacy code. Almost all Huawei executives had been involved in this debate with NCSC, and over the course, we have been getting a deeper understanding of what it means by legacy code refactoring and by building high quality and trustworthiness into the development process. We realized that this is definitely not just about addressing the concerns of the UK; it carries a lot of weight and to a certain degree is the foundation to

Huawei's future development.

Because as we know, "cloud, intelligence, and software defines everything" are becoming more and more prevalent, the future world will see software as a very key part of that. We must ensure that our software is trusted by our customers or government authorities. To do that, we have to ensure the high quality and trustworthiness of not only the outcome but also of the process when producing such software. We think of this as the cornerstone that enables Huawei to realize our long-term aspiration.

I personally went to talk to NCSC twice and I realized we could not continue to confront each other. It's not just about addressing the requirements coming from NCSC; this is something that Huawei must be doing for our long-term development. After returning from the UK, I managed to persuade other executives on the leadership team, and we came to a Board resolution to embark on a comprehensive software engineering transformation program.

### **When did that happen?**

**Eric Xu:** This was by the end of last year. Actually, the debate in our board room for that decision was quite fierce, and in the end, we had the board decision to fundamentally enhance our software engineering

capabilities and practices, with the objective of building trustworthy products. This transformation will take three to five years to complete. Essentially, we will take the future standards and future requirements to rebuild our process of software production, and we are going to follow those future standards as we work to refactor our legacy code.

We have to work to satisfy the requirements our customers have now while working on code refactoring, so we definitely need to have an additional budget. That's where the US\$2 billion budget comes in. Essentially, that would be used primarily for legacy code refactoring, training or upskilling of our R&D engineers, and so on. Unfortunately, I am the person responsible for this transformation program; that means I will have a lot more work to do in the next five years. And I have spent a great deal of time recently working on this program.

And this US\$2 billion budget is just an initial fund. Definitely it would not be enough. I hope through our efforts in the next three to five years, we can truly build products that would be trusted by governments and by customers, so as to support and sustain Huawei's long-term development. For this reason, our founder and CEO, Mr. Ren Zhengfei, sent out an open letter to all employees as the very first corporate document issued

in 2019. It's about comprehensively enhancing software engineering capabilities and practices to build quality and trustworthy products.

I can give you a simple analogy to explain what high quality for the process is. Many people like Chinese food, but few may have visited and checked the kitchen or know what kind of moves and what kind of activities that a chef follows in order to produce the Chinese food that are set on the table.

Now it's about going into the kitchen and setting out a whole set of procedures, processes, standards, and code of conduct so that the chef can follow in order to produce tasty food. If the chef does not follow specific steps or activities in the process, maybe the food in the end would not be as tasty, and then you have to identify which specific moves that the chef did not follow, correct it and then the food would be tasty again. So that's essentially what our transformation program for enhancing our software engineering capabilities is about. It's about delivering high quality and trustworthy software code in the end, and also high quality and trustworthiness of the software production process.

It's a very challenging journey, I would say, but this is something that we have to deliver. I think that this is my answer to your questions as to why the program will take three to five years and why the US\$2 billion budget

is only the initial fund.

Frankly, I don't know how much money will be needed in order to support this transformation program.

But we certainly enjoy one advantage. We are not a public company, so it would be totally fine that we make less money today. As long as there is a future, it'll be our greatest victory. And many of our employees hold company shares. I think that they would understand this choice. They would prefer lower profitability today for the longer term future instead of more profits today without a long-term future for the company.

### **13 Are you able to estimate at all how much it might cost to entirely rewrite your code base?**

**Eric Xu:** We're in the process of doing that. We are working on the high-level plan for the whole transformation program. After we have that number, I'll let you know. And our timeline is to hopefully complete the high-level plan by the end of March.

One more thing I want to say is that these issues mentioned just now are not unique to Huawei. I think these are challenges that all companies in our industry have to work on. The only difference is the extent of improvement that would be needed, but I do believe

no company is perfect here. On top of that, the whole landscape, I think, is dynamically changing as well. Any company who voluntarily delivers their source code to the UK for review by British nationals with DV clearance would certainly expose quite a number of issues.

**14** **Sorry to return to the issue of cost, but could you just summarize the role that HCSEC will play in vetting and monitoring the new code and the timeline?**

**Eric Xu:** All of the refactored code, as long as they go into the UK networks, would be reviewed by HCSEC. Therefore whether the outcome in the end would be good or not, I believe NCSC would certainly know that. And, of course, from NCSC's point of view, they would say, all right, these are all the expectations and hopes for the future. I hear you, but I need to really see with my own eyes what you deliver in the end.

When we put in place HCSEC, the very objective was to identify issues and areas for improvement so that we can make progress. It's certainly not just about finding backdoors which do not exist. We invested 6 million euros in HCSEC in 2018, and of course we want them to identify any areas that we can take actions to improve. That's the very purpose. From my personal point of view, this model

can also push our internal R&D teams to improve, as it is a way of verifying how well our R&D teams are doing.

**15**

**I'm just wondering your opinion on the internet, considering its history in sort of military intelligence, as a tool for American military intelligence. Do you think this is just a case of the mask slipping and technology being more overtly political than ever before, more obviously political than it had been previously, and if you think so, how will this be a problem and how will you address it?**

**Eric Xu:** Technology has always been linked in one way or another with politics. What is politics? People can politicize one thing if they want to, and they cannot politicize one thing if they don't want to. How can we address this?

Humanity has gone through a long journey, and there are a lot of people in every country who have the right wisdom. For sure, technology advancements bring benefits to humankind. This is particularly true for 5G. 5G can bring benefits to the general public, enabling them to enjoy much better digital experience. It's certainly not an atomic bomb, because 5G will not hurt people.

And then for privacy protection, there is already GDPR

from the European Union. The UK is still part of that right now. Even after Brexit, I believe the UK will come up with its own standards for privacy. As long as players follow those standards, privacy will be adequately protected for people in the UK and across Europe.

Any company that violates the stipulations in GDPR would be subject to severe punishment. So we highly appreciate standards and regulations like GDPR. It is open, transparent, and nondiscriminatory. It applies to all the players. Everyone has to follow it, and those who violate it would get punished.

I think, from a technical point of view, similar standards can be set up for cyber security. With standards that are open, transparent, and nondiscriminatory, there will be clear guidelines for all players. Everyone needs to follow the standards, and those who violate them will get punished. It is as simple as that.

If it's related to politics or ideology, that is totally based on suspicion or assumption. What if I say you will kill someone in the future? I think no one can rule out that possibility 100%.

So that to a certain degree would describe what Huawei is facing today.

16

**You mentioned that Asia represents a very important market for Huawei from 5G point of view, and the maturity of European market is not that high when it comes to 5G adoption. Then can you give us some hint in terms of which specific countries in Asia that will really adopt 5G in a very big way? And how much market share that will contribute to Huawei's 5G business?**

**Eric Xu:** To me, there are three types of markets when it comes to 5G adoption.

The first type is markets with strong demand for 5G. Those countries include China, Japan, South Korea, and some GCC countries.

The second type is developed countries in Europe, and the US as well. These countries do not currently have a strong demand for 5G, and they are not that developed yet even on 4G rollout. Do you know the number of base stations in France and how that compares to the number of base stations in the city of Shenzhen? The total number of 4G base stations in France is smaller than the number of base stations deployed by China Mobile Shenzhen only.

The third type is largely the developing markets, where we do not see real demand for 5G at this point of time.

Huawei's revenue from 5G in the next few years will primarily come from the first type of markets, and a small proportion of our revenue will come from the second type of markets.

# Ryan Ding's UK Media Roundtable

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February 21, 2019  
London, England

**Ryan Ding:** Let me briefly introduce myself. I joined Huawei in 1996. I have over 18 years of experience in Huawei's R&D division. I was the head of Huawei global R&D from 2011 to 2017. Since 2017, I have been responsible for the sales and services for the carrier business. I am in the UK mainly for the pre-MWC briefing.

Yesterday at the event I shared Huawei's 5G progress with the journalists. By the end of 2018, we had signed 25 5G contracts and shipped 25,000 5G base stations. As of yesterday, we had signed 30 5G contracts and shipped 40,000 base stations. I believe the UK is a global leader in 5G. I was much honored to have the chance to make a 5G video call with three operators, namely, Vodafone, EE, and 3 UK, over their live 5G networks. Although my background is mainly technical, today I will be open and transparent with you and I would like to answer any of your questions.

**01** **Yesterday we had a conversation with the NCSC and Ian Levy said that the NCSC has yet to see a credible plan from Huawei to address the issues identified in the last OB report. Do you agree with that assessment? Can you tell us any detail in you plan?**

**Ryan Ding:** Let me brief you about the background of

the OB. It was established in 2014. Mr. Ciaran Martin is the chair of the OB. As the representative of Huawei, I'm the deputy chair of the OB. At the meeting last December, I reported to the OB about our plan for improving our software engineering capabilities and trustworthy computing. Around the end of March, we will finalize the plan internally. I'd like to emphasize the fact that our programme for software engineering capability and trustworthiness improvement is not a response to the UK market or the OB report only. Rather, it is a global and systematic programme. Starting from Q2 this year, we will start to have intensive communication with all stakeholders, including UK stakeholders, about the plan. Hopefully by the end of H1 this year, we will have completed the high level design of the plan. During this process, we will brief the OB on the content related to the UK. We know that the NCSC and the HCSEC have many top experts in trustworthy computing and software engineering, so we will also discuss with them over other content in the plan.

**02 Can you give us some more detail about your offering? As Jack said it seems you have yet to convince the UK government that it's enough. Can you give some details? What will you do in software engineering in the next 3 or 5 years to win that argument?**

**Ryan Ding:** First of all, this is a global and systematic transformation programme. It covers improvements in both software engineering and trustworthy computing. We will talk with the UK government not only about software quality improvement, but also about how to build trustworthy products. If we only talk about product quality, I believe Huawei products have the best quality in the industry. When it comes to trustworthiness, we still have much work to do. We need to ensure trustworthiness of both black boxes and white boxes at the source code level.

Since the end of last year, we have conducted a lot of internal discussions on trustworthiness and divided it into eight streams.

First, we need to build Huawei's theoretical and technical frameworks of trustworthiness. Second, we need to have trustworthy product planning. Third, we need to make sure we have trustworthy product design. Fourth, we need to have trustworthy software engineering from end to end. Fifth, end-to-end hardware trustworthiness. Sixth, contract and product lifecycle management. Seventh, software engineer capability improvement. The last and the most important one is to transform the company culture into one where trustworthiness and software engineering really matter.

These eight streams are the key areas for improving

our trustworthiness that we have identified. After March when we have the plan approved internally, we will start communicating with global stakeholders in Q2.

Regarding the two billion dollar investment, I want to share more information. We believe the transformation will require at least two billion US dollars. If it is not enough, we will add more in the future. In 2019, the company has already approved a 500 million US dollar budget specifically for the transformation. This amount is not part of the existing R&D budget that has been approved.

**03 Tell us about 5G and what is the extent of your involvement in 5G in the UK with various operators? How confident are you that it will not be brought to a halt by the government review currently on the way? How confident are you that you will be allowed to stay?**

**Ryan Ding:** As a telecom vendor, Huawei cannot decide how much Huawei equipment will be deployed in the UK. Also we cannot help customers decide whether they should choose Huawei or not. I have three points to share with you.

First, the multi-operator video call we made yesterday was based on live networks.

Second, in the past few years, we have conducted extensive collaboration and innovation with operators on 5G deployment and standards.

Third, I firmly believe that a 5G market without Huawei is just like the Premier League without Manchester United.

**04 In the call yesterday, the NCSC talked about the approach with Huawei almost being like a new standard they want for security. Are you aware of them making similar demands on Nokia or Ericsson?**

**Ryan Ding:** As far as I know, we are the only vendor adopting an HCSEC model and being subject to source code level reviews in the UK. Ciaran Martin's speech in Brussels yesterday also mentioned that their regime with Huawei is arguably the toughest and the most rigorous around the world. Ciaran also talked about three pre-conditions for security: First, we must have high standards of cyber security across the entire telecoms sector. Second, telecoms networks must be more resilient. Third, there must be sustainable diversity in the supplier market. We fully agree with all three of them.

**05 What risk management have you undertaken in the UK to manage risks that are out of your control**

**that you can see yourselves restricted or to manage policymakers concern?**

**Ryan Ding:** Ciaran Martin said in his speech, "These problems [identified in the last year's OB report] are about standard of cyber security; they are not indicators of hostile activity by China." Cyber security is all about technologies, not about politics. From my perspective, as long as governments and regulators' decisions are based on technologies and facts, not on politics, Huawei is willing to accept the decisions.

**06** **So you trust the NCSC when they say it's not about politics? We all understand on some of the meetings last year between you and the NCSC, it was quite "tense". I think that is the word used to describe it. And can you tell us your perspective on those meetings and how do you feel?**

**Ryan Ding:** All that we discussed on those meetings were related to technologies. All they showed us was technical evidence. What we have discussed with Ian were also technical issues. I welcome fact-based technical discussions and debates.

**07** **But this is only one prong of the debate because there is the DCMS as well. So there is politics in this as well.**

## **So how do you manage this risk? Do you believe the politicians understand the technologies?**

**Ryan Ding:** I have also talked with DCMS officials. And I believe what the DCMS wants is the third pre-condition mentioned by Ciaran Martin. That is to have sustainable diversity in the supplier market. We totally understand this.

We have many discussions on OB meetings. To me these are all useful interactions. Actually inside Huawei we have a forum called Xinsheng Community, where people can comment on or criticize our internal management systems and managers. The criticism there is much sharper than those from the OB.

Four or five years ago we started to make the forum open to the public. Some journalists picked information from the forum and used it to criticize Huawei. But now they are used to this Huawei model. I believe all of you believe that Huawei is a company willing to accept fact-based criticisms.

Whether the points raised in the OB report are criticisms or suggestions, they can all be considered a new starting point for our improvement. To be fair, the annual release of the OB report is a challenging and painful process in the short term. But it is a good thing for Huawei 5 to 10 years from now.

**08** **Given the last OB report was quite critical and flagged all the issues, in retrospect do you think you are a bit slow to address them or it just takes that long to go through this process because vendors were planning for 5G networks last year and a lot of work was going on? So should you have acted quicker?**

**Ryan Ding:** The software engineering and trustworthiness transformation is a really huge and systematic programme that requires significant investment. Trustworthiness is more forward-looking, but software engineering improvement is not only about the future. It is also about addressing the problems with the legacy. We believe that if we don't have a systematic refactoring of the code we have written in the last 30 years, we will be unable to lay a solid foundation for future transformation. We have indeed spent a long time to produce a systematic plan. In fact this is also the NCSC's suggestion for us. They don't want Huawei to be a reactive company; they want us to be more proactive and future-oriented when planning how to improve our software engineering and trustworthiness.

The NCSC felt that Huawei has made a lot of reactive efforts to the issues raised by them, but lacks future-oriented, systematic thinking. The reason why Huawei has spent such a long time on the plan is that this is a huge programme and Huawei wants to make a future-

oriented, systematic transformation.

**09 Will you oppose or protest against partial ban equivalence such as ban from core or mobile edge computing?**

**Ryan Ding:** Huawei is a commercial company. The only thing we can do is to provide the best possible products and services. Regarding whether Huawei is selected or not, it is the decision of operators and regulators. Huawei has no right to interfere.

**10 So you are going to MWC this year, how are your goals different this year compared with previous year?**

**Ryan Ding:** From the business side there is not much difference. But this year we will talk more about 5G. We will tell the industry that 5G is mature and encourage the industry to adopt 5G faster.

We firmly believe that since security is a technical issue, it should be addressed by technical means. We firmly support the first pre-condition raised by Ciaran Martin: There should be higher cyber security standard across the entire telecoms sector.

11

**Do you expect to spend a lot of time talking about cyber security this year because of the issues the UK and other countries have raised?**

**Ryan Ding:** No. We talk about cyber security and privacy protection every year. Compared with privacy protection, cyber security is still lacking in terms of unified standards. For privacy, Europe has issued the GDPR. This standard applies to all vendors and industry players. GSMA recently issued a statement calling for a single, unified security standard and certification process. We strongly support this initiative.

12

**Can you talk a bit about the Huawei staff that work in the Huawei Cyber Security Evaluation Centre? What are their backgrounds? Are they long-term Huawei employees? Are they British or are they Chinese? And what is the vetting process that they have to go through?**

**Ryan Ding:** This is a very good question and you have asked the right person. I was deeply involved in the whole process from early discussions in 2010 to the establishment of the HCSEC in 2011. In 2010 we started to talk to the GCHQ and operators about setting up a multi-party mechanism involving the government, operators, and vendors to make sure Huawei's products

meet the cyber security standards of the UK. In 2011, the Huawei Cyber Security Evaluation Centre was established.

All the employees there are hired by Huawei, but they must pass the UK's DV vetting. When the product versions to be deployed in the UK were released, we delivered the binary and source code of these versions to the HCSEC for testing. That model continued until 2013 when the National Security Adviser (NSA) said that since HCSEC personnel were Huawei's employees, a mechanism must be created to ensure the independence of the HCSEC, including independence of processes, HR management, finance, technologies, and so on. So in 2013, the NSA recommended building a new entity called the Oversight Board. The Oversight Board was set up in 2014. Ciaran Martin is the chair of the Board. Other members are from Huawei, operators, and other government agencies. The Board oversees the operations of the HCSEC.

Both Huawei and the NCSC firmly believe that this is a global exemplary model in which vendors, operators, and regulators work together to manage security risks.

**13**

**I got a question about this year's MWC. The US government is also sending a large delegation to MWC this year. They are expected to continue**

**this message that their close allies should not use equipment made by Huawei. Do you have any plans in MWC to respond to that message or will you talk to any specific regulators or government partners? What will your message be?**

**Ryan Ding:** I think it's very straightforward. We are just a private company registered in China. Regarding operators, what we can do is to provide the best possible products and services. For governments and regulators, we will remain open and transparent. I believe as long as we do these two things well, our business success will sustain, no matter how the world changes.

**14 What are UK operators saying to you at this moment because obviously there is the uncertainty of 5G roll out plan? Have they sought extra assurances or revisited any terms?**

**Ryan Ding:** Since the second half of last year, UK operators' collaboration with Huawei on cyber security has been much closer. This January, UK operators sent a delegation to China to review our R&D process and security capability. The operators not only want to talk with Huawei's team in the UK; they also want to directly and extensively engage with our R&D team. These are very good engagements. Just like what I said, we will

continue to be open and transparent with governments and regulators. We have nothing to hide.

**15** **So that delegation were people at chief executive level or network architect level? What are we talking about?**

**Ryan Ding:** They were Chief Security Officers and Chief Technology Officers.

**All of the operators came?**

**PR manager:** Not all the operators who work with us, just some of them.

**16** **One of the things Ciaran said yesterday I am sure you were quite happy about was no malevolence of Huawei. It seems like a clash with what the US is saying. Why do you think you have been treated so differently in the UK and in the US?**

**Ryan Ding:** One of the OB's purposes is to check whether Huawei installs backdoors. I believe the OB trusts Huawei in this regard: Huawei does not install backdoors and has never conducted any malicious activities.

Undeniably, there are some political factors behind

the different treatment we receive in the UK and the US. But Huawei is only a technology company. I myself don't understand politics. What we can do is to make the best possible technologies and services and be open and transparent with governments and regulators.

# Guo Ping's 2019 MWC Keynote Address

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February 26, 2019  
Barcelona, Spain

Ladies and gentlemen, good morning.

It's great to see you all again.

There has never been more interest in Huawei. We must be doing something right.

Of course, the past few months have been a challenge for us. On one hand, our 5G solutions are widely recognized in the industry. On the other hand, there has been a lot of speculation about the security of our 5G solutions.

Today, I would like to talk about Huawei's latest innovations and our views on cyber security.

### **Innovation – It's all in the details**

On the 2018 EU R&D Investment Scoreboard, Huawei ranks number 5 globally. Last year, we invested more than 15 billion US dollars.

This consistent investment has produced many positive results. Through nonstop investment, we can keep providing our customers with new, innovative products and more efficient services.

5G is a perfect example of this.

## **Powerful. Simple. Intelligent.**

Huawei is the first company that can deploy 5G networks at scale. More importantly, we can deliver the simplest possible sites with better performance.

With 100 megahertz, our 5G can reach more than 14 gigs-per-second; that's for a single sector. We are at the leading edge of performance.

Strong capacity also needs strong transmission equipment.

- If fiber is available, we only need to install a blade, attach one fiber, and we can bring bandwidth up to 200 Gbps. It's incredible.
- If fiber is not available, carriers can use microwave. However, the bandwidth of traditional microwave is only 1 Gbps. To address this problem, we use innovative architecture to boost that bandwidth to 20 Gbps.
- With our 5G smartphone and CPE, Huawei is able to provide end-to-end 5G solutions. We have begun to help carriers deploy 5G at scale.

## **Proven in field tests and commercial use**

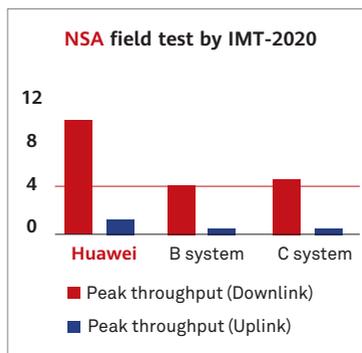
Last month, Zealer published a report, saying that

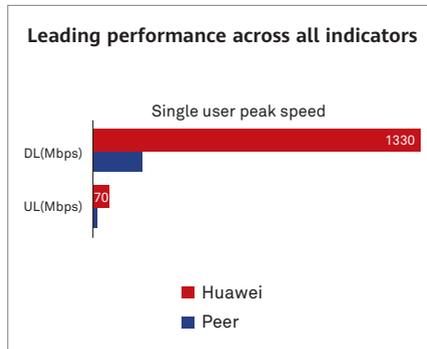
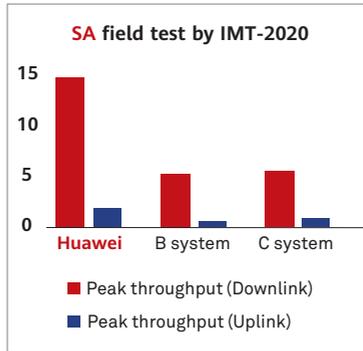
Huawei's 5G is 20 times faster than the so-called 5G in the US. That's in field tests. In commercial use, it is not 20 times faster, but it's still much, much faster. So I fully understand what President Donald Trump said last week. The United States needs powerful, faster, and smarter 5G.

In the two charts below, we have the results from IMT-2020's phase 3 tests in China. As you can see, Huawei is far ahead of the game when it comes to single site throughput.

The third chart compares the speeds of a commercial 5G network deployed by several vendors. This is a real customer network. On Huawei 5G, single user speed reaches 1.3 Gbps.

### Proven in field tests and commercial use





## Powerful

Innovation is in the details.

Let's start with capacity.

- For example, with a performance algorithm, we can more than triple cell throughput.
- For hardware, our 5G chips support 64 channels, the highest in the industry. We have also increased the computing power of these chips by 2.5 times.

For microwave, we can support 10 times greater transmission bandwidth than other solutions on the market.

Little by little, we are pushing the physical limits of our technology.

## **Simple**

We are also making sites as simple as possible, without sacrificing performance.

For example, if we made 64T antennas with old techniques, one 5G antenna would be bigger than a door. Can you imagine installing that? If we put one here on the beach, it would be blown down.

To address this issue, we are using new materials. We have reduced the number of components by 99%, and with lighter covers, we can reduce weight by 40%.

These new AAUs are as wide as a backpack and very strong. They can survive grade-15 typhoons. This happened in Shenzhen last year.

Installation is super easy. We can install them directly on a 4G site, or even on a lamp pole. Simple sites greatly reduce carrier CAPEX and OPEX. In Europe, where space is limited, we can help you save 10,000 euros on site rental, every site, every year.

## **Intelligent**

In the telecom industry, someone said we are using 5G networks of the 21st century. However, network Operation and Maintenance is still in the 18th century.

Let's look at one figure. Globally, 70% of network faults are from human limitations. To make life easier for carriers, our goal is to build intelligent networks.

Last October, Huawei launched the world's most powerful AI chips: Ascend 910 and Ascend 310. We can use these to bring intelligence to all scenarios, and reduce computing power costs for carrier networks.

Building on these chips, Huawei has developed many algorithms and models for carrier networks. With AI, we can increase resource efficiency, make O&M easier, and reduce power consumption for telecom networks.

## **Conclusion**

The more we invest in engineering science, the more value we can create.

At Huawei, we can bring powerful, simple, and intelligent 5G networks to carriers anywhere in the world, faster than anyone else.

Huawei is the global leader in 5G. But we understand

innovation is nothing without security.

And that brings me to my second topic.

## **Cyber security**

### **Prism**

Prism, prism on the wall.

Who's the most trustworthy of them all?

It's an important question to ask. And if you don't understand this question, go ask Edward Snowden.

We can't use prisms, crystal balls, or politics to manage cyber security. It's a challenge we all share.

## **Unified standards and aligned responsibilities**

To build a system that we all can trust, we need aligned responsibilities, unified standards, and clear regulation.

### **Responsibility**

There are three areas of responsibility:

- Technology providers have responsibility.
- Carriers have responsibility.
- The industry and regulators have responsibility.

## **Technology providers**

Let me start with technology providers, like us.

For technology providers, our responsibility is to comply with standards and build secure equipment.

With 5G, we have made a lot of progress over 4G, and we can proudly say that 5G is safer than 4G.

As vendors, we don't operate carrier networks, and we don't own carrier data. Our responsibility, what we promise, is that we don't do bad things.

Here, let me say this as clearly as possible: Huawei has not and will never plant backdoors. And we will never allow anyone to do so in our equipment.

We take this responsibility very seriously.

## **Carriers**

Carriers are responsible for the secure operations of their own networks.

5G networks are private networks. The boundaries between different networks are clear. Carriers can prevent external attacks with firewalls and security gateways.

For internal threats, carriers can manage, monitor,

and audit all vendors and partners to make sure their network elements are secure.

## **Industry and regulators**

Finally, as an industry, we all need to work together on standards. This is our shared responsibility.

To build safer networks, we need to standardize cyber security requirements. And these standards must be verifiable for all vendors and all carriers.

NESAS is jointly defined by GSMA and 3GPP, and it is a very good idea. Huawei fully supports this scheme.

In fact, 3GPP's security standards were created with the support of many government security agencies.

These agencies have strong capabilities to verify 5G security.

So, I fully agree with recent recommendations: Governments and mobile operators should work together to agree what this assurance testing and certification regime for Europe will be.

And I would recommend extending NESAS to the world.

Let the experts decide whether networks are safe or not.

## **Best Technology, Greater Security**

Huawei has had a strong track record in security for three decades, serving three billion people around the world.

The US security accusation against our 5G has no evidence, nothing.

The irony is that the U.S. CLOUD Act allows their entities to access data across borders.

So, for best technology and greater security, choose Huawei.

# The US Attacks on Huawei Betray Its Fear of Being Left Behind

Guo Ping's Byline in FT

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As a top Huawei executive, I'm often asked why the US has launched a full-scale assault on us. The Americans have charged us with stealing technology and violating trade sanctions and largely blocked us from doing business there. Mike Pence, US Vice-President, recently told NATO of "the threat posed by Huawei," and Mike Pompeo, Secretary of State, warned allies that using our telecommunications equipment would make it harder for the US to "partner alongside them."

On Tuesday at the Mobile World Congress, the industry's largest trade show, a US delegation led by Ajit Pai, Federal Communications Commission chair, repeated the call to keep Huawei out of global 5G networks.

Washington has cast aspersions on Huawei for years. A 2012 report by the House Intelligence Committee labelled us a threat. But, until recently, these attacks were relatively muted. Now that the US has brought out the heavy artillery and portrayed Huawei as a threat to Western civilisation, we must ask why.

I believe the answer is in the top secret US National Security Agency documents leaked by Edward Snowden in 2013. Formed in 1952, the NSA monitors electronic communications, such as emails and phone calls, for intelligence and counter-intelligence purposes.

The Snowden leaks shone a light on how the NSA's

leaders were seeking to “collect it all” — every electronic communication sent, or phone call made, by everyone in the world, every day. Those documents also show that the NSA maintains “corporate partnerships” with particular US technology and telecom companies that allow the agency to “gain access to high-capacity international fibre-optic cables, switches, and/or routers throughout the world”.

Huawei operates in more than 170 countries and earns half of its revenue abroad, but its headquarters are in China. This significantly reduces the odds of a “corporate partnership”. If the NSA wants to modify routers or switches in order to eavesdrop, a Chinese company will be unlikely to co-operate. This is one reason why the NSA hacked into Huawei’s servers. “Many of our targets communicate over Huawei-produced products,” a 2010 NSA document states. “We want to make sure that we know how to exploit these products.”

Clearly, the more Huawei gear is installed in the world’s telecommunications networks, the harder it becomes for the NSA to “collect it all”. Huawei, in other words, hampers US efforts to spy on whomever it wants. This is the first reason for the campaign against us.

The second reason has to do with 5G. This latest generation of mobile technology will provide data connections for everything from smart factories to electric power grids. Huawei has invested heavily in 5G research

for the past 10 years, putting us roughly a year ahead of our competitors. That makes us attractive to countries that are preparing to upgrade to 5G in the next few months.

If the US can keep Huawei out of the world's 5G networks by portraying us as a security threat, it can retain its ability to spy on whomever it wants. America also directly benefits if it can quash a company that curtails its digital dominance. Hobbling a leader in 5G technology would erode the economic and social benefits that would otherwise accrue to the countries that roll it out early. Meanwhile, US laws, including the Foreign Intelligence Surveillance Act, and the Stored Communications Act as amended by the CLOUD Act, empower the US government to compel telecom companies to assist in its program of global surveillance, as long as the order is framed as an investigation involving counter-intelligence or counter-terrorism.

The fusillade being directed at Huawei is the direct result of Washington's realisation that the US has fallen behind in developing a strategically important technology. The global campaign against Huawei has little to do with security, and everything to do with America's desire to suppress a rising technological competitor.

The writer is a ROTATING chairman of Huawei Technologies

# **Don't Believe Everything Your Hear. Come and See Us.**

An Open Letter from Catherine Chen to the US Media

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February 28, 2019

I am Catherine Chen, a Director of the Board at Huawei. I'm in charge of public and government affairs.

The US is a shining example of how to inspire passion for technological innovation and development. We too have been inspired by your history of creativity and hard work.

I am writing to you in the hopes that we can come to understand each other better. In recent years the US government has developed some misunderstandings about us. We would like to draw your attention to the facts.

We operate in more than 170 countries and regions, including countries like the UK, Germany, and France. We provide innovative and secure telecom network equipment and smartphones to more than three billion people around the world.

Huawei was founded over 30 years ago, and we are proud of our people's willingness to work in the world's most difficult and dangerous regions. We have put our hearts and souls into connecting the unconnected and bridging the digital divide in underserved locations around the world – places where many other companies aren't willing to go.

We build base stations in the harshest environments, like the Arctic Circle, the Sahara, rainforests in South America, and even on Mount Everest. In the wake of disasters like the tsunami in Indonesia, the nuclear

disaster in Japan, and the massive earthquake in Chile, our employees were some of the first on the ground, working tirelessly to restore communications networks and support disaster relief.

We work with many leading US companies on technology development, business consulting, and procurement. In addition, we support university research programs in the US, helping them make significant progress in communications technologies, which we believe will benefit the whole world.

There are only so many people we can reach out to. On behalf of Huawei, I would like to invite members of the US media to visit our campuses and meet our employees. I hope that you can take what you see and hear back to your readers, viewers, and listeners, and share this message with them, to let them know that our doors are always open. We would like the US public to get to know us better, as we will you.

If you would like to visit us, please send an email to [corpcomm@huawei.com](mailto:corpcomm@huawei.com).

Don't believe everything you hear. Come and see us. We look forward to meeting you.

Sincerely,

Catherine Chen  
Corporate Senior Vice President  
Director of the Board  
Huawei Technologies Co., Ltd.

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