This is Huawei, a Reliable Partner

Innovation, Openness, Transparency & Collaboration

Tonny Bao
CEO of Huawei Polska
Huawei: Leading Global Provider of ICT Infrastructure and Smart Devices

Bring digital to every person, home and organization for a fully connected, intelligent world

180,000+ Employees
80,000+ R&D employees
170+ Countries
68 in Interbrand's Top 100 Best Global Brands
72 in Fortune Global 500
Worldwide Recognition

Winner of 2018 GSMA Award for Outstanding Contribution to the Mobile Industry

No. 68 Interbrand Best Global Brands

No. 72 in the Fortune Global 500 2018

Top Companies

most sought-after employers 2018

No. 1 Universum, China's Most Attractive Employers (Engineering/IT)

No. 5 EU Industrial R&D Investment Scoreboard 2018
Sustained Investment in R&D Drives Technology Breakthroughs

- $75+ billion invested in R&D in the past 10 years
- Huawei will invest $100+ billion in the next 10 years

Source: The 2018 EU Industrial R&D Investment Scoreboard

- Huawei ranks number 5 on total R&D investment of companies in 2017
Promoting ICT Standardization and Industry Development

- Total Patents: 87,805
- Patents outside China: 44,434
- Proposals for standard: 59,000+

- Membership in industry organizations: 400+
- Organizations founded by Huawei: 30+
- Key positions in standard organizations: 400+
Huawei in Poland

- **900+** Employees
- **3000+** Jobs created
- **250+** Huawei Certificated Experts

1. Innovation Center
1. Training Center
1. R&D Center (2019 base on Investment environment)
1. Technical Support Center (2019 base on Investment environment)
Digital Economy is the New Growth Model in 170 Countries

Over 170 countries worldwide have published a national digital strategy (ITU)

- 20% ↑ in ICT investment = 1% ↑ in GDP
- ICT investment returns 6.7x non-ICT
- Digital economy growing 2.5x faster than world economy
5G is the Evolution of 4G, and will Bring more Opportunities

- **Ultra Faster**: 10 Gb/s
- **Low Latency**: 1 ms
- **Massive Connections**: 1 million / km²
- **More Secured**: 256 bit key

By 2035:
- **3500 bn $**: 5G Industry Contribution
- **22 mn**: New Jobs

Source: IHS Markit
Huawei is the Global Leader in 5G

IMT-2020 5G Benchmark Testing
(Leading in all indicators)

- eMBB LF Cell Peak Data Rate (Gbps)
- eMBB LF SU Peak Data Rate (Gbps)
- Area Traffic Capacity (Mbps/m²)
- uRLLC Latency (ms)
- mMTC Connections Mn/MHz/Cell/Hour
- eMBB HF Cell Peak Data Rate (Gbps)

- Huawei
- Vender 1
- Vender 2
- Vender 3
- Vender 4

Huawei Tests the Most Complete Scenarios and the Performance Ranks First

30+ (18 in Europe) 5G commercial contracts
25,000+ 5G base stations shipped
$2 bn Heavy investment since 2009
Full Competition with Huawei’s Participant has Speeded Up Development of Poland Digital Infrastructure

Poland Ranks **No.2** Mobile Broadband Penetration(%)  

Mobile Tariff Decreased by **55%** in last 15 years

Telecommunication services cost will increase by **100%~300%** without full competition.
Reduced Presence of Huawei in Poland Will have a Significant impact to the Society

Total impact could reach **8.5 Billion EUR**

- **2G/3G/4G**
  - Accelerated devaluation of investment
  - Cost of equipment replacement
  - Cost of migration services

- **5G**
  - Lack of competition will lead to higher price
  - Reduced local investment by Huawei
  - Delayed digital economy progress
Cyber Security and Privacy Protection is Huawei's Top Priority

“... Huawei guarantees that its commitment to cyber security will never be outweighed by the consideration of commercial interests.”

– Statement on Establishing a Global Cyber Security Assurance System

"As a company, cyber security and privacy protection are our top priorities. We are committed to building trust and high quality into every ICT infrastructure product and solution we develop."

– An open letter to all Huawei employees
Huawei Has Maintained Proven Cyber Security Records Worldwide

30 years
170+ countries
3 billion people
1,500 carrier networks

Poland
15 years in Poland
38+ million people
10+ networks

Huawei's practices in cyber security have been recognized by customers.
## Huawei Cyber Security & Privacy Approaches: 5 Key Pillars

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<th>R&amp;D Cyber Security</th>
<th>Supply Cyber Security</th>
<th>Service Cyber Security</th>
<th>HR Cyber security</th>
<th>Vulnerability Management and Disclosure</th>
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<td>• Active participation in standards organizations</td>
<td>• From materials, production to customers in the supply chain</td>
<td>• Infrastructure security, Application security, Data security &amp; Personnel security</td>
<td>• Clean record and clean behaviors</td>
<td>• Responsible disclosure</td>
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<tr>
<td>• Lifecycle IPD Process integration</td>
<td>• Suppliers management &amp; global logistics management</td>
<td>• Audited for accountability</td>
<td>• Imbedding awareness</td>
<td>• Timely resolution</td>
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<td>• Industry security best practices as reference (OpenSAMM, BSIMM, Microsoft SDL etc)</td>
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<td>• Security and privacy protection code of conduct</td>
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- Clean record and clean behaviors
- Imbedding awareness
Europe Cyber Security Center in Brussels

Dedicated Communication Platform for Europe-Openness & Transparency, Collaboration

Open in Brussels on March 5th 2019

Europe Cyber Security Center

Cyber security communication with EU governments, carriers, and customers

Experience Center
Demonstrate security competitiveness of Huawei solutions and Huawei's cyber security engineering capabilities

Knowledge Hub
Carry out communication and cooperation and best practice sharing (such 5G, cloud, IoT)

Evaluation Center
Provide standardized Huawei products black and white (source code) box cyber security test and evaluation services

We are ready to establish a similar cyber security center in Poland, if the authority accept it as a trusted solution.
Independent Clarification on China’s Laws by External Legal Experts

Independent legal opinions by preeminent law firms incl. Zhong Lun, and Clifford Chance

- No empowerment to government authorities to order for backdoor installation
  No law in China authorizes intelligence offices to ask companies to install backdoors.

- No extraterritorial effect:
  Companies and branches established outside the territory of China and their employees have no obligation of “assistance”.

- Consistency
  The Intelligence Law applies also to the foreign-invested companies incorporated in China, and the China subsidiaries/branches of foreign companies. The legal obligations they assume are the same as those of Chinese enterprises under the Intelligence Law.

- Procedural requirements and limitations in law enforcement
  According to the Article 31 of the Intelligence Law, the conduct of state intelligence agency and its staff is subject to restrictions of the law, and potential abusive conduct, including infringement of legitimate rights and interests of citizens and organizations, and enforcement beyond authority would be subject to investigation and punishment in accordance with the law.

- Obligation for defense/protection
  After the Snowden event, China has released series of laws including Cybersecurity Laws, National Security laws, and National Intelligence laws since 2014, the purpose of which is to protect itself from potential security threats from other countries. It is a legislation for defense purpose, not for malicious intelligence actions or espionage.
  The telecommunication networks set up outside the territory of China with the participation of Huawei pose no threat to China’s national security. “Obligations of assistance and support” should not be interpreted as “Huawei is unconditionally obligated to meet malicious intelligence requests”, as this interpretation does not align with the intent and purpose of the legislation.
Chinese Government Clarification

“I would like to stress again that Chinese laws and regulations never give any institution the mandate to force companies to build "mandatory back doors". The Chinese government always encourages Chinese enterprises to follow international rules and abide by local laws when conducting economic cooperation with other countries. We also hope that relevant countries can provide a fair, transparent and unbiased environment for Chinese enterprises seeking investment, operation and cooperation there and refrain from setting up unnecessary obstacles for the normal operation of Chinese businesses out of other motives.”

-- Spokesman of Ministry of Foreign Affairs of People’s Republic of China

10th December, 2018

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