



Huawei Board of Directors

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Content Disclaimer

At its core, Model United Nations (MUN) is a simulatory exercise of diplomatically embodying, presenting, hearing, dissecting, and negotiating various perspectives in debate. Such an exercise offers opportunities for delegates to meaningfully explore possibilities for conflict resolution on various issues and their complex, even controversial dimensions – which, we recognize, may be emotionally and intellectually challenging to engage with.

As UTMUN seeks to provide an enriching educational experience that facilitates understanding of the real-world implications of issues, our committees' contents may necessarily involve sensitive or controversial subject matter strictly for academic purposes. We ask for delegates to be respectful, professional, tactful, and diplomatic when engaging with all committee content, representing their assigned country's or character's position, communicating with staff and other delegates, and responding to opposing viewpoints.

The below content warning is meant to warn you of potentially sensitive or triggering topics that are present in the formal content of this background guide, as well as content that may appear in other aspects of committee (e.g., debate, crisis updates, directives), so that you can either prepare yourself before reading this background guide or opt-out of reading it entirely:

Upon the dais' review, there are no content concerns for this committee.

If, because of this committee's content warning, you wish to request switching committees and you registered with UTMUN as:

- a) part of a group delegation, please contact your faculty advisor and/or head delegate with your concerns and request.
- b) an individual delegate, please email our Equity Officer at equity@utmun.org with a brief explanation of your concerns based on this committee's content warning and your request to switch. You will be contacted shortly regarding your request

UTMUN Policies

We ask for your cooperation in maintaining order, both inside and outside of committee session, so that we may provide a professional, safe, inclusive, and educational conference.

Throughout the conference, please note that delegates shall only:

1. Wear Western Business Attire (i.e., no costumes, no casual wear)
2. Embody their assigned country's/character's position, not their mannerisms (e.g., no accents, no props)
3. Use laptops or electronic devices during unmoderated caucuses to draft paperless resolutions/directives (subject to their committee director's permission)
4. Opt for diplomatic, respectful, and tactful speech and phrasing of ideas, including notes (e.g., no foul language, suggestive remarks, or obscene body language)
5. Make decisions that contribute to a professional, safe, inclusive, and educational space for debate

The rest of our conference policies can be found on our website at <https://www.utmun.org/conference-policies>. By attending all or part of a UTMUN conference, attendees agree to abide by all of our conference policies.

Furthermore, delegates' efforts to contribute to a culture of collaboration, inclusivity, and equity at our conference, both inside and outside of committee session, will be considered by the dais and Secretariat when determining conference scholarships and committee awards.

In cases of failing to adhere to any of UTMUN's policies, the Secretariat reserves the right to take any action it deems necessary, including rendering delegates ineligible for awards, taking disciplinary action, and prohibiting delegates from participating further in the conference.

Equity Concerns and Accessibility Needs

UTMUN 2020's Secretariat and Staff are committed to ensuring every attendee has an enjoyable, comfortable, and safe experience and is able to participate fully and positively at our conference.

If you have any equity concerns (e.g., concerns about barriers to participation) or accessibility needs now or during the conference, please do not hesitate to contact your committees' dais and/or our Equity Officer at equity@utmun.org.

A Letter from Your Director

Dear Delegates,

It is my absolute pleasure to welcome you all to the Huawei Board of Directors Crisis Committee on behalf of our crisis team. My name is Priscilla, and I am pursuing a specialist degree in Economics at UofT. I am very proud to introduce our amazing crisis team this year: Brayden, Shashwat, Harry, Sahreesh, and Victoria! To keep it short and sweet, I will explain three points in this letter: the focus of this committee, the reasons why this topic is worth our exploration, and my personal advice for your preparation for the conference!

On May 15th, 2019, Huawei is put on the United States' Entity List. Fortunately, a few days after, Huawei was granted a 90 days license to temporarily continue existing networks and pieces of equipment. This is a vital opportunity for Huawei and its business partners to prepare for the impending restrictions.

On Day 1 of the committee, you will find yourselves in the shoes of Huawei Technologies Co. Ltd.'s Board of Directors on May 20th, 2019, day 1 of the 90 days reprieve. All of you have the capability to influence the strategies of the company, which means that you have to carefully discuss, weigh, and decide on responses to the impending restrictions, privacy and security concerns, and strategic plans for the future of the company.

This topic is unique because of its huge relevance today. The ban, which takes place in the larger context of the escalating tension between the United States and China, allows us to ask important questions: do the security concerns have justifiable grounds? What are the impacts of the trade restrictions, and are they justified? Furthermore, the topic zooms in on the motivation and strategies of powerful private actors, which is still rarely explored in Model United Nations conferences despite their rising power and influence. Do companies prioritize its shareholders, its profit, its future market influence, pushing the boundaries of science, or improving its stakeholders' wellbeing? Lastly, through this committee, we will also explore the depth of influence technology has in our daily lives, which we rarely notice. We should ask the questions: how do these powerful technological companies shape the technological landscape of today and of the future? And how does that impact the roles of governments, international organizations, as well as ordinary people's lives?

As your director and fellow member of this committee, I would highly encourage you to embrace the challenge, think outside of your ordinary flow of thoughts, and enjoy the learning process. While this is undoubtedly a complex and difficult topic for us to explore, it also offers limitless possibilities for exploration, creativity, and imagination. To help you with your research, I highly encourage you to assess the situation as your character. Consider the incentives, moral justifications, professional standards, ambitions, and other desires that motivates your character, and allow that to guide your perceptions of our key areas of discussion.

Three very important notes:

1. Our committee would not strictly adhere to the factual timeline of the events after May 19th 2019. The outcome of the crisis depends entirely on your actions.
2. Closer to the conference day, you will receive a document with details about your character's backgrounds. You are free to creatively build on it, but you cannot disregard it entirely.
3. This background guide is a necessary source for your research. Make sure you understand the overall gist of it!

See you at Huawei Technologies Co. Ltd.'s extraordinary Meeting of the Board of Directors!

Sincerely,
Priscilla Layarda, Huawei Board of Directors Crisis Committee
priscilla.layarda@mail.utoronto.ca

Historical Context

Sep 15, 1987: Huawei Technologies Co., Ltd. founded by current CEO Ren Zhengfei.¹

1993: Launches the C&C08 digital telephone switch, considered the company's first breakthrough, entering its way into the mainstream market.²

1994: Wins an important contract for the People's Liberation Army to build the first national telecommunications network.

1995: Sales reach 1.5 billion RMB, mostly derived from rural markets in China.³

1997: First international contract- providing fixed-line network products to a Hong Kong company.

2004: Obtains first major contract in Europe with Dutch operator, Telfort, valued at over 25 million USD.

2005: International sales exceed domestic sales.

2009: Debuts its first Android Smartphone at the Mobile World Congress

2010: Makes the Global Fortune 500 list, with annual sales of 21.8 billion USD

2012: Briefly became the world's third largest smartphone manufacturer for the first time in Q4.

May 2017: Enters the laptop market with the launch of the Matebook X and Matebook D.⁴

Feb 13, 2018: FBI Director Chris Wray cautions against purchasing Huawei phones.⁵

May 2, 2018: Huawei and ZTE phone sales are banned on US military bases.⁶

Jul 2018: Surpasses Apple to become the second largest smartphone vendor in the world.⁷

Dec 6, 2018: Huawei CFO Meng Wanzhou is detained in Canada by US request.⁸

Jan 29, 2019: US Department of Justice charges Huawei with 23 indictments for trade secret theft and fraud.

Feb 17, 2019: UK government concludes that using Huawei 5G equipment is a "manageable risk".⁹

Feb 24, 2019: Announces the Huawei Mate X, a foldable 5G smartphone.

Mar 19, 2019: Angela Merkel stands up against US pressure to bar Huawei from Germany's 5G rollout.¹⁰

May. 15, 2019: Donald Trump signs an executive order that effectively bans Huawei from the US market.

May. 20, 2019: Huawei receives a temporary 90-day reprieve that allows them to continue business with American companies.¹¹

Now: Day 1 of the committee.

1 <https://successstory.com/companies/huawei-technologies-co-ltd>. Date Accessed: 25 August 2019.

2 <https://populartimelines.com/timeline/Huawei> Date Accessed: 25 August 2019.

3 <https://www.huawei.com/ca/about-huawei/corporate-information/milestone> Date Accessed: 25 August 2019.

4 <https://www.techadvisor.co.uk/news/laptop/huawei-matebook-3659403/> Date Accessed: 25 August 2019.

5 <https://www.cnet.com/news/huawei-zte-fbi-chris-wray-nsa/> Date Accessed: 25 August 2019.

6 <https://www.cnet.com/news/pentagon-reportedly-bans-sale-of-huawei-and-zte-phones-on-us-military-bases/> Date Accessed: 25 August 2019.

7 <https://www.canalys.com/newsroom/huawei-overtakes-apple-to-become-number-two-smartphone-vendor-in-q2-2018?campaignname=huaweibeatsapple> Date Accessed: 25 August 2019.

8 <https://www.cnet.com/news/huawei-executive-arrested-by-canadian-officials-at-us-request/> Date Accessed: 25 August 2019.

9 <https://www.cnet.com/news/uk-concludes-using-huawei-in-5g-is-a-manageable-risk-report-says/> Date Accessed: 25 August 2019.

10 <https://www.bloomberg.com/news/articles/2019-03-19/merkel-takes-a-stand-against-u-s-pressure-to-bar-huawei-from-5g> Date Accessed: 25 August 2019.

11 <https://www.bis.doc.gov/index.php/all-articles/17-regulations/1555-addition-of-certain-entities-to-the-entity-list-final-rule-effective-may-16-2019>. Date Accessed: 8 November 2019.

Global Technological Landscape

Reasons for the Ban

There was no single cause for the ban, but it was rather a culmination of controversy and buildup of tension.

Governments, particularly the United States, have long had deep concerns regarding Huawei's ties to the Chinese government, and fear that Huawei may have created "backdoors" in their equipment that allows them to spy on consumers. Huawei has always denied this, and no concrete physical evidence has been found.

Huawei allegedly sold equipment in Iran, which broke US sanctions. This led to the arrest of Huawei CFO Meng Wanzhou in Canada by US request¹². All this occurred amidst an ongoing trade war between the US and China. Some speculate the ban on one of China's largest companies was simply another point of leverage, alongside the countless tariffs.

Effects of the Ban

Android

The greatest point of concern and one of the main reasons for the reprieve was Google, and its Android operating system that millions of smartphones around the world currently rely on. If Huawei smartphones lost access to Android, current phones face extreme security concerns due to the inability of receiving software updates. This would also mean the inability to use Google services, such as Google Maps, and most notably the Google Play Store. Essentially, without an Operating System alternative, Huawei smartphones would be rendered nearly unusable. There have been reports of Huawei developing their own OS, Hongmeng OS (Harmony OS), but they have publicly stated that it isn't designed as an Android replacement.

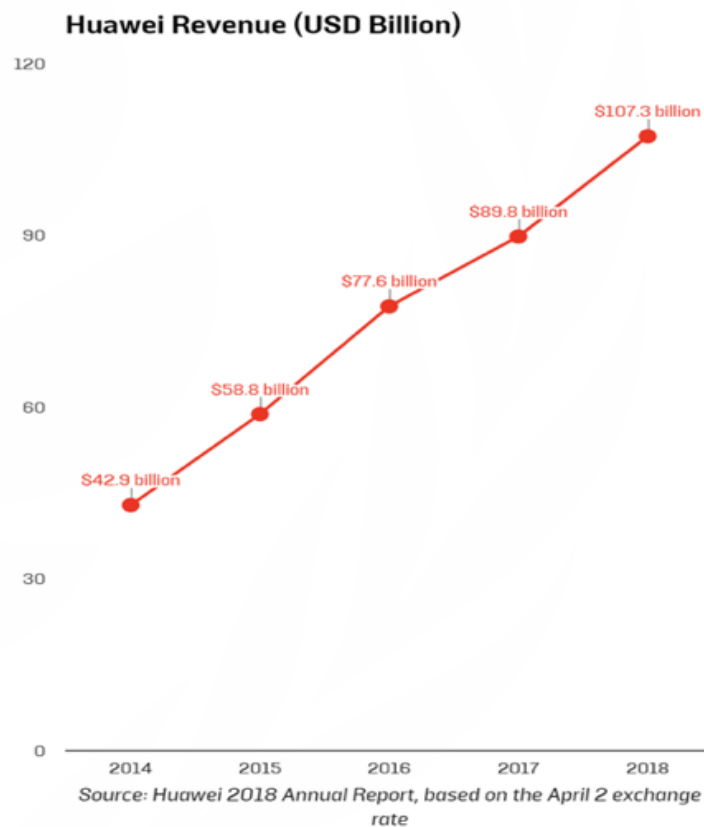
Windows

With the introduction of the Matebook series, Huawei has seriously disrupted the Windows laptop market. Unfortunately however, they rely on the Windows operating system, which is created by Microsoft, an American brand. Likewise to Android and debatably more so, without Windows, Huawei's entire laptop lineup is essentially worthless. On Jun. 11, Huawei delayed the announcement of their new laptop indefinitely.

¹² <https://www.forbes.com/sites/kenrapoza/2019/01/08/further-investigations-show-chinas-huawei-broke-iran-sanctions/#57814673d6d1>. Date Accessed: 8 November 2019.

Hardware Components

ARM-based Chips (Smartphones): ARM is a UK based chipset company, but its chip designs include "US origin technology".¹³ Following the ban, ARM froze "all active contracts, supporting entitlements, and any pending engagements" with Huawei. Phones such as the Huawei Mate 20 rely on ARM chips, as well as many other parts that are from US-based manufacturers such as Micron, Skyworks, and Qorvo. Intel and Nvidia (Laptops): Continuing the trend, Huawei laptops also rely on several US brands for their laptops. From Intel processors to Nvidia graphics cards, it is unfathomable to imagine a laptop without American parts. Huawei CEO Ren Zhengfei has publicly stated that the US ban will cost them about 30 billion USD, from the originally projected 130 billion for 2019. He doesn't see that as an issue however, saying "I don't see that problem, because in the Chinese market, the consumer business has not seen a decline. We believe the \$30 billion US will be a very small thing."¹⁴



Huawei's Revenue in USD, 2014-2018

¹³ <https://www.theverge.com/2019/5/22/18635326/huawei-arm-chip-designs-business-suspension>. Date Accessed: 8 November 2019.

¹⁴ <https://www.cnet.com/news/huaweis-ceo-is-not-worried-about-30b-revenue-hit-from-us-ban/>. Date Accessed: 8 November 2019.

¹⁵ <https://foreignpolicy.com/2019/04/03/the-improbable-rise-of-huawei-5g-global-network-china/> Date Accessed: 8 November 2019.

Current Smartphone Market

In July 2018, Huawei surpassed Apple to become the second largest smartphone vendor worldwide in market share. Since then and as of Q1 2019, Samsung, Huawei, and Apple hold 21%, 17%, and 12% respectively. The remaining market share is comprised of Xiaomi, Oppo, and Vivo, among others¹⁶. There are 4 markets for smartphones that manufacturers target: North America, Europe, China, and then the rest. Huawei has found its success mostly in China, gaining 12% market share from 22 to 34 just between 2018Q1 and 2019Q1. It has also begun targeting what it believes to be the “next China”, a modernizing region with a high demand for smartphones, India. Huawei India plans to open 1000 experience stores in the nation by 2020, with 100 of so already in planning or construction¹⁷.

One of the greatest areas for innovation in the smartphone marketplace right now is in folding phones. Long have consumers dreamed of having a tablet sized screen that could fit in their pocket, and on Oct. 31, 2018, Royole introduced the “FlexPai”¹⁸. Tech critics later realized this device left much to be desired. Months later in February, Samsung announced a device of their own, the Galaxy Fold¹⁹. This was only to be met with disappointment as review devices faced hardware failures, postponing the debut without a specific release date.

In the same month, Huawei announced a foldable phone of their own at MWC 2019, the Huawei Mate X²⁰. Many people believed that it was the most promising of the three options, but after Samsung faced their hardware issues, Huawei decided to delay their release until September to ensure they didn’t have the same issues.

International 5G Rollout

Essentially, 5G is the newest generation of mobile networking, an upgrade from 4G LTE. Although there are multiple benefits to this technology, the eye-catching feature is the increase the speed; it is expected to be able to deliver peak data rates of up to 20Gbps.²¹ As it is only in its early stages, infrastructure development projects are plentiful, and the companies that manage to secure them gain an advantageous position for the future.

Dozens of nations across the globe have begun investing in 5G and created development plans, but very few have successfully implemented public networks.²² Even in the US, rollout of 5G has been limited to designated areas of specific cities.

At the time of the initiation of the reprieve, Australia and Japan have followed in the footsteps of the US and banned Huawei, although only in terms of telecommunications

16 <https://www.counterpointresearch.com/global-smartphone-share/>. Date Accessed: 8 November 2019.

17 <https://www.retailnews.asia/huawei-india-revealed-massive-expansion-plan-by-2020/>. Date Accessed: 8 November 2019.

18 <https://www.royole.com/ca/Dynamics?id=578>. Date Accessed: 8 November 2019.

19 <https://www.tomsguide.com/us/galaxy-fold-specs-price-release-date,news-29463.html>. Date Accessed: 8 November 2019.

20 <https://bgr.com/2019/07/26/galaxy-fold-price-release-date-vs-huawei-mate-x/>. Date Accessed: 8 November 2019.

21 <https://www.qualcomm.com/invention/5g/what-is-5g> Date Accessed: 7 November 2019.

22 <https://www.lifewire.com/5g-availability-world-4156244> Date Accessed: 7 November 2019.

equipment²³. On the other hand, even under extreme pressure from US President Donald Trump, countries such as the UK and Germany have openly stated that they will continue to use Huawei equipment. This may partly be because experts say that Huawei is a year and a half ahead of Sweden's Ericsson, another telecommunications competitor in Europe, in terms of quality of 5G equipment²⁴.

23 <https://www.cnn.com/2019/04/26/huawei-5g-how-countries-view-the-chinese-tech-giant.html> Date Accessed: 7 November 2019.

24 <https://phys.org/news/2019-02-european-telecoms-dilemma-huawei-highway.html> Date Accessed: 7 November 2019.

Huawei Business Model

Core Business

Huawei's business is centred around three key areas²⁵: consumer devices and services, enterprise products and services, and carrier products and services. Consumer devices and services include phones, PCs, tablets, watches.²⁶ Enterprise products and services consists of cloud data center, network security, routers, wireless, servers, transmission and access network, intelligent video and data analytics.²⁷ Carrier products and services involves its wireless network, fixed network, cloud core network.²⁸ At the end of 2018, Huawei had deployed LTE-advanced Pro(4.5G) networks for 182 carriers worldwide and worked with more than 1,000 partners globally, and 211 Fortune Global 500 companies – 48 of which are Fortune 100 companies – selected Huawei as their partner for digital transformation²⁹.

These three business pillars work together to achieve the company's main functions: building communication and electronic systems, supplying equipment for enterprise customers, manufacturing telecommunication devices., and providing network infrastructure, wireless network, and network computing for telecommunication companies.

Huawei's main channels of business rely on online platforms and regional physical outlets. The Huawei website provides information on the corporation and its products while its VMall platform provides online shopping and delivery services) Third-party websites include popular sites such as Amazon, Ebay, Alibaba, Fido, Walmart, Tianmao, GUME.com, Suning.com, and JD.com. Regional physical retail outlets include GUME□Suning□Dphone, Saturn, and Huawei-owned retail stores, including flagship stores, experience stores, exclusive stores³⁰. As of December 2018, Huawei owned more than 60,000 retail stores.

Value Proposition

Huawei portrays itself as “the world's leading provider of information and communication infrastructure and intelligent terminals” committed to “bringing the digital world to everyone, every family, every organization, and building a smart world of Internet of Everything”³¹. It currently claims that it “will continue to build a smart world for the interconnection of all things”³². Huawei has been in the leading position of 5G innovation and development which ranks first with holding over 15% of the world's 5G patents. As of

25 www.huawei.com. Date Accessed: 26 August 2019.

26 https://consumer.huawei.com/ca/?ic_medium=hwdc&ic_source=corp_panel1_consumer. Date Accessed: 26 August 2019.

27 https://carrier.huawei.com/en/?ic_medium=hwdc&ic_source=corp_panel3_carrier. Date Accessed: 26 August 2019.

28 https://e.huawei.com/en/?ic_medium=hwdc&ic_source=corp_panel2_enterprise&source=corp_panel. Date Accessed: 26 August 2019.

29 <https://www.huawei.com/ca/press-events/annual-report/2018>. Date Accessed: 8 November 2019.

30 <https://consumer.huawei.com/en/press/news/2019/huawei-first-global-flagship-store-opened-saturday-in-shenzhen/>. Date Accessed: 7 November 2019.

31 <https://www.huawei.com/cn/about-huawei/corporate-information>. Date accessed: 26 August 2019.

32 *Ibid*. Date accessed: 26 August 2019.

December 31, 2018, Huawei have granted 43,371 patents in China and 44,434 outside China³³. As of May 2019, Huawei ranks 97th as the world's most valuable brand according to Forbes magazine³⁴.

Customer Segments and Customer Relationships

Generally, Huawei's major consumer segments include consumers, commercial and corporate enterprises, and (B2B): consumer devices and services, enterprise products and services, carrier products and services government and public institutions

More specifically, it internally categorizes its consumers into these following segments:³⁵

1. **Business-focused:** Device used primarily for business purposes. Seeks reliable network quality, particularly for voice, together with a high level of customer care.
2. **Value-chaser:** Driven by price. Spending money begrudgingly, this user seeks first-class service, but at an economy price.
3. **Family-focused:** Device mainly used for maintaining contact with family members. seek reliable coverage, particularly in the home.
4. **Entertainer:** Uses device for watching videos and playing games. Seeks high-speed data, and is an early adopter of new services. Youthful, with limited disposable income.
5. **Socializer:** Device primarily used to access social networking sites. Seeks reliable data and application performance.
6. **Heavy User:** Consumes large volumes of data for video and applications. Seeks high data speeds and large data bundles.

To maintain its relationship with its customers, Huawei focuses on quality and customer satisfaction through various channels. Huawei's use of social media, most notably, Weibo, aims to build a virtual Huawei community. Through their experience stores and technology exhibitions, Huawei establishes priority in customer experience, service, and satisfaction.

Key Partners

Several of Huawei's partners include TechStrata, SYNEX, SoftNet Solutions, Profulgent Technology, Saasfire, and PrimaSense. More broadly, Huawei works with various types of partners, including: Supplier and Vendors, Channel and Distribution Companies, Solution-oriented Companies, Strategic and Alliance Partners, and Industry Partners

33 <https://venturebeat.com/2019/05/02/china-dusts-the-u-s-finland-and-south-korea-with-34-of-key-5g-patents/>. Date Accessed: 8 November 2019.

34 <https://www.forbes.com/companies/huawei/#5f003d2d5d26>. Date Accessed: 26 August 2019.

35 <https://www.huawei.com/en/about-huawei/publications/communicate/75/catch-the-right-customers>. Date Accessed: 6 November 2019.

Supplier and Vendors

These are suppliers of materials, components, and equipment that are used in the Company's manufacturing processes, as well as suppliers of services and technologies that are utilised more broadly across the business.

Channel and Distribution Companies

Channel and Distribution Companies are distributors, resellers, and independent sales agents that help to extend the Company's sales reach, notably in markets where the Company is not itself well represented.

Solution-oriented Companies

Solution-oriented companies include technology companies, consulting firms, and various service providers that assist the Company in developing and implementing its products and solutions.

Strategic and Alliance Partners

These partners are market-leading companies across multiple business sectors, with which Huawei collaborates on joint marketing, branding, and other projects. Huawei's strategic and alliance partners include SAP, Microsoft, Intel, Accenture, and Infosys

Industry Partners

Industry partners are partners with whom Huawei focuses on expanding ICT market, build an ecosystem, digital transformation, establish standards. Includes the European Telecommunications Standards Institute, International Telecommunication Union, International Organization for Standardization, International Electrical Commission. Example projects include Push Internet Engineering Task Force(IETF) standards to drive forward internet protocol network technology. The company also works to help emerging industries like ultra HD video and blockchain reach maturity quicker. It forged partnerships with China UHD Video Industry Alliance (CUVA), the Trusted Blockchain Consortium, the Network 5.0 Industry, and Technology Innovation Alliance, and the Alliance of Internet + Energy Conservation³⁶.

Key Resources

Huawei's most important resources include its workers, its intellectual properties, its supply chain and distribution networks, its ITC infrastructures, its retail stores, its manufacturing facilities, and its partnerships. Huawei currently employs 188,000 employees, operating in over 170 countries, reaching more than 3 billion people. It owns 14 research

36 <https://www.huawei.com/ca/press-events/annual-report/2018>. Date Accessed: 8 November 2019.

Supply Chain

Product Traceability in Supply Chain

From contract to delivery.

```
graph LR; Customer[Customer] -- Client PO --> CM[Contract Mgmt]; CM -- Requirement --> PM[Product manufacturing]; HSE[Hardware Supplier & EMS] -- Raw Material Semi Product --> PM; SS[Software Supplier] -- 3rd Party Software --> RD[R&D]; RD -- SW & HW Design --> PM; PM -- Logistics --> RW[Regional Warehouse]; RW -- Return --> PM; RW -- Return logistics --> RM[Return Mgmt]; RM -- Site Installation --> Customer2[Customer]; subgraph Supply_Chain [Supply Chain]; CM; PM; RW; end
```

The diagram illustrates the product traceability in a supply chain, from contract to delivery. The process is divided into two main sections: the Supply Chain (enclosed in a dashed red box) and the final delivery phase.

Supply Chain Process:

- Customer** (represented by a person icon) initiates the process with a **Client PO** (Purchase Order).
- The **Client PO** is received by **Contract Mgmt** (Contract Management).
- Contract Mgmt** sends a **Requirement** to **Product manufacturing**.
- Hardware Supplier & EMS** (Equipment Maintenance and Support) provide **Raw Material Semi Product** to **Product manufacturing**.
- Product manufacturing** is the central hub for the supply chain.
- Product manufacturing** sends **Logistics** to the **Regional Warehouse**.
- The **Regional Warehouse** sends **Return** information back to **Product manufacturing**.
- The **Regional Warehouse** also handles **Return logistics** to **Return Mgmt** (Return Management).

Final Delivery Phase:

- Return Mgmt** leads to **Site Installation**.
- Site Installation** is the final step before the product is delivered to the **Customer** (represented by a person icon).

Supporting Roles:

- Software Supplier** provides **3rd Party Software** to **R&D** (Research and Development).
- R&D** provides **SW & HW Design** (Software and Hardware Design) to **Product manufacturing**.
- 3rd Party Software License** is also provided to **Product manufacturing**.

*Illustration of Huawei's Supply Chain*⁴⁰

Governance Structure

Shareholders' Meeting

The Shareholders' Meeting is the highest authority within the Company, and comprises two shareholders: the Union and Mr. Ren Zhengfei⁴¹. The union, in turn, conducts its work

37 <https://www.huawei.com/cn/about-huawei/corporate-information>. Date accessed: 26 August 2019.

38 *Ibid.*, Date accessed: 26 August 2019.

39 There is much debate surrounding Huawei's intellectual properties, their origin, and the extent of ownership Huawei has over them given several charges of intellectual property theft against the company.

40 <https://www.ukessays.com/essays/business/huawei-supply-chain-operations-2826.php> Date Accessed: 8 November 2019.

41 <https://www.huawei.com/ca/about-huawei/corporate-governance/the-shareholders-meeting-and-the-representatives-commission>. Date accessed: 26 August 2019

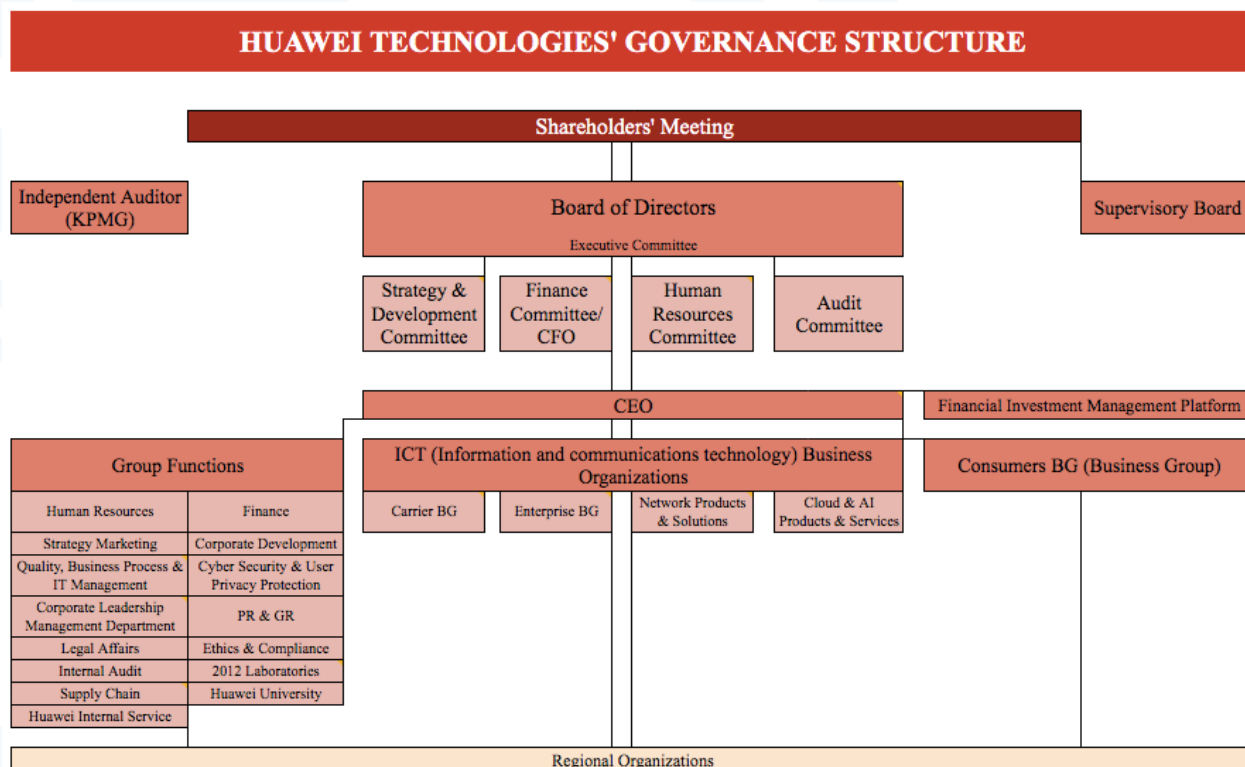
through a representatives' commission, which represents the rights of all shareholders. Currently, the commission lists a total of 49 members⁴².

The Board of Directors

The board of directors elected 4 vice chairman and 3 managing directors. The rotating chairman was composed of 3 vice chairman. The rotating chairman presided over the company's board of directors and the standing board of directors on a rotating basis. The board of directors guides the overall business operations and is involved in making decisions on strategic issues including corporate strategy and business management decision-making power. It has the highest organizational responsibility for ensuring customer satisfaction. Huawei uses a rotating CEO system under the leadership of the BoD. The rotating and acting CEO is the primary person responsible for the company's operations and crisis management during the tenure.

Supervisory Board

10 members who oversee the company's operational and financial status as well as its internal control and legal compliance



42 <https://www.businesstimes.com.sg/opinion/is-huaweis-rise-due-to-its-corporate-governance-style>. Date Accessed: 6 November 2019.

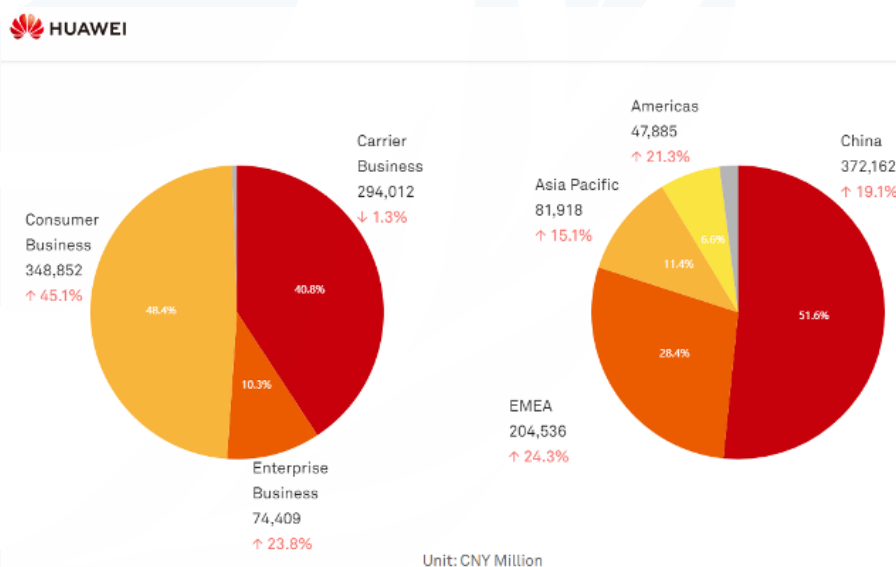
Finances

Costs

Huawei's operating cost account for the following areas: product development, procurement of materials and professional services, operation of its storage and distribution facilities, development of its online portals, building and maintenance of its ITC infrastructure, management of partnerships, implementation of marketing and advertising schemes, operation of its physical retail network, retention of its personnel, sales, advertisements, and marketing, and legal costs. In 2015 Huawei recorded total operating expenses in the amount of CNY 118.91 billion (or approximately \$17.4 billion).

Revenue

Huawei gains revenue from the sales of its products and service fees from all three pillars of its core business. In 2015 Huawei generated revenue for the year in the amount of CNY 395.01 billion (approximately \$57.59 billion), up on the CNY 288.20 billion recorded by the Company in 2014. Almost 60% of this revenue was attributed to the Company's Carrier Network segment, with the Consumer segment accounting for around 33%. In 2018, however, the company's consumer business revenue overtook its carrier network segment, earning 348.9 billion yuan or \$51.89 billion, while its carrier business earned 294 billion yuan or \$43.72 billion and its enterprise deals earned 74.4 billion yuan or \$11.06 billion. The figure below shows Huawei's revenue breakdown by business segments and geographic location of the market in 2018. As of May 2019, Huawei is worth approximately \$8 billion⁴³.



Huawei Revenue Breakdown, 2018⁴⁴

⁴³ <https://www.forbes.com/companies/huawei/#5f003d2d5d26>. Date Accessed: 26 August 2019.

⁴⁴ <https://www.telecomlead.com/telecom-equipment/huawei-revenue-from-carrier-business-drops-in-2018-89697>
Accessed: 8 November 2019.

Sanctions and Privacy Concerns

US-China Trade Tensions

In 2018, President Trump issued two executive orders calling for tighter tariff enforcement and a review of US trade deficits. These orders led to a suite of US tariffs on approximately \$50 billion worth of Chinese goods⁴⁵. Throughout the year that followed, China instituted retaliatory tariffs of its own kind in rapid succession. To date, the US has imposed tariffs totalling approximately \$250 billion on Chinese imports ranging from steel and aluminum to washing machines and solar panels⁴⁶. Conversely, China has imposed tariffs totaling \$110 billion on the US. This 'trade war' has drastically changed trade patterns around the world and has inspired protests from many industries in both the US and China⁴⁷. WTO economists sharply downgraded forecasts for trade growth in 2019 and 2020. World merchandise trade volumes are now expected to rise by only 1.2% in 2019, substantially slower than the 2.6% growth forecast in April. The projected increase in 2020 is now 2.7%, down from 3.0% previously⁴⁸.

Supply-Chain Concerns

Although Huawei has 3 core businesses, its consumer sector has been rapidly growing and became its largest source of revenue in 2018.⁴⁹ Unfortunately, this sector is largely dependent on a variety of US companies for hardware and software, an area of immense concern. In their smartphones, major components such as flash memory (storage) and RAM are supplied by Micron, and LTE antenna bands by Qorvo and Skyworks.⁵⁰ On the software side, it is only worse. All Huawei smartphones to date run on the Android operating system, and unlike hardware, there are no real alternative options currently on the market. Huawei did publicly announce that they have been developing their own operating system that could be used across all platforms, but it is clear that in its current form, it would be a significant downgrade from Android.⁵¹ Huawei has been allowed to maintain the OS on existing devices, but this will not apply to new products. Furthermore, under the ban, new devices will also be unable to use Google applications such as YouTube, Google Maps, or the Play Store.

Smartphones are not the only consumer product that Huawei sells; they expanded into the laptop market several years ago. These products also rely on US parts such as

45 <https://www.reuters.com/article/us-usa-trade-china-timeline/timeline-key-dates-in-the-us-china-trade-war-idUSKCN1SE2OZ>. Date Accessed: 8 November 2019.

46 <https://www.americanactionforum.org/research/the-total-cost-of-trumps-new-tariffs/>. Date Accessed: 2 November 2019.

47 <https://www.piie.com/blogs/trade-and-investment-policy-watch/whos-winning-us-china-trade-war-its-not-united-states-or>. Date Accessed: 1 November 2019.

48 https://www.wto.org/english/news_e/pres19_e/pr840_e.htm. Date Accessed: 19 October 2019.

49 <https://techcrunch.com/2019/03/29/huawei-books-8-8b-profit-for-2018/>. Date Accessed: 8 November 2019.

50 <https://arstechnica.com/gadgets/2019/05/huaweis-us-ban-a-look-at-the-hardware-and-software-supply-problems/>. Date Accessed: 8 November 2019.

51 <https://www.cnet.com/news/huawei-has-reportedly-developed-its-own-os-in-case-it-cant-use-android-windows/>. Date Accessed: 8 November 2019.

Intel processors and Nvidia graphics cards, among others. Similarly, they run on Windows, Microsoft's operating system, which suffers the same demise as Android. Without a software replacement, Huawei's laptop business cannot continue to exist.

Potential Loss of Market for Current Products

Huawei has had rapid growth massive success both domestically and internationally in the smartphone market, and even became the world's second largest smartphone vendor in July 2018. With the ban disrupting the supply chain, it is inevitable that this progress will begin to stagnate or even decline. Penetration into the US market will likely decrease due to public perception and lack of services, but it is not the only market at stake. Compared to the US, where Huawei only had around 1% market share at the beginning of the reprieve⁵², they had over 18% in Europe⁵³, an area where President Trump has been pressuring nations to implement bans of their own.

The gravity of this situation is perhaps best exemplified with Huawei's domestic market. In Q1 of 2019, Huawei held 34% of China's smartphone market, with other Chinese competitors Vivo, Oppo, and Xiaomi trailing behind.⁵⁴ Unfortunately for Huawei however, none of these other companies have been targeted by the US government, and will continue to have access to American hardware and software for the foreseeable future. This puts Huawei at a considerable disadvantage and paves the way for a dethroning. It is important to note that consumers in Mainland China haven't had access to Google applications such as YouTube or the Playstore for several years due to the Great Firewall, but this will be a critical hinderance for expansion into Western markets.

5G Partnerships and Deals

The 5G market is currently at a critical point in its development; the winners today will be the winners in a decade. However much international influence the United States has, they cannot control the policy decisions of other nations. Huawei clearly has its foot in the door for 5G development with 29% international market share in current telecommunications equipment, but if it is to remain a leader in this market, it cannot afford to have any other nations instigate a ban.⁵⁵ Otherwise, competitors such as Nokia, Ericsson, Samsung, or Ciena will take over.

International and Domestic Competition

As the world's second largest smartphone manufacturer, and with strides currently being made in countless other industries such as laptops and smartwatches, Huawei has had

52 <https://gs.statcounter.com/vendor-market-share/mobile/united-states-of-america>. Date Accessed: 6 November 2019.

53 <https://gs.statcounter.com/vendor-market-share/mobile/europe>. Date Accessed: 6 November 2019.

54 <https://www.counterpointresearch.com/china-smartphone-share/>. Date Accessed: 7 November 2019.

55 <https://www.telecomreviewasia.com/index.php/news/industry-news/1410-huawei-market-share-increases-by-8-in-telecom-equipment-market>. Date Accessed: 7 November 2019.

a momentous effect on the global technological market. Its aggressive push in development of new technology has given rivals no time for stagnation, forcing them to keep up with improvements of their own. Huawei has notably led with several innovations in smartphones recently, with the release of the first smartphone capable of 'reverse wireless charging' in the Mate 20 Pro⁵⁶, as well as the first smartphone with a triple camera setup in the P20 Pro⁵⁷.

If Huawei was eliminated as a player in the Western market, the incentive for companies such as Apple and Samsung to innovate, to offer competitive prices, would be significantly less. Furthermore, as Huawei suffers the full impact of the restrictions from the United States, smaller brands such as Xiaomi, Vivo, and Oppo, which receive less of the restrictive burden might flourish and take over part of its market share.

Legal Challenges

In the past few years, Huawei has been consistently legal battles on several fronts, especially on patents. Following the US government's decision to apply strict restrictions on Huawei, the company may consider challenging these decisions legally⁵⁸.

Privacy and Security Concerns

Huawei is under scrutiny for concerns over its ties with the Chinese government and the possibility of national security threats as a result of this close relationship. The company's CEO, Ren Zhengfe, is a former technologist in the Chinese People's Liberation Army. The company was also deeply involved in The Great Firewall Project and The Golden Shield Project⁵⁹. Furthermore, it is questionable whether any Chinese company is fully independent from the Chinese government as it "reserves the right to require companies to assist with intelligence gathering"⁶⁰.

In December 2018, Canadian police arrested Meng Wanzhou, Huawei's CFO and daughter of the company's owner, as a result of a U.S. allegation that she violated international sanctions against Iran. In mid-January 2019, the Polish government arrested a Huawei employee on spying charges. While there has been no hard evidence made public to support the security allegations against Huawei, the extreme moves by the U.S. and allied governments suggest there might be a solid evidence supporting the intelligence community's worries about national security threats⁶¹.

56 <https://tweaklibrary.com/reverse-wireless-charging-a-technology-quite-incredible/>. Date Accessed: 8 November 2019.

57 <https://www.androidauthority.com/best-triple-camera-phones-922143/>. Date Accessed: 8 November 2019.

58 <https://www.cbc.ca/news/business/huawei-launches-court-challenge-to-u-s-security-law-1.5046316>. Date Accessed: 8 November 2019.

59 https://www.theepochtimes.com/the-relationship-between-huawei-and-the-chinese-regimes-factional-politics-2_2736713.html. Date Accessed: 8 November 2019.

60 <https://theconversation.com/whats-wrong-with-huawei-and-why-are-countries-banning-the-chinese-telecommunications-firm-109036>. Date Accessed: 8 November 2019.

61 *Ibid*. Date Accessed: 8 November 2019.

Long-Term Strategic Plan

Staying successful in this era of exceedingly fast paced technology and digital sector is very difficult no matter what strategies a firm employ. Huawei must continue to put innovation at the forefront of its game along with other business strategies. As a Huawei Board Director, there are multiple potential challenges that Huawei will face, and should be taken into account in order for the company to continue to succeed..⁶²

Pace of Innovation

Huawei must not stop at just satisfying the current needs of the consumers. It must, in fact, create future consumer needs by continuing its current pace of innovation. Moreover, it should be on the lookout for investors trying to latch on to its impressive growth. Huawei is currently an employee-owned private company and seeing its current growth trends, it should expect challenges regarding pursuing an IPO. Historically, spreading the company ownership has led to discouragement in game changing innovations because they are risky and can hamper the returns to shareholders. If Huawei does decide to go public, it must play the stock market very carefully making sure its innovation game is not hampered.

Brand Image in the US

North America currently accounts for 20% of all global telecom spending. Ever since a 2007 report came out highlighting that CEO ren Zhengfei used to be a Civil Engineering Director for the Chinese Government before starting this company in 1987, the US government has been discouraging American companies to do business with Huawei. This is because of the possible threat of Chinese state influence and other security concerns. Huawei must play a safe game and look for ways to raise its legitimacy and trustworthiness to shake suspicions. They must lobby hard to let the company stay and sell its products in the American markets. While this might not entail being dominant in the US, but it still needs to be accepted as it grows as a smartphone brand. If all plays out well, Huawei might be able to gain the same trust and support as other Asian technology brands in the US such as Samsung, Lenovo, and LG.

Mergers and Acquisitions

Huawei established a joint venture with 3Com in 2003, who at the time were world leader in networking solutions. This venture was called H3C and according to the agreement terms, 3Com would simply sell and rebrand products under H3C while reaping the benefits of Huawei's distribution networks and local knowledge. Huawei, in the long run would gain from learning from the American giant and would eventually try to purchase their global operations in 2007. Unfortunately, the US Government regulators stepped in over concerns

⁶² <https://martinroll.com/resources/articles/strategy/huawei-transforming-chinese-technology-business-global-brand>. Date Accessed: 8 November 2019.

that the Chinese military would gain access to 3Com's cyber security unit which sells software to the U.S. military. Eventually, 3Com was acquired by HP in 2010. In 2008, Huawei signed a joint venture with Symantec to enhance their capabilities in network, and security. Three years later, Huawei acquired all of Symantec's shares in the joint venture. In order to continue to expand its business and add expertise, Huawei must stay away from the type of mergers that are predicted on cost efficiency and economies of scale. The most helpful mergers are those that add to the company's asset base and/or enhance the company's competitive advantage.

Growth Markets

In order to expand and truly make a global competitor, Huawei must succeed in building a strong global brand and in order to do that, it must make a conscious effort to a diversified viewpoint and an international mindset. The company must bring in more people in managerial ranks, with diverse experience. A global senior management could help Huawei break into foreign markets.

New Products

Software

While the system is not yet launched, it is believed that the development of Oak OS, Huawei's own operating system as an alternative of Android, started in 2012. Part of the impact of the new restrictions on Huawei, Huawei's devices will be no longer capable of upgrading to Android Q or access any Google applications. Google replaced Huawei's former license with a temporary license that lasted till the end of August 2019. Therefore, launching Huawei's own operating system could be an option⁶³

Mobile Applications

Current mobile applications include Huawei ID, Huawei Mobile Cloud, Huawei App Gallery, Huawei Wallet, Huawei Video, Huawei Music, Huawei Themes, Huawei Browser. Huawei could develop more applications to replace the access it might lose, including Huawei Game Center, Huawei Map, Find my Huawei, Huawei Mail, Huawei Books. Most importantly, Huawei could explore applications that work best under 5G services, including: upgraded cloud services, upgraded mapping services (locating where the customers are), upgraded ID and wallet system (working with public services systems such as transportation), upgraded network made online working more efficient, and control of other devices.

Hardware

New series of devices that offers 5G services, including but not limited to: Phones (Huawei Mate 30 Pro 5G was launched on September 26, 2019 in China) and laptops (Huawei MateBook X Pro was released in April, 2019 world widely). So far Huawei has only released

63 <https://www.androidauthority.com/huawei-plan-b-mobile-os-988097/>. Date Accessed: 8 November 2019.

one 5G product, which is Huawei Mate 30 Pro 5G. It could consider updating the 5G services on most of its current products.

5G-Based Stations

Huawei already developed methods and technologies to deploy 5G networks in urban areas. In their official site, they announced that their newly released products can cover various sites including towers, poles and small rooms in February 2018. Their new 5G Massive MIMO products deployed on existing 4G street lamp poles can also boost network connection⁶⁴.

Huawei may also get more involved into the construction of 5G infrastructures (5G radio hardware and 5G systems for carriers) on multiple parts of the world. Such approaches will make Huawei more dominant in modern communication.

⁶⁴ <https://www.huawei.com/en/press-events/news/2018/2/Huawei-Launches-Full-Range-of-5G-End-to-End-Product-Solutions>.
Date Accessed: 8 November 2019.

Questions to Consider

1. How could the company best respond to impending trade restrictions?
2. How should the company respond to rising privacy and security concerns?
3. What should be the company's long-term vision? What are the strategies it could pursue to realize that?
4. How would you weigh the importance of increasing profitability, expanding market share, and maximizing the wellbeing of stakeholders (note stakeholders not shareholders) of the company?
5. Do the security concerns have justifiable grounds? What are the impacts of the trade restrictions, and are they justified? Who benefits and who are disadvantaged?
6. What motivates you as a director, and how would that shape the company's policies moving forward?
7. What powers does Huawei hold? How does that impact the roles of governments, international organizations, as well as ordinary people's lives? What part does Huawei play in shaping the technological landscape of today and of the future?

Further Research

Key milestones for Huawei Technologies Co. Ltd.

<https://www.huawei.com/ca/about-huawei/corporate-information/milestone>

Huawei Annual Report 2018

<https://www.huawei.com/en/press-events/annual-report/2018>

Overview of the development of the trade tensions:

<https://www.piie.com/sites/default/files/documents/trump-trade-war-timeline.pdf>

Potential consequences of the trade tensions:

<https://www.bloomberg.com/graphics/2019-us-china-trade-war-economic-fallout/>

More on the effects of the trade war:

<https://www.economist.com/finance-and-economics/2019/08/08/the-trade-war-escalates-and-the-fog-of-war-descends>

Resource on international trade statistics:

https://www.wto.org/english/news_e/pres19_e/pr840_e.html

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