



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



The win-win relationship between the EU and Huawei

As the world enters the 4th industrial revolution, the era of Artificial Intelligence, the Internet of Things and faster and more powerful 5G telecommunications networks, the EU and Huawei have a unique opportunity – to be partners in leading the world's economic growth through digitalisation.

Huawei, the world's foremost supplier of information and communication technologies (ICT) equipment, has been based in Europe since it set up a first research lab with a small number of employees in Stockholm in 2000.

Now, two decades later, Huawei employs nearly 15 000 people across Europe, 70% of these locally hired, in all the EU countries and beyond. Some 2 400 of these staff work in highly skilled jobs, dedicated entirely to research, development and innovation, at Huawei's European research facilities, which now number 23 across the continent.

Meanwhile, as EU per capita income has nearly doubled over the past 20 years, so Huawei's contribution to European GDP has soared. You could say the EU and Huawei have grown hand in hand in this respect, especially in the technology sector, where Europe is well positioned to become a leader globally.

Huawei's most spectacular growth in Europe has taken place over the past four years. According to the global forecasters, Oxford Economics, the company's contribution to Europe's GDP in 2018 was €12.8 billion, having grown at an average annual rate of 19% since 2014. In the same period, employment supported by Huawei grew by 13% per year to nearly 170 000 jobs, and the €5.8 billion tax revenue the company paid to European countries in 2018 has increased by 17% a year since 2014.

Huawei, a European company

Huawei is committed to Europe. The company sees Europe as its second home base and wants to contribute to **European growth** and towards Europe's **technology leadership** in the world. It wants to help Europe achieve true **digital sovereignty** in terms of data protection, citizens' privacy, cyber security, and the ethical

considerations of the applications and equipment used on European soil. And Huawei is more than committed to making a decisive contribution to Europe's economic recovery. Already today, Huawei has manufacturing sites on European soil. Further significant investments in 5G manufacturing will follow.

To ensure Huawei is able to contribute fairly and equally to the European ICT ecosystem, the company has established thousands of win-win partnerships with European telecoms carriers, industrial companies and industry associations, top universities and research institutes, and local and regional authorities beginning to introduce smart technologies.

Huawei is now a part of the European fabric, an active player in shaping the digital economy for the future, contributing innovative technology to EU research projects and broad-ranging industry-led cooperation initiatives such as those for connected vehicles, digital transformation and smart agriculture.

The EU's approach to free, fair and open competition in the ICT sector, protecting innovation and consumer choice, and ensuring equal opportunities for companies to compete in the European marketplace, makes Europe an attractive base for companies developing high-end intellectual property.

Data privacy protects European consumers

With more than 250 million daily internet users in Europe, and virtually every European citizen owning a mobile phone, European individuals and businesses rely more and more on convenient, reliable and high-quality telecoms networks and services, and EU competition rules, along with regulations specific to the telecoms sector, mean European consumers will receive more and more innovative and affordable services in the future while also being safe in the knowledge their rights and privacy are protected.

Huawei and its partners are well placed to deliver these services. Our aim now is to continue growing hand in hand with Europe, helping the European Union achieve its goal of making Europe fit for, and a leader in, the Digital Age.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

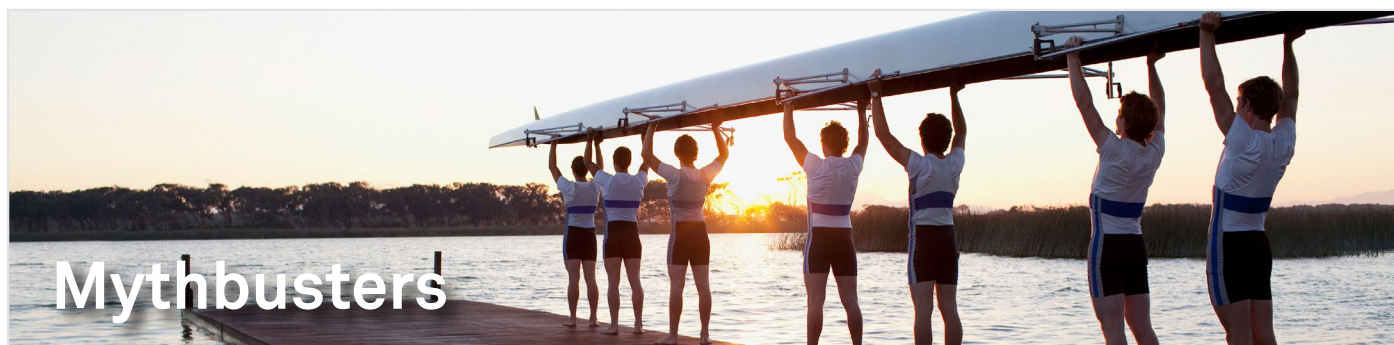
Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



Myth 1: Huawei gets cheap loans or lines of credit from Chinese banks.

Wrong. In fact, 80% of every euro of our financing comes from non-Chinese global banks.

Myth 2: Huawei has a communist party cell that runs the company.

Yes, there is a communist party branch in Huawei, as there is one in Walmart, Ericsson, Samsung and presumably the BHPs, Rio Tintos and other large companies operating in China; it's the law. In fact, three out of four foreign joint ventures in China have a branch. But that branch has no say in our operations. It meets in non-working hours and looks after staff social issues and activities. It has nothing to do with the management of company and is run by a retired employee of the company.

Myth 3: Under Chinese National Intelligence Law, Huawei has to cooperate and collaborate in intelligence work.

The law actually contains safeguards that discharge individuals and organisations from providing support that would contradict their legitimate rights and interests. And that law has no legitimacy outside China. We obey the laws of every country in which we operate. To do otherwise would be corporate suicide.

The United States alleges that Huawei's equipment is a threat to national security. What is Huawei's response?

The allegations from the United States have not been backed up by any evidence so far. Huawei's devices and networks are not a threat to the United States, or any country.

In the 30 years since Huawei's founding, we have served over three billion people across 170 countries and maintained a spotless cyber security track record. There has never been a single major cyber security incident. We have embedded strict security requirements into all of our systems used globally. We fully abide by all local laws and regulations in every nation we operate in.

The United States alleges that Huawei's equipment is a threat to national security. What is Huawei's response?

The allegations from the United States have not been backed up by any evidence so far. Huawei's devices and networks are not a threat to the United States, or any country.

In the 30 years since Huawei's founding, we have served over three billion people across 170 countries and maintained a spotless cyber security track record. There has never been a single major cyber security incident. We have embedded strict security requirements into all of our systems used globally. We fully abide by all local laws and regulations in every nation we operate in.

Myth 4: Huawei equipment is a threat to the national security of the United States of America

False. The allegations from the United States have not been backed up by any evidence so far. Huawei's devices and networks are not a threat to the United States, or any country. In the 30 years since Huawei's founding, we have served over three billion people across 170 countries and maintained a spotless cyber security track record. There has never been a single major cyber security incident. We have embedded strict security requirements into all of our systems used globally. We fully abide by all local laws and regulations in every nation we operate in. According to analysis conducted by economist Debra J. Aron, the ban could cost the US up to \$240 billion. Eliminating a partner like Huawei will create a duopoly in the US market, harming competition, stifling innovation, increasing costs for consumers and exacerbating the digital divide. According to analysis conducted by economist Debra J. Aron, the ban could cost the US up to \$240 billion. Eliminating a partner like Huawei will create a duopoly in the US market, harming competition, stifling innovation, increasing costs for consumers and exacerbating the digital divide.

Myth 5: Huawei is a foreign company in Europe

False. Huawei has been operating in Europe for 20 years and considers Europe as its second home. Huawei is a key solutions provider to the speedy economic recovery of Europe and is in the process of investing billions of euros in Europe in 5G factories.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

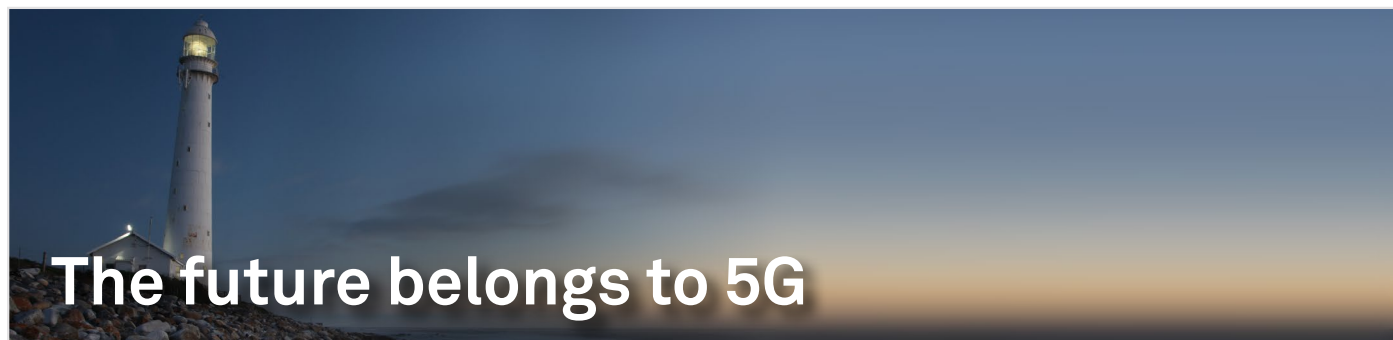
Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



We stand at the beginning of a new era. A new age of lightning-fast mobile communications where everyone and everything is connected. Where smarter devices and intelligent analysis of massive data flows will light up the cloud, powering change and a new wealth of opportunities.

5G has arrived – the fifth generation of mobile communications technology, after 4G, 3G and 2G before it – and it is already changing the way we think. It is different from its predecessors. 5G represents an explosion in data capacity and computing possibility thanks to its scope to bring about ubiquitous connectivity across the globe.

By the end of 2020, with 5G rollout now well underway, it is estimated that 6.5 billion people will be using mobile networks for data communications, while 100 billion ‘things’ – such as vehicles, industrial machines, meters, medical devices and home appliances – will be connected to the network over 5G.

Huawei recognised as a leader in 5G

The European Commission – in its March 2019 report by its internal think tank, the European Political Strategy Centre

– recognises Huawei as the standard-setter in 5G and the top 5G equipment vendor in the world.

This market leadership has not come about by chance. Huawei has spent a decade on research into 5G, spending over €500 million in the past four years alone to ensure we are indeed the No.1 5G standard setter. We recognised the potential early, adopting Professor Erdal Arıkan's monumental work on polar codes back in 2008 and promoting it as the basis for 5G commercial applications worldwide.

Huawei is now a member of over 360 standards bodies, industry alliances and open source communities in the world, including Europe's 5G Infrastructure Public Private Partnership (5G-PPP), the International Telecommunication Union's IMT2020 5G initiative, Japan's 5G Mobile Forum (5GMF), the Next Generation Mobile Networks (NGMN) alliance of global operators and the 3rd Generation Partnership Project (3GPP).

In Europe, we have taken part in over 25 of the EC's Horizon 2020 research projects, many of them dedicated to advancing 5G, and we are a member of the 5G Infrastructure Association board, the private side of the 5G-PPP. We have been trying out 5G in Europe since 2015, in cutting-edge testbeds such as the 5G Vertical Industry Accelerator in Munich and the 5G Innovation Centre at the University of Surrey in the UK.

Our innovations, research projects and trials have clearly demonstrated that 5G will impact heavily on the way business is done in vertical markets like intelligent traffic systems, smart power grids and health care services. 5G will be the basis for urban applications such as smart cities, self-driving vehicles and zero-wait Ultra-HD video streaming in dense areas. Sectors such as logistics, environment and agriculture will also benefit hugely from the introduction of 5G from 2020 onwards.

Huawei's end-to-end products and solutions

The first 5G services using enhanced Mobile Broadband (eMBB) were demonstrated at the 2019 Mobile World Congress in Barcelona. Over live networks in Barcelona city centre, Vodafone used Huawei's 5G end-to-end (E2E) products and solutions to provide live coverage over 80 MHz C-Band spectrum, with downlink rates of up to 1.7 Gbps. Leading operators are moving quickly toward 5G commercial deployment, because first movers will benefit first. On the network side, Huawei's innovative, simplified antenna solutions keep rental costs low for carriers, allowing them to commercially deploy 5G fast. Huawei is also a main provider of other vital equipment for 5G networks such as switches, routers, small cells and network slicing gear.

5G is now ON. Huawei's leading 5G end-to-end capabilities, and innovative products and solutions, are attracting customers worldwide. Through heavy investment and continuous innovation, we are committed to helping carriers deploy 5G networks easily, rapidly and cost-effectively. And we are ready to work with all stakeholders to drive the robust development of the 5G industry.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS

IMPLEMENTING THE EU 5G SECURITY TOOLBOX

The EU Toolbox for 5G Security, adopted in January 2020, is a vital way to achieve timely and secure deployment of 5G networks. As a major contributor to 5G standards and connectivity 'made in Europe', Huawei is an essential part of this process.

INVESTING IN A FUTUREPROOF EUROPE

Huawei is localising its production in and for Europe with a view to strengthening the bloc's digital sovereignty while improving transparency and maximising its economic contribution.



COMMON GROUND, COMMON CHALLENGES

Huawei welcomed delivery of the EU 5G Security Toolbox, which provide much-needed common ground.

However, we believe a security approach based on labelling specific vendors as high risk has a number of inherent limitations:

- **Trust in vendors is continually built over time and regularly reviewed.** Creating a static security label in a fast-evolving context does not adequately address risks: A global supply chain, changing suppliers, technological and regulatory change mean that "trusted vendor" labels create a false sense of security.
- **The country of origin is not a relevant criterion for assessing risk.** Manufacturing, R&D and procurement are globalised. Determining risk based on the country of origin unfairly damages business reputation without appropriately addressing threats.
- **Targeting a vendor based on the country of origin may be illegal.** Determining risk in this way may result in discrimination and trade barriers, violating applicable WTO and EU law.

A ZERO-TRUST APPROACH

To effectively upgrade the security of 5G networks, we need to address risk through a series of measurable and verifiable criteria:

- **Applying the zero-trust principle.** Taking into account the global nature of the supply chain, this approach means that all vendors are subject to the same strict standards and evaluations.
- **Using proven schemes and specifications to carry out these checks.** The European Commission should work towards a standards and evaluation scheme specifically designed for 5G. This should cover NESAS (Network Equipment Security Assurance Scheme) standards and the 3GPP-developed SCAS (SeCurity Assurance Specifications), which both involve independent auditing and evaluation.
- **Assessing vendors based on such processes and in line with WTO and EU rules.** Decisions on who is a risk must be based on concrete, transparent, non-discriminatory and proportionate criteria, applied coherently across the EU.

CYBER SECURITY AT HUAWEI: AN IMPECCABLE TRACK RECORD

- **Not a single major security incident** in the last 30 years
- **Compliance with all national and international laws and regulations** from our 20-year operation in Europe
- **Key contributor to 5G security standards:** From a total of 1,609 proposals on 5G security, more than four out of ten of them are successfully accepted

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS

Huawei's ABC principle in cyber security

Over the past 30 years, Huawei has served more than three billion people around the world. We support the stable operations of more than 1 500 carrier networks in over 170 countries and regions. In this time, we have always maintained a solid track record in cyber security.

Cyber security is a global issue. No single government or company can tackle this challenge alone.

ICT products are the result of a global supply chain. A single piece of equipment typically includes components sourced from all over the world. To deal with threats effectively, we need global standards and internationally agreed processes and best practices. A holistic and comprehensive approach is needed in which everyone takes their fair share of responsibility.

Collaboration with European partners to create a safer online environment is at the heart of our strategy.

Our approach to cyber security is that everything needs to be **built in** rather than bolted on, and so we build security into every single aspect of our company, from strategy, governance and standards, to processes, manufacturing, third-party management, delivery, human resources and audit, as well as demanding the strictest compliance from our global supply chain.

Looking to the future, we want to do more. We will keep investing substantially in our cyber security and technical capabilities.

The **Huawei Cyber Security Transparency Centre** in Brussels is an important milestone in this commitment. It offers government agencies, technical experts, industry associations and standards organisations a platform where they can communicate and collaborate to balance out security and development in the digital era.

The centre has three major functions:

1. It showcases Huawei's end-to-end cyber security practices, from strategies and supply chain to R&D and products and solutions. This allows visitors to experience cyber security in areas including 5G, IoT and Cloud.

2. The centre facilitates communication between Huawei and key stakeholders on cyber security strategies and end-to-end cyber security and privacy protection practices.
3. It provides a product security testing and verification platform, and related services, for Huawei customers.

Common challenges

Right now, there are four main challenges to building trust:

1. Fast-developing digital technology has brought new security challenges. As more digital content and services are migrating to cloud data centres and more devices go online, networks have greater attack surfaces than ever before.
2. The global community lacks a common and unified understanding of cyber security. Both the public and private sectors lack a basic common understanding of this issue. As a result, different stakeholders have different expectations, and there is no alignment of responsibilities.
3. The industry lacks a unified set of technical standards for security. There is the need to further develop security standards and verification systems, as well as professional resources and skills.
4. Governance is key. In some countries, cyber security management lacks legislative support, and cyber security enforcement is not mature.

Cyber security is a challenge we all share. To address these challenges, mutual understanding is the starting point. To build a trustworthy environment, we need to work together.

ABC principle

At Huawei, we use the ABC principle for cyber security:

- **Assume nothing.**
- **Believe nobody.**
- **Check everything.**

Trust needs to be based on facts. Facts must be verifiable, and verification must be based on common standards. Huawei believes that this is an important model for building trust in the digital era.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS

HUAWEI'S CONTRIBUTION TO AI IN EUROPE

HUAWEI POSITION ON AI

DIVERSE AND INCLUSIVE	VULNERABLE POPULATIONS	ELIMINATE BIAS	REMEDIAL MEASURES
The development and application of AI must be diverse and inclusive, as it must ensure specific individuals or minority groups are not subject to unfair bias, stigmatization, or discrimination.	AI must not be deployed in ways that will compound the disadvantages of already vulnerable populations.	AI practitioners should strive to minimize the introduction of bias when developing and deploying AI . This can be done through: <ul style="list-style-type: none">• using algorithms and data models that eliminate bias• using training datasets that meet diversity requirements• performing extensive validation of AI systems.	AI practitioners can promptly detect problems and initiate effective remedial measures with regards to: <ul style="list-style-type: none">• algorithmic bias and discrimination• when datasets deviate from personal or organizational preferences

WHY IS AI SO IMPORTANT

- Practical AI applications will become pervasive
- This will generate new demands for intelligence and incubate new technologies, products, industries, businesses, and models
- Industrial AI will be the foundation of digital transformation and business innovation
- Full-scale and full stack globalized industrial AI will accelerate digital innovation

RECOMMENDATIONS FOR THE EUROPEAN APPROACH TO AI

- Stimulate a positive mind-set to outweigh negative challenges
- Uphold a specific, risk-based system for regulation
- Embrace global cooperation
- Reinforce synergies between national funding schemes
- Encourage development of digital skills
- Nurture start-ups
- Implement AI in the public sector

HUAWEI'S AI FOR GOOD

StorySign: Huawei has a free mobile app that aims to help deaf children read by translating text from selected books into sign language with AI.

Facing Emotions: application that uses AI to allow the visually impaired to “see” the emotion on the face of someone they are talking to by translating it into sound.

Unfinished Symphony: Using the power of AI, Huawei has taught its Mate 20 Pro smartphone to compose the third and fourth movements of Schubert's famously 'Unfinished Symphony'. The Mate 20 Pro listened to the first two movements of Schubert's Symphony No. 8, analysed the key musical elements that make it so incredible, then generated the melody for the missing third and fourth movement from its analysis.





20 YEARS
OF CONNECTING
EUROPE

INSIGHTS

HUAWEI'S CONTRIBUTION TO AI IN EUROPE

8 AREAS

HEALTHCARE	TRANSPORTATION	FARMING AND AGRICULTURE	FORESTS
Track AI project <p>Detection of visual disorders in childhood requires a specialised paediatric ophthalmologist to examine children. Through a unique collaboration between Huawei and the DIVE start-up, 18 ophthalmologists from 5 different countries across 3 continents will collect data from children either with normal visual development or with a wide range of visual disorders to develop an easy-to-use, portable, and affordable device for non-trained professionals to identify these children with visual disorders as soon as possible.</p> Benefits: <ul style="list-style-type: none">• Decrease the rate of undiagnosed visual disorders• Easy to use for non-trained people 	Enabling a Future-Ready Airport through AI Innovation <p>Huawei and Shenzhen Airport are following the 'Platform + Ecosystem' strategy to build a future-ready digital platform.</p> <p>Based on Huawei's ICT infrastructure, the two parties have integrated the Internet of Things, big data + AI, Geographic Information System (GIS), and Integrated Communication Platform (ICP) resources. AI big data is used for applications such as knowledge graphs, machine learning, and natural language processing.</p> Benefits: <ul style="list-style-type: none">• Operational control• Security• Passenger services to the airport 	Smart farming; The connected farm <p>In Spain, Telefonica and ABB provided the remote irrigation system which helped farmers incorporate computers and mobile phones in setting up a suitable irrigation schedule. The solutions were based on the mobile telephony network and remote reading registers.</p> Benefits: <ul style="list-style-type: none">• Savings – 47 hm3 of water per annum• 25% increase in farm profits• 30% reduction in electricity bills 	Prevention of illegal logging <p>Huawei is working with Rainforest Connection (RFCx) to prevent illegal logging; the sounds collected by mobile sensors spread throughout the rainforests are stored and managed using HUAWEI CLOUD's big data solutions.</p> <p>AI algorithm models identify the sounds made by electric saws and trucks.</p> Benefits: <ul style="list-style-type: none">• Monitoring of endangered animals' habitats• Prevention of illegal activities 
SKILLS	VEHICLES	CONNECTED CARS	MANUFACTURING
ICT Academy & Seeds for Europe Programme <p>Huawei has established ICT academies around the world, bringing the latest digital technologies to all parts of the world and cultivating local talent to equip them with skills they will need in the digital era. In addition, the scholarship programme Seeds for the Future sends European ICT students to China on a two-week study trip.</p> Benefits: <ul style="list-style-type: none">• Partnerships with +900 universities• +45000 students benefit from this program yearly• +1300 European students from more than 30 countries took part in Seeds for the Future 	Vehicle Intelligent Twins (iVehicle) <p>Through the use of big data and artificial intelligence (AI) technologies, Vehicle Intelligent Twins (iVehicle) provides functions such as vehicle status and location monitoring, driver drowsiness detection, real-time route planning, and robot assistants, powering intelligence transformation from products to services and making life smarter.</p> Benefits: <ul style="list-style-type: none">• Optimized algorithms improve the precision of intelligent Q&A• Ease of use to facilitate third-party applications integration• Improved road safety 	ICT integrated Connected Vehicle platform <p>Huawei is collaborating with car makers to connect vehicles, joining the policy debate on standards for the future connected road ecosystem.</p> <p>Thanks to the ICT integrated Connected Vehicle platform, global public cloud services, and industry suites, Huawei has become a perfect partner for Groupe PSA to execute their strategy and support all their car factories based on a global platform.</p> Benefits: <ul style="list-style-type: none">• Roll-out of connected vehicle services in eight regions by 2020• Support to more than 10 million connected vehicles• Mobility services for over 180 countries 	Smart Factory <p>Huawei's industrial predictive maintenance solution collects and transmits data in real time to reduce the need for physical inspections. By using data analytics on the cloud, it is possible to identify issues and send an alert in advance of a likely malfunction.</p> <p>Huawei is working with its partners to provide Schindler with an industry-leading Internet of Elevators solution.</p> Benefits: <ul style="list-style-type: none">• Downtime reduced by 90%• Maintenance costs -50%. 

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



The early years

One of the first areas of the Chinese economy to open up to foreign competition, under Deng Xiaoping's economic reforms, was the telecom infrastructure sector. Huawei was established by a man by the name of Ren Zhengfei. Yes, Ren was a Major in the PLA and in 1983, along with a million others, he lost his job. During his time with the PLA, Ren was in fact a civil engineer building bridges and factories. In 1987, he was a 44-year-old businessman who had suffered a number of failures but wanted to try again in the telecommunications field. With funds invested by five colleagues to provide working capital of about EUR 4 000, he started Huawei. At the time, he had little support and many things were stacked against him. When Huawei first started, the Swedish multinational Ericsson had already been in China for three years. In fact, there were nine international communications equipment manufacturers doing business in China at the time. Also, during this period, over 400 Chinese telecom manufacturers sprang up. Competition was based around the big cities of Shanghai, Beijing and Guangzhou. Huawei didn't stand a chance. So, establishing their headquarters in the new city of Shenzhen, the sales force went west to the remote and regional areas of China.

At the time, money was tight. The rules around private companies meant that bank loans were virtually impossible to secure. Out of necessity, the Huawei staff share ownership structure was developed to raise the capital necessary for growth. It has been the backbone of the company's success. Shares were offered to retain staff. Today, 96 000 employees

own Huawei, with our largest single shareholding belonging to our founder Ren Zhengfei, who has 1.4 % of the company.

Mr Ren has always admired US business models. He noted they focused heavily on R&D, and he looked at their business structures during a visit to the US. He then hired expert companies to help him grow his business – IBM, PWC, KPMG, Hay Group, etc. In 2000, Huawei went global. It was a slow start, with only 1 % of revenue coming from outside of China. However, it changed the course of our company's history – and, more importantly, upended the entire telecom sector. Just as in China, Huawei went to the markets that the global giants of the time ignored. Africa, the Middle East, South-East Asia. The timing proved right. Huawei missed the 2G era and started focusing on 3G R&D. As the dot-com bubble had burst, competitors spent less on R&D, giving Huawei an opportunity to catch up, turning a technology gap into a level playing field. Huawei knew that better technology was the key to success, so the company mandated that a minimum of 10 % of revenue needed to be spent on R&D. By the time 4G arrived, Huawei had become a global leader. Huawei is a 100 % employee-owned private company operating in 170 countries. More than one third of the world's population uses Huawei technology for their daily communications needs. With such reach, it is no surprise Huawei receives plenty of attention from global regulators and security agencies. As Huawei's Global Head of Cyber Security John Suffolk often says: "Huawei is the most poked, prodded and audited company on the planet."

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



A truly global culture

Across Europe, Huawei is sometimes perceived as a typical Chinese company. True, the Huawei headquarters are located in Shenzhen, a modern metropolis just next door to Hong Kong. But it's also true that Huawei operates in 170 countries across all continents, and that throughout its dynamic history it has embraced advice and guidance from all corners of the world. Through its participative corporate culture, input from employees of all nationalities shapes Huawei on a daily basis!

Huawei's culture is like an onion with many layers; one layer is the British culture, another layer is Chinese, and still another is American. For instance, the US-based tech company IBM advised Huawei on its management system and has left a lasting imprint on Huawei's working structure. Huawei could not have become a leading global ICT service provider without international expansion.

Arguably, the roots of its global outlook were already in place when Ren Zhengfei established Huawei in 1987 – with a starting capital of just 21 000 yuan, less than 4 000 euros at that time. Back then, China was a very different country from what it is now: after Deng Xiaoping's reforms, the economy was only gradually opening up. Those who took the risk to set up their own company were real pioneers – competition was fierce and success all but guaranteed. After Huawei managed to survive the first years, this pioneer spirit naturally led Ren and his team to look beyond China. Already then, openness was the basis of Huawei's survival and growth.

"Plunging into the sea" of international expansion, Huawei had a chance to gain a foothold in markets as yet undeveloped by

American and European telecom companies. As it happened, in the early 1990s, Africa was a continent offering numerous opportunities. Perseverance, one of Huawei's core values, was key in setting up networks in markets that competitors avoided entering. Had the Huawei executives thought about all that could go wrong when engaging in hardship locations, they would not have come very far. The spirit of openness, not the fear of unpredictable outcomes, drove investment decisions already back then.

At the end of 1997, Huawei founder Ren Zhengfei sold his second-hand Peugeot and bought a BMW. One day, when driving his BMW on Shennan Avenue in Shenzhen, Ren spotted then IBM chairman Louis Gerstner. "Do you know where the handbrake on this BMW is?" Ren asked Gerstner. One year later, IBM had successfully built up Huawei's modern business management system. By then, Ren knew where the handbrake was. Beforehand, he was so focused on expansion that he did not have enough time to think about the handbrake.

With an open mind, Huawei has developed a unique culture that combines both Western and Eastern characteristics. This, together with its core values, is the secret to its rapid growth and its perseverance in more challenging times such as in 2019 and 2020.

Invaluable experiences come from operating internationally in 170 countries. Everywhere Huawei operates, it abides by the local laws. Huawei also observes the conventions of the United Nations.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

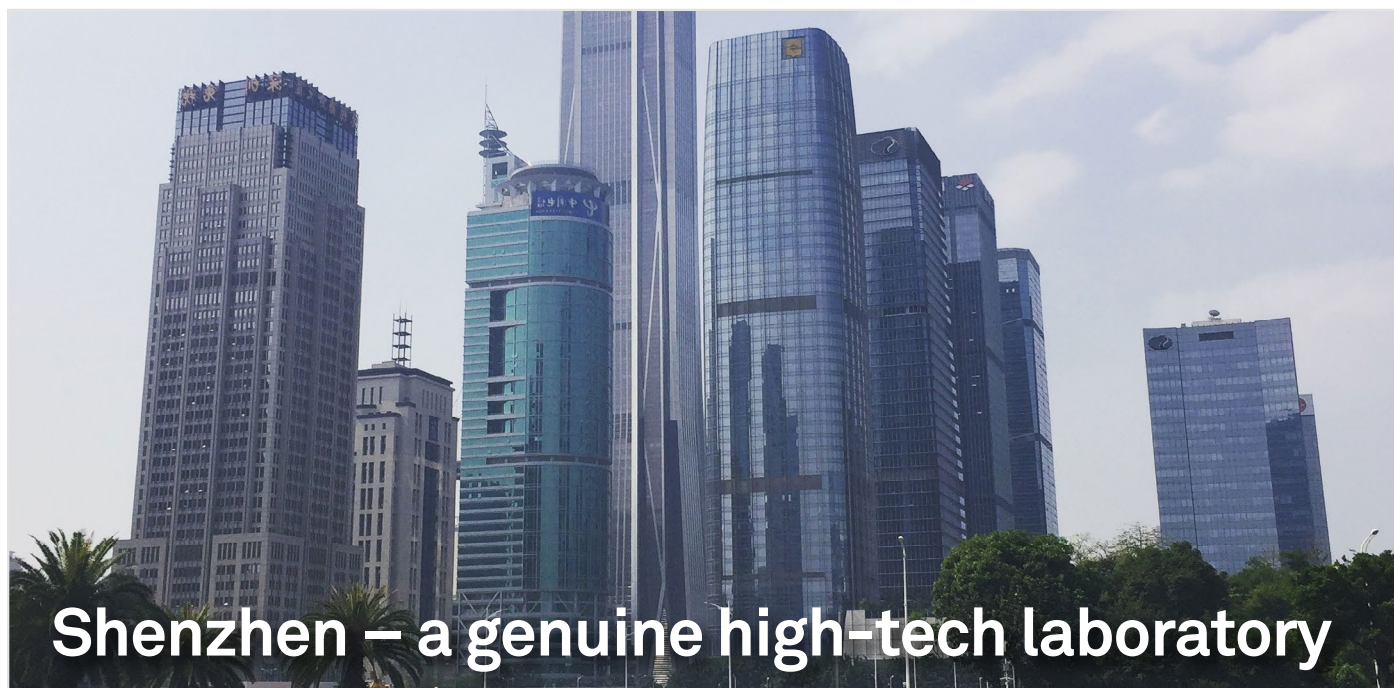
Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



Shenzhen – a genuine high-tech laboratory

Understanding the place where a company is based is often key to understanding the soul of a company. Huawei's home is in Shenzhen in the south-east of China. It is a particular place. On a world map, Shenzhen seems far away from Europe – approximately 10 000 kilometres from Brussels. Yet there is a direct air service linking the two cities, making travel easy and comfortable.

Today, Shenzhen has over 15 million inhabitants – 30 years ago it was a fishing village with a population of a couple of hundred souls. Shenzhen is currently one of the fastest growing cities on earth, and the city with the highest income per head in the whole of mainland China.

But what makes Shenzhen really special is its spirit of pioneers and excellence. When Deng Xiaoping inspired the progressive economic opening-up of China some 30 years ago, Shenzhen became one of the special economic zones in which entrepreneurs such as Huawei founder Ren Zhengfei could test their resilience and their determination to shape China's economic future. Competition was tough. Not everybody succeeded, but those who made it were in for an amazing ride. From the beginning, Shenzhen has been a place where boundaries are pushed, where the impossible is being put into practice. And a place where tomorrow's technologies are already deployed today.

Today, Huawei aims to bring the digital revolution to every person, home and organisation across the globe. Nowhere is this vision as far implemented in practice as in Shenzhen. On the streets, buses and taxis drive with electric engines – for pedestrians this means having to mentally adapt as the traditional sounds made by cars

and buses are not present here. Correspondingly, the air quality is substantially better than for example in neighbouring Hong Kong. Cash as a means of payment has been eliminated in practice as most payments are being done via the smartphone WeChat app (which is the Chinese equivalent to WhatsApp, but with an integrated payment function). Shenzhen is a Smart City at its best.

Not all features deployed in Shenzhen can be easily reproduced elsewhere. For example, there is a positive and constructive attitude of the population towards the large-scale deployment of CCTV. This results in fewer traffic jams, the elimination of petty crime and better performance of communal services such as waste management. Cultural differences mean that in Europe the public acceptance of CCTV coverage of cities might be less developed, even if that means living with more crime and more road accidents. Huawei as a truly international company knows both China and Europe very well and is fully respectful of local customs, laws and regulations wherever we operate.

Huawei's headquarters are located in the north-eastern part of Shenzhen. The Huawei campus groups together several building complexes. Next to Huawei founder Ren Zhengfei's office, there is a lake with black swans swimming in it. If the black swan theory holds that there are rare, hard-to-predict events that are beyond the realm of normal expectations, then it is certainly Huawei's ambition to live up to the unexpected and to drive progress in an ambitious manner. Where it was presumed that black swans did not exist until nature proved the contrary, Huawei has the ambition of bringing new technology to people all over the globe. And the spirit of Shenzhen is at the heart of this great quest.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



20 YEARS
OF CONNECTING
EUROPE

INSIGHTS



Our Core Values – the essence of Huawei

The essence of a company is reflected in its culture, core values, mission and vision.

Companies have measurable and quantifiable assets such as buildings, equipment, patents and technologies. These assets can be expressed in financial figures, but they do not express the company's soul or reasons for existence.

The essence of a company is reflected in its culture, more specifically in its core values, mission and vision. These intangible assets form the backbone of all the activities that lead to product development and deployment.

At Huawei, we take the customer's needs very seriously and this means that we put the customer first in everything we do. When a clear direction is accompanied by a strong and supporting set of values (and related behaviours), the employees take ownership and understand what to do and how to do it. In this sense, the core values are driving Huawei forward and are key to understanding the rise of Huawei in recent years and decades.

Integrity, the essence of Huawei

Huawei founder Ren Zhengfei puts it as follows: "The essence of Huawei's culture can be described with one word: integrity.

As our most valuable intangible asset, integrity is the key to our survival and the source of individual and corporate growth."

At Huawei, our customers always come first. Huawei can only exist thanks to its customers.

Logically, **Customer Centricity** is the goal. We achieve this goal through **Inspiring Dedication**. Dedication can be achieved through **Perseverance**, i.e. maintaining course when the going gets tough, and not losing sight of strategic objectives, even if short-term obstacles come along. To **Grow by Reflection** then refers to employing wisdom accumulated through experience (sharing) and thinking, positively impacting on the other three core values.

As a truly international company, Huawei values openness as a key factor for continued success.

It boasts a unique culture that combines both Western and Eastern characteristics.

Huawei's culture is like an onion with many layers; all representing different cultural elements that enable Huawei's employees to make a real difference across the world. They are the essence of Huawei.

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020



INSIGHTS



20 YEARS
OF CONNECTING
EUROPE

ARTIFICIAL INTELLIGENCE & EUROPEAN GREEN DEAL

HUAWEI IS COMMITTED TO PROMOTING GREEN ICT SOLUTIONS

Achieving the objectives set out in the Green Deal demands **actions coming from all sectors of the European economy**:

- Investing in **environmental-friendly** technologies;
- Supporting industry to innovate and **switch to greener processes**;
- Rolling out **cleaner, cheaper and healthier forms** of private and public transport;
- Achieving digitalisation in **rural areas and agriculture**;
- Working with international partners to **improve global environmental standards**.

ARTIFICIAL INTELLIGENCE & FARM TO FORK STRATEGY: HUAWEI'S SOLUTIONS



Connected Cow – A Huawei AI connected technology allowing farmers to **maximize milk yields** by monitoring the most optimal time for their cattle to mate over vast areas of land in real time – **saving money, man-hours, and reducing waste**.



Yield Monitoring – AI can monitor grain mass flow, moisture content and quality of harvested grains – reducing operational costs, waste, and **enhancing productivity reducing prices**.



Rural Star – 5G base station enabling remote farms and rural areas to have access to the network, making AI and smart farming possible to all.



Soil monitoring – IoT enabled solutions help farmers **track and improve soil quality** to avoid degradation over time.

With our continued investment in **R&D**, we aim to help industries to **conserve energy and reduce emissions** via the use of new technologies and build an environmentally friendly low-carbon society that saves resources.

WHAT ROLE CAN AI PLAY IN ACHIEVING THE GREEN DEAL PRIORITIES?

The **European Green Deal** covers all sectors of the economy. **Digital technologies** contribute through reducing transaction costs, monitoring real-time usage of data and building in efficiencies into processes. **Digitalisation** leads to greater efficiency and sustainable solutions.

AI solutions facilitate evidence-based decisions and expand capacities to understand and tackle environmental challenges – **digital technologies are critical enablers for attaining the sustainability goals of the European Green Deal**.

Broader use of AI could reduce worldwide greenhouse gas (GHG) emissions by 4% in 2030, an amount equivalent to 2.4 Gt CO₂e.





20 YEARS
OF CONNECTING
EUROPE

INSIGHTS

TOWARDS A GREEN RECOVERY – ASSISTED BY DIGITAL TECHNOLOGIES

Recovery from the Coronavirus pandemic needs to be looked at in a holistic manner.

The crisis may serve as a **motor for the recovery** – it **can be turned into an opportunity** to rebuild economies differently, and **more sustainably**.

Europe will witness the transition to a new normality – **digitalisation and sustainability** will ensure more resilience and kickstart the economic restoration.

A **Green recovery** is vital: mobilising investments towards sustainability – renewable energy, clean cars, energy-efficient houses – will make our society and our planet healthier.

The bedrock of these technologies being successful is **Artificial Intelligence**.

Data and AI will also help us to be better prepared for the future – and the next crisis.

For now however, **investing in the implementation of the European Green Deal aims is a route out of the Coronavirus crisis**.

THE IMPORTANCE OF CONNECTIVITY

Connectivity contributes to enforce policies, including those linked to **Sustainable Development Goals and the Farm to Fork Strategy**.


With connectivity comes **AI capability** – a crucial component of the **Farm to Fork Strategy**: AI brings about reduced costs for farmers, improved soil management, a **reduction in the use of pesticides, fresh water, and GHG emissions**.

A **long-term vision is essential**: we urge policymakers to look at the future and invest in it now – creating regulatory certainty and investing in network connectivity are the next steps.

Connectivity is strictly linked with **accessibility**: proper training and up-skilling of workers should be in each Member State's agenda – so that they can actively take part in the renewed digitalised society.

Within the framework of the EU Green Week, Huawei is happy to exchange ideas and views on how to stimulate recovery in a sustainable, efficient way.

We have been in Europe for more than 20 years now, and we are committed to help the EU deliver its rightful digital ambitions, enhance resilience, and contribute to the recovery of the global economy.

 @Huawei_Europe

 @Huawei

Huawei EU press contacts:

Philip Herd
+32 491 165 509

Jakub Hera-Adamowicz
+32 499 641 839

Find out more: www.huawei.eu

Published September 2020