

Connecting the Future

2015 Sustainability Report



Report Profile



2015 Sustainability Report

Huawei Investment & Holding Co., Ltd.

Every year since 2008, Huawei Investment & Holding Co., Ltd. ("Huawei", "the company", or "we") has voluntarily released sustainability reports and disclosed our sustainability performance so that the public can better understand the strategy, approach, and implementation of our sustainability efforts. Doing so helps us be more sustainable and facilitate communication, awareness, and interaction with our stakeholders and the public.

This report covers all entities that Huawei either has control of, or a significant influence over, in terms of financial and operational policies. The scope of the entities covered in this report is consistent with the scope of organizations discussed in the *Huawei Annual Report 2015*. Unless otherwise specified, this report describes the economic, environmental, and social performance of Huawei and its subsidiaries worldwide during the January 1, 2015 to December 31, 2015 reporting period. All data contained herein is derived from Huawei's official documents and statistical reports.

This report is prepared in accordance with the Core Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines. Huawei engaged TÜV Rheinland, an external assurance provider, to verify the reliability, fairness, and transparency of this report and to issue an independent verification report (see Appendix IV).



As an independent record of sustainability, this report is published online and in print in both Chinese and English in August 2016. (The previous report was published in June 2015.) The *2015 Sustainability Report* can be viewed and obtained at www.huawei.com.


We would like to thank all stakeholders for sharing their feedback and recommendations as we strive to continuously improve our sustainability performance and this report.

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Connecting the Future)]]

Like air and water, connectivity has become so pervasive that it is weaving its way into every aspect of our lives. A Better Connected World is taking shape – it is destined to profoundly influence every individual, organization, and industry. Connectivity is everywhere: between businesses, between people, between people and things, between things, and even between people’s emotions. Enhanced connectivity will change the world for the better, allowing individuals to better sense and seize opportunities. However, the road ahead is beset with challenges. With a growing global population, deepening urbanization, and increasing resource consumption, we are faced with a worrying dilemma: How can we do more with less to be sustainable?

As a key player in the information and communications technology (ICT) industry, Huawei leverages connectivity-based ICT technologies – such as cloud computing, 5G, and the Internet of Things (IoT) – to drive global sustainability and build a Better Connected World. Our innovative ICT technologies bring people closer together and reunite the separated, no matter where they are. Our ICT technologies also create considerable business opportunities, deliver efficiency gains, and move the industry forward.

*Huawei’s vision for sustainability is to **Connect the Future**. In the future, we will bridge the digital divide with communications technologies; honor our responsibilities to support network stability and security; deliver innovative technologies to make our world greener; devote ourselves to employee care and well-being; build harmonious communities and make dreams come true; and partner with industry players to achieve shared success.*

We stand ready to collaborate with all our stakeholders to establish a robust business ecosystem and build a Better Connected World.

Message from the Chairwoman



Information and communications technology drives traditional industries forward and serves as a catalyst for their development. As the fourth industrial revolution takes hold, new innovations and disruptive technologies will boost that development to a whole new level. More companies are starting to look beyond capital gains, exploring how they can benefit from participation in a sound industrial ecosystem. This has driven our transition from an industrial civilization to one that thrives as an ecological community. Against this backdrop, sustainability is not only a recurring theme in global social and economic activities, but a matter of strategy.

At Huawei, we have built our sustainability management system around the needs of our customers and other stakeholders. We are constantly improving our approach, striding forward with clear direction and a common goal. We provide quality ICT products, solutions, and services to thousands of businesses and governments, and billions of people. To date, we have deployed more than 1,500 networks in over 170 countries and regions. We have redoubled our efforts to reinforce compliance systems in our subsidiaries outside China, appointing and training compliance officers

in 85 key countries to ensure that we abide by all applicable laws and regulations. Dedicated employees are at the heart of everything we do. In our commitment to develop local ICT talent, we have increased the percentage of local hires to 72% in our offices outside China. We provide our outstanding employees with a solid platform for realizing their full potential, while creating more jobs in local communities and boosting local economic growth. Last year, we also established a mature network security assurance system. This system includes contingency plans for 10 potential emergency scenarios, such as earthquakes and war, with procedures that help customers rapidly restore networks and ensure stable network operations. Huawei is an active player in the ICT industry. We are fortunate in that we can leverage our own ICT expertise to improve competitiveness and efficiency—and do so in a responsible, sustainable way. We will continue to work with all sectors of society to embrace the world of new opportunities that sustainable development brings, while promoting socioeconomic growth and improving the environment in which we live.

As the world prepares itself for the sweeping changes of digitization, we must remain open and collaborative to maximize the value of connections. Economies are going digital, and it's no longer practical to forge ahead alone; instead, we must carefully position ourselves and grow together as a thriving ecosystem. Moving forward, we will remain focused and continue to patiently invest in the future, applying ourselves to the pursuit of momentous technological breakthroughs. Our ultimate goal is to enable full connectivity between people and people, people and things, and between things and things, and in doing so create a more sustainable, better connected future.

Sun Yafang
Chairwoman of the Board

Message from the Chairman of the Corporate Sustainable Development (CSD) Committee



ICT is crucial for human progress in modern society. It is clear that connectivity-centered ICT technologies are catalyzing transformation in every industry. In addition to boosting business efficiency and enriching people's lives, ICT is transforming society in a way that creates economic opportunities, protects the environment, and makes our world more sustainable.

In 2015, we remained focused on our Pipe Strategy and achieved strong growth in all our business segments. Nevertheless, business growth is not our only goal, as we are equally committed to fulfilling our corporate social responsibilities and pursuing sustainable development. In short, we aim to build a Better Connected World. To this end, we place great emphasis on sustainable operations, provide customers with sustainable products, solutions, and services, and collaborate with partners to create a robust business ecosystem.

Sustainable Operations

Operating with integrity and compliance is one of our key focus areas. We always live up to our core value of inspiring dedication and take good care of our employees. To minimize the environmental impact of our operations, we are exploring ways to save energy and cut emissions, and introducing clean and renewable energies. To build a more sustainable supplier ecosystem, we have comprehensively embedded sustainability requirements into our procurement strategies, processes, and supplier management.

In 2015, our employee localization ratio outside China reached 72%, and our investment in global employee benefits exceeded US\$1.4 billion, up over 25% year-on-year.

Through technological and management improvements, we saved 44.3 million kWh of electricity, with our energy consumption per unit of sales revenue dropping by more than 10% year-on-year. Our in-house solar power stations generated 20 million kWh of electricity, reducing CO₂ emissions by approximately 18,000 tons. As part of our efforts to more effectively manage the supply chain, we refined our conflict minerals management strategy, investigated 977 suppliers concerning their use of conflict minerals, and followed responsible procurement practices.

Occupational health and safety has long been our focus. In this regard, we have established a corporate-level global safety incident ownership mechanism, and adopted a range of measures to mitigate and eliminate risks. In 2015, we extensively deployed the On-Board Diagnostic (OBD) system to manage driver behavior in regional projects. This system produced positive results, including an award from Vodafone that recognized our best practices for driving safety management.

Sustainable Products and Solutions

In the Internet era, cyber security and user privacy are key industry concerns. We emphasize that our commitment to cyber security will never be outweighed by the consideration of commercial interests. We continuously optimize our approach to managing cyber security and user privacy, and have created an end-to-end assurance system. Our ongoing efforts have paid off: In 2015, we received the Transparency Award for cyber security from the governments of four cities in Lower Saxony, Germany. Another example of external recognition is the 10-Year Excellence in Information Security Testing Award from the International Computer Security Association Labs.

We have integrated eco-design and circular economy practices into the entire product lifecycle, and created our circular economy business model, including the *cradle to cradle* practices for sustainable resource use. At the product design stage, we aim to maximize product lifespan and ensure easy take-back, maintenance, recycling, and reuse. Our design approach also adopts the lifecycle assessment methodology to help us select recyclable or compostable materials, thus minimizing material use. Thanks to these measures, in 2015 we reduced the rate of waste sent to landfills to 2.03%. In China and Malaysia, we set up an online device recycling system that allows our consumers to

trade in their old phones and receive subsidies on new ones. This system complements our existing Global Green Recycling Program, which comprises 444 recycling stations across 23 countries and regions.

We have also obtained leading environmental certifications for certain of our products, which demonstrate their strong environmental credentials. In 2015, six Huawei phones were certified based on the UL110 standard, and five of them (e.g., the P8 and Mate8) achieved the highest level (Platinum) UL110 certification. Our entire range of campus network switches were certified with the Green Product Mark of TÜV Rheinland.

Sustainable World

In 2015, we connected millions of people to high-speed networks in both developed (e.g., Canada) and developing (e.g., Sri Lanka) countries. In Kenya, we launched a new initiative to improve the affordability of smartphones by enabling people with low incomes to purchase phones on installment. In Ethiopia, our Desktop Cloud Solution helped over 50,000 students learn more efficiently with the aid of ICT technologies. To support innovation and developers globally, we launched the Developer Enablement Plan with US\$1 billion of funding, technology platforms, and other support. We also expanded Seeds for the Future, our CSR flagship program, to 67 countries and regions. So far, this program has benefited more than 15,000 students and increased local people's engagement in the digital society.

We also responded quickly to the 8.1-magnitude earthquake in Nepal to restore key base stations at hospitals, government agencies, disaster relief centers, and embassies within 24 hours after the disaster. We provided essential communications services to emergency services and local victims, and maintained stable equipment operations during peak hours. Throughout the year, we ensured reliable communication for nearly 3 billion people worldwide, and supported network stability during more than 130 major events and natural disasters.

We made tremendous progress in increasing the energy efficiency of our communications products and data centers, with major improvements in battery storage and energy management technologies. For example, we reduced the power usage effectiveness (PUE) of data centers to 1.45. If natural cooling is used, this number can be further reduced to 1.2, ranking among the best in the industry. We expanded our ICT solutions for solar power stations to improve their efficiency. Our smart photovoltaic (PV) solution is able to reduce over 9 million tons of CO₂ emissions every year.

Work Priorities for 2016

With a global presence, Huawei faces diverse business situations in local countries and regions where it operates. Technology is advancing at a lightning pace; so is the way it is used. Our stakeholders are placing increasingly high requirements on us. These trends are bringing us face to face with tremendous challenges. However, with challenges also come opportunities. These are both key driving forces behind our management improvements, and we strive to turn them into competitive advantages. In 2016, we will focus our efforts on the following priorities:

- Bridging the digital divide to enable information access for more people;
- Implementing end-to-end practices for cyber security and user privacy protection, and supporting network stability during major events and natural disasters worldwide;
- Optimizing our eco-design skills to provide more energy-efficient products and solutions;
- Implementing our circular economy strategy and expanding the Global Green Recycling Program;
- Continuing the supplier energy conservation and emissions reduction program to build a greener supply chain;
- Rolling out social contribution activities around the world;
- Enhancing communication with customers, governments, industry players, and other key stakeholders; and
- Conducting a sustainability maturity assessment to drive continuous improvements in all our business domains.

We are an ambitious company and we view sustainability as key to our survival and development. We are striving to integrate sustainability into everything we do, and empower all employees to contribute as much to Huawei's sustainable development as they can. I'm thankful to our employees for their efforts, and to our stakeholders for their ongoing support.

Huawei stands ready to collaborate with other industry players to make tremendous breakthroughs. I look forward to greater success in 2016.



Kevin Tao
Chairman of the CSD Committee

Overview of Huawei's Sustainability Initiatives in 2015



3 billion

Deployed products and solutions in over 170 countries and regions to serve nearly 3 billion people



white paper

Launched our first white paper on bridging the digital divide to support digital enablement

Provided network access for Ethiopian students

50,000



ICT

Provided ICT technologies for governments and the energy, transportation, and finance

industries to

**BOOST
EFFICIENCY**



1,500

Supported the stability of over 1,500 customer networks



130

Supported network stability during over 130 major events and natural disasters worldwide



ETSI

Hosted the fifth meeting of the ETSI Cyber Security Technical Committee

Received the

**TRANSPARENCY
AWARD**

for cyber security from the German government



 **23** countries

Expanded the Global Green Recycling Program to recycle used mobile phones in 23 countries

 **40,000** tons

Reduced 40,000 tons of CO₂ emissions via managerial and technological improvements

 **2.03%**

Reduced the rate of waste sent to landfills to 2.03% via a circular economy model

 **72,000⁺** tons

Worked with suppliers to reduce over 72,000 tons of CO₂ emissions



 **72%** 

Ensured an employee localization ratio of 72% outside China

 **1.4** billion

Invested over US\$1.4 billion in employee benefits

 **977** 

Investigated 977 suppliers about their use of conflict minerals

 **67** countries

Rolled out the CSR flagship program Seeds for the Future in 67 countries and regions



Sustainability Awards and Honors

Huawei's Sustainability Awards and Honors in 2015

Name of Award	Awarding Body
Gold Award at the BT Better Future Supplier Forum (BFSF)	British Telecom (BT)
2015 Extraordinary Contribution to Project Spring Award and 10 Years Partnership Award	Vodafone
Award for Excellence in Compliance to ABC & SCP	Telenor India
EcoVadis CSR Gold Rating	EcoVadis
Product Innovation Leadership Award in Telecom Energy Solutions	Frost & Sullivan



Name of Award	Awarding Body
Annual Green Technology Award	Informa Telecoms
2015 Evergreen Award for the <i>Huawei 2014 Sustainability Report</i>	GoldenBee
Transparency Award for Cyber Security	Governments of four cities in Lower Saxony, Germany
10-Year Excellence in Information Security Testing Award	International Computer Security Association Labs (ICSA Labs)
No. 1 in the ranking of the Top 500 Enterprises for CSR in China	China Company Evaluation Committee and Tsinghua School of Humanities and Social Sciences







01

Sustainability Management



Sustainability Management

1.1 Corporate Profile

Who is Huawei?

Huawei is a leading global information and communications technology (ICT) solutions provider. Driven by responsible operations, ongoing innovation, and open collaboration, we have established a competitive ICT portfolio of end-to-end solutions in telecom and enterprise networks, devices, and cloud computing. Our ICT solutions, products, and services are used in more than 170 countries and regions, serving over one-third of the world's population. With more than 170,000 employees, Huawei is committed to enabling the future information society, and building a Better Connected World.

What Do We Offer the World?

We create value for our customers. Together with telecom carriers, Huawei has built over 1,500 networks, helping over one-third of the world's population connect to the Internet. Together with our enterprise customers, we employ agile enterprise networks, including open cloud networks, to drive efficient operations and agile innovation across domains such as safe cities, finance, transportation, and energy. With our smart devices and smartphones, we are improving people's digital experience in work, life, and entertainment.

We promote industry development. Huawei advocates openness, collaboration, and shared success. Through joint innovation with our partners and peers we are expanding the value of information and communication technology to establish a robust and symbiotic industry ecosystem. Huawei actively participates in over 300 standards organizations, industry associations, and open source communities, having submitted over 43,000 proposals to drive standardization and pave the way for more effective collaboration. We have joined forces with industry partners to innovate in emerging domains like cloud computing, software-defined networking (SDN), network functions virtualization (NFV), and 5G. Together, we are promoting ongoing, collaborative industry development.

We boost economic growth. Huawei generates tax revenues, boosts employment, and stimulates the development of the ICT value chain in the countries where we operate. Perhaps more importantly, we deliver innovative ICT solutions that drive the digital transformation of all industries, thereby fostering economic growth and greatly improving the quality of people's lives.

We drive sustainable development. As a responsible corporate citizen, Huawei has made significant contributions to bridging the digital divide. We are keenly aware of the importance of telecommunications in emergency response situations: Facing Ebola-affected areas in West Africa, nuclear contamination after the Japanese tsunami, and the massive earthquake that struck Sichuan, China, we hold fast in disaster zones to help restore communications networks and ensure the reliable operation of critical telecom equipment. To further promote sustainability, we are developing the next generation of ICT talent through our global Seeds for the Future program, with which we give university students the opportunity to visit China, receive training, and gain first-hand experience in the ICT industry.

We provide dedicated employees with a strong growth platform. Inspiring dedication is one of Huawei's core values, and it manifests itself in many ways. We assess employees and select managers based on their results, as well as the extent of their responsibilities. We provide our teams with a global development platform, giving young team members the opportunity to shoulder greater responsibilities and accelerate their career development. In this way, we have enabled more than 170,000 employees to yield ample returns for their individual efforts, and gain memorable life experience.

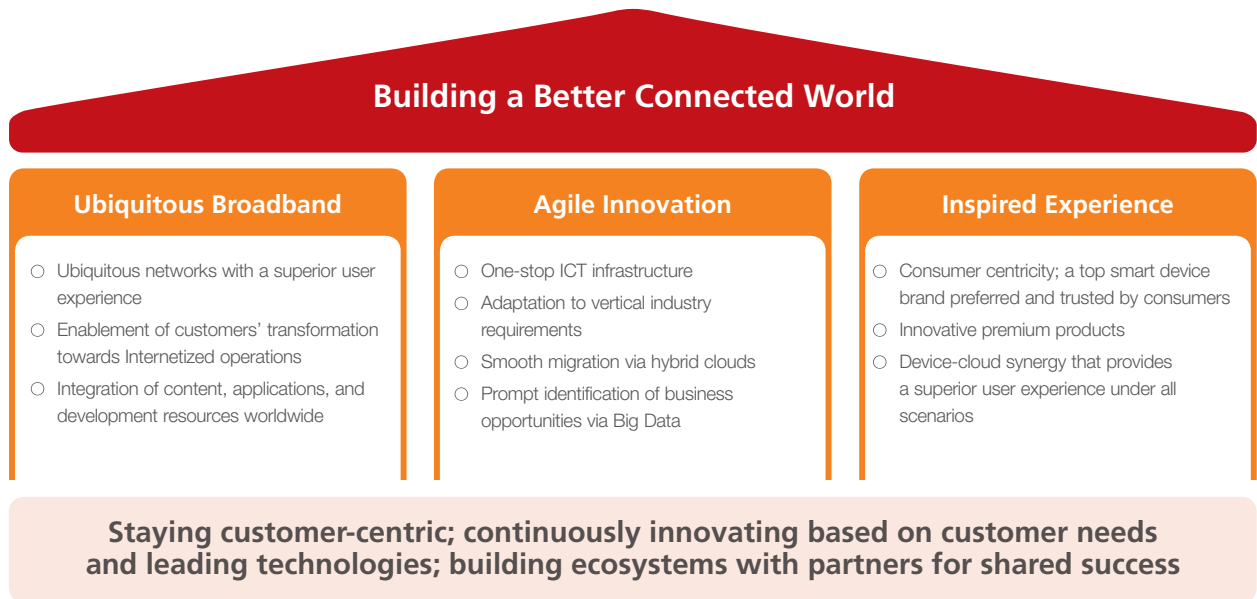
What Do We Stand for?

For the past 28 years, hundreds of thousands of Huawei employees have maintained an unwavering focus on our core businesses, refusing to cut corners or pursue other forms of short-sighted opportunism. With a solid, practical approach to everything we do, we have invested patiently, amassing the long-term, focused efforts that lead to great moments of technological breakthroughs. Our ability to maintain this strategic focus boils down to our core values of staying customer-centric, inspiring dedication, persevering, and growing by self-reflection.

The digital era has been generous. We will make the most of the historic opportunities it has given us, and boldly forge ahead to build a Better Connected World.

Our Value Propositions

The convergence of ICT technologies continues to accelerate. New technologies, particularly cloud computing and Big Data, are becoming key enablers of ICT innovation and development. These new innovations are not only reshaping the CT industry, but also creating enormous business opportunities through the convergence of IT and CT. In response to these revolutionary changes, Huawei continues innovating based on customer needs and leading technologies. Through open partnerships, Huawei focuses on providing future-oriented information pipes to build a Better Connected World and continuously create value for customers and society. Huawei aims to become a strategic partner that assists carriers in their future transformations, a leader in providing enterprise ICT infrastructure, and a top smart device brand preferred and trusted by consumers.



Sustainability Management

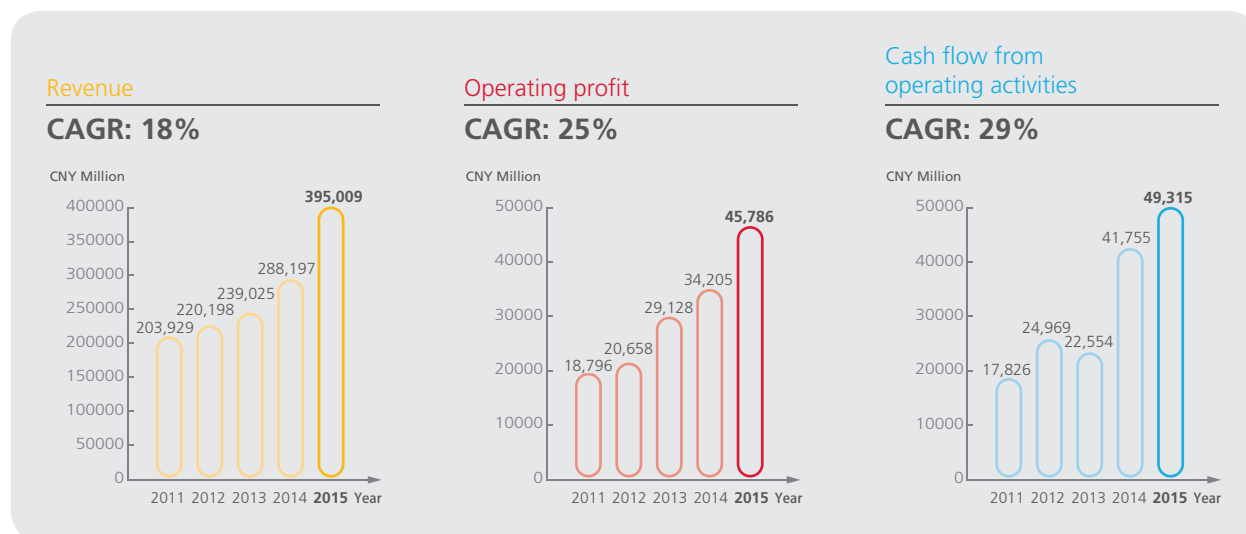
Business Review 2015

In 2015, Huawei achieved significant results due to its focus on the pipe strategy. The company achieved sustainable growth in the carrier, enterprise, and consumer businesses. Annual revenue totaled CNY395,009 million (approximately US\$60,839 million), a 37.1% increase over the previous year.

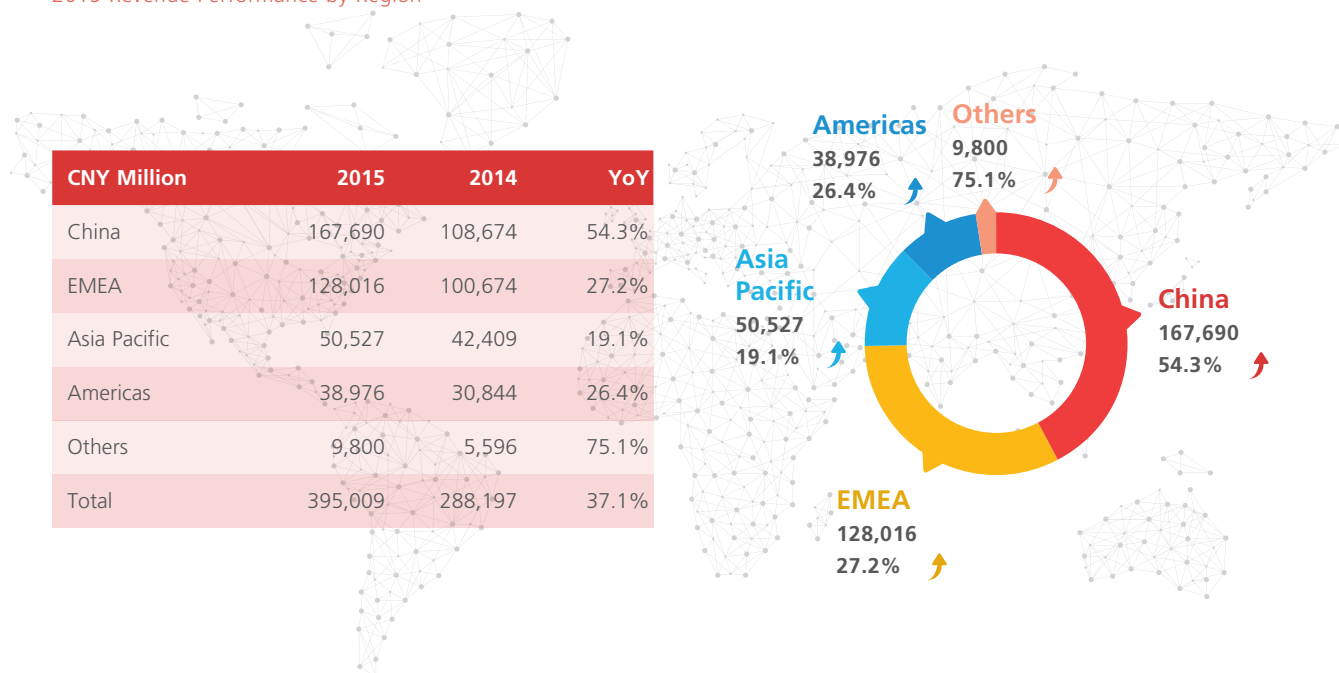
CNY 395,009 million

Annual revenue totaled CNY395,009 million (approximately US\$60,839 million), a 37.1% increase over the previous year

Five-Year Financial Highlights

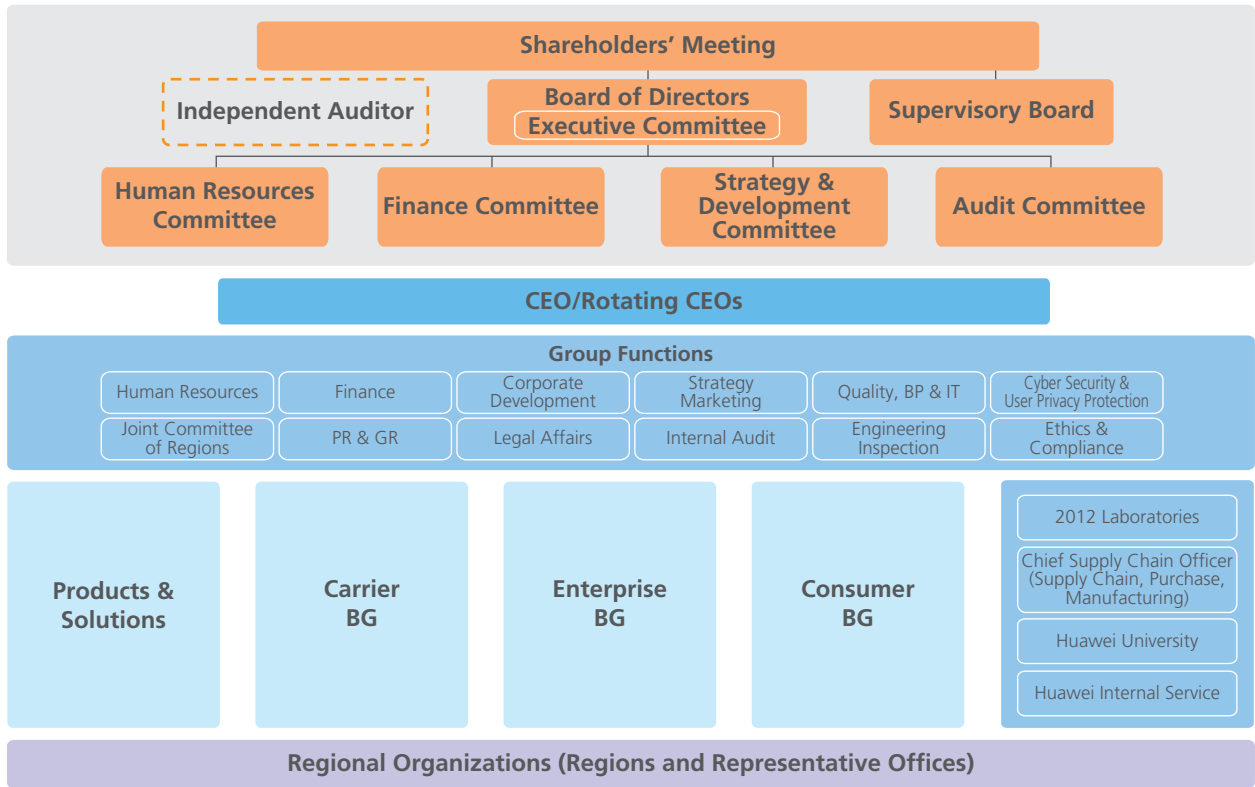


2015 Revenue Performance by Region



Corporate Governance

By staying customer-centric and inspiring dedication, we have sustained long-term growth by continuously improving our corporate governance structure, organizations, processes, and appraisal systems.



Shareholders

Huawei Investment & Holding Co., Ltd. (the “Company” or “Huawei”) is a private company wholly owned by its employees. Huawei’s shareholders are the Union of Huawei Investment & Holding Co., Ltd. (the “Union”) and Mr. Ren Zhengfei.

Through the Union, the company implements an Employee Shareholding Scheme (the “Scheme”), which involved 79,563 employees as of December 31, 2015. The Scheme effectively aligns employee contributions with the company’s long-term development, fostering Huawei’s continued success.

Mr. Ren Zhengfei is the individual shareholder of the company and also participates in the Scheme. As of December 31, 2015, Mr. Ren’s investment accounts for nearly 1.4% of the company’s total share capital.

Board of Directors and Committees

The Board of Directors (BOD) is the decision-making body for corporate strategy and management. The BOD guides and oversees the overall business operations and makes decisions on significant issues regarding strategy and operations. The BOD has established the Human Resources Committee, the Finance Committee, the Strategy & Development Committee, and the Audit Committee to assist and support BOD operations.

Supervisory Board

Pursuant to the requirements of the *Company Law of the People’s Republic of China*, Huawei has established a Supervisory Board. The key responsibilities of the Supervisory Board include overseeing internal and external compliance, examining the company’s financial and operational status, monitoring the responsibility fulfillment of BOD members and senior management, as well as the standardization of BOD operations. Members of the Supervisory Board attend BOD meetings as non-voting participants.

Rotating CEOs

Huawei implements the rotating CEO system under the BOD’s leadership. As the primary owner of the company’s operations and crisis management during the tenure, the Rotating and Acting CEO is responsible for the company’s survival and development.

The Rotating and Acting CEO convenes and chairs the company’s EMT meetings. During routine management decision making, the Rotating and Acting CEO promptly notifies BOD and Supervisory Board members of responsibility fulfillment.

For more information about Huawei’s corporate governance, see the Corporate Governance Report section in the *Huawei Annual Report 2015*.

<http://www.huawei.com/en/about-huawei/annual-report>

Sustainability Management

1.2 Sustainability Strategy

Huawei's role is to responsibly build a Better Connected World. We will accomplish this by fulfilling our sustainability vision – bridging the digital divide and promoting the harmonious and sustainable development of the economy, the environment, and society.

Our approach is based on operating with integrity and legal compliance, cooperating with stakeholders, contributing to a positive business environment, and, above all, serving our customers and sharing benefits with society. Our sustainability strategy has been prepared to achieve our vision and integrate sustainability firmly into our company, so it is aligned with our corporate business strategies. It is based on our materiality assessment (see page 23 for details) and identifies the key challenges we face across our entire value chain.

Sustainability Strategy



Bridging the Digital Divide

- Huawei provides people across all geographic areas with easy access to voice communications services.
- Huawei ensures ubiquitous broadband for all and promotes future-oriented ICT technologies to address global challenges.
- Huawei establishes training centers and launches joint teaching initiatives to develop local talent, transfer knowledge, and increase people's engagement in the digital society.
- Huawei provides customized ICT applications and solutions that meet individual, corporate, and regional needs to improve economic performance, quality of life, productivity, and competitiveness.



Supporting Stable and Secure Network Operations and Protecting User Privacy

- Supporting network stability and security, especially at critical times (e.g., earthquakes, tsunamis, and other natural disasters and emergencies), is our highest priority and comes ahead of our own commercial interests.
- By fully considering service continuity and network resilience, Huawei continuously innovates to enhance the robustness and protection capabilities of our products. Huawei supports product testing, verification, and certification by independent parties to provide customers with internationally recognized security assurance approaches. Huawei maintains openness and transparency by proactively communicating and cooperating with stakeholders, and complying with applicable security standards, laws, and regulations. We emphasize the protection of user privacy, and have collaborated with industry partners to adopt recognized methodologies and practices and integrate privacy protection into our day-to-day business activities.



Promoting Environmental Protection

- Huawei incorporates green concepts into product planning, design, R&D, manufacturing, delivery, and O&M. Through continuous technological innovation, Huawei boosts resource utilization efficiency to provide customers with world-leading green and energy-efficient products and solutions.
- Huawei is dedicated to improving resource utilization efficiency in our offices, production facilities, logistics centers, and labs to minimize waste and greenhouse gas emissions and become a role model for environmentally friendly operations.
- Huawei continuously ensures that our products meet environmental protection requirements, and requires that our partners operate in compliance with green regulations. By being closely involved in business activities, we promote energy conservation and emissions reduction in the supply chain to improve our overall competitiveness in the industry ecosystem.
- Huawei has rolled out a wide variety of green integrated ICT solutions to help industries conserve energy and reduce emissions. Huawei is an active player in promoting a resource-conserving, environmentally friendly, and low-carbon society.



Seeking Win-Win Development

- Huawei provides employees with varied career paths based on their particular skill sets to help them realize their individual value.
- Huawei enthusiastically contributes to the communities and countries in which we operate.
- Huawei adheres to business ethics, opposing corruption, dumping, and monopolies. We operate with integrity and in compliance with applicable laws and regulations.
- Huawei focuses on sustainability risk management during our operating activities and service processes. We have gradually become a sustainability leader, not just in the ICT industry, but also throughout the world.
- Huawei works closely with suppliers to develop standards and benchmarks. We have shifted our focus from risk management to efficiency management, and have taken a leading position in sustainability in the industry ecosystem.

1.3 Risks and Opportunities

Every year, we establish a dedicated work team to analyze stakeholder requirements and sustainability trends, conduct industry benchmarking, and record compliance results. Following this, the team systematically identifies and evaluates sustainability risks and opportunities in all business domains, determines the severity of risks and the priority of opportunities, and devises response measures.

By comprehensively identifying sustainability risks and opportunities, we are able to obtain important references for our annual strategic plans, and develop appropriate targets and work plans to minimize our sustainability risks and maximize contributions to Huawei's sustainable development.

The following table lists sustainability risks and opportunities identified in 2015 as well as our responses.

Item	Risk and Opportunity	Response
 Sustainable Operations	Risk: Major challenges caused by complexities in the global legal environment for operational compliance	Establish an operational compliance system
	Opportunity: Provide people with skills, incomes, and fulfilling careers	Provide training, career opportunities, and a supportive workplace
	Risk: Manufacturing and installation of products can be dangerous	Ensure safe operations for employees and subcontractors
	Risk: Using non-renewable resources creates negative environmental impacts, including climate change	Reduce the use of energy, water, and other resources, increase the use of renewable energy, and promote the circular economy
	Risk: Suppliers may fail to fulfill their social responsibilities	Incorporate sustainability requirements into our procurement processes and practices
 Sustainable Products and Solutions	Opportunity: Improve suppliers' economic, environmental, and social performance, and create jobs	Work with suppliers to increase their capacity regarding sustainability management
	Risk: Risks of cyber security and user privacy reduce the demand for ICT or the use of ICT	Ensure user privacy and the security of products and solutions from end to end
	Risk: Network energy consumption grows as a result of more connections and higher bandwidth needs	Provide energy-efficient products and solutions to cut the energy consumption of equipment, sites, and networks
	Risk: Negative environmental or social impacts (e.g., climate change and waste) result from the use of components with low energy efficiency, non-renewable resources, and toxic materials	Emphasize products' resource efficiency, durability, recyclability, and reusability at the design and packaging stages; take back, reuse, and recycle products; minimize the environmental impact during product manufacturing, transportation, and use
 Sustainable World	Risk: Products may harm users' health and safety	Comply with product safety standards, and continuously innovate to provide customers and consumers with safe products and services
	Opportunity: 1 billion people are unconnected	Deploy networks to connect individuals
	Opportunity: 4 billion people are offline	Deploy broadband networks and devices to provide Internet access
	Risk: Lack of ICT talent	Nurture local professionals to increase people's engagement in the digital society
	Opportunity: Drive efficiency improvements and social progress through the application of ICT	Provide customized ICT applications and solutions for individuals, businesses, and governments
	Opportunity: Use ICT solutions to reduce our society's use of non-renewable resources	Develop energy-efficient solutions that enable individuals, communities, and industries to conserve resources and lower emissions
	Risk: Natural disasters and excessive demands on networks can render networks unusable	Maintain network stability wherever possible and restore networks as soon as possible
	Opportunity: Improve communities	Roll out social contribution activities to contribute to local communities

Sustainability Management

1.4 Managing Sustainability

Organization

In 2010, Huawei established the Corporate Sustainable Development Committee (CSD Committee), which comprises over 20 members from research & development (R&D), manufacturing, procurement, human resources (HR), and delivery. The organization is responsible for implementing the company's sustainability strategy, making decisions on critical issues, and resolving cross-departmental problems. It also sets forward-looking goals that Huawei uses to guide future actions. At the beginning of every year, the committee reviews the sustainability strategy, including its business plan and strategic plan, to ensure it remains focused and reflects our strategic goals, as well as internal and external business environments. It also meets once a quarter to assess sustainability performance and coordinate efforts to ensure that all sustainability initiatives are on track.

The CSD Committee is chaired by Mr. Kevin Tao, President of the Quality, Business Process & IT Management Department, and Chief Sustainability Officer. Mr. Tao reports directly to Huawei's rotating CEOs.

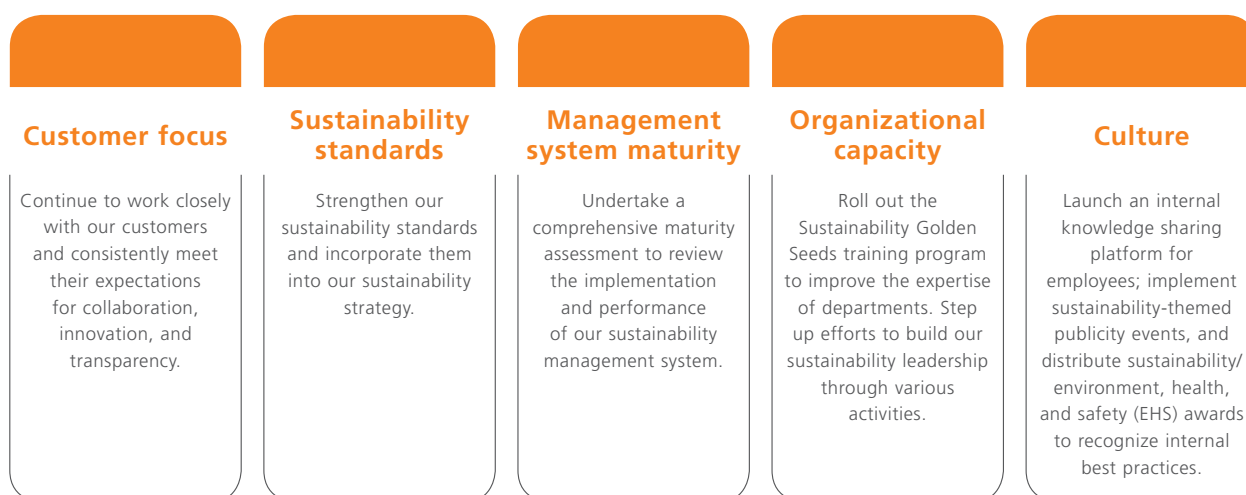
Management System

Huawei has established a sustainability management system based on standards such as ISO14001 and OHSAS18001 (as well as SA8000 in Huawei's Consumer Business Group [BG]), and adopted the ISO26000 standard to refine the sustainability management system. We have also put in place sustainability policies and processes in all business areas. The sustainability management system, policies, and processes allow us to systematically plan, implement, monitor, and improve sustainability initiatives and make our businesses more sustainable.

In 2015, we continued rolling out processes to systemically plan, implement, monitor, and improve our sustainability efforts, and integrate sustainability requirements into business operations. We also conducted a comprehensive assessment to review the maturity of our sustainability management. Through the assessment, we are able to continuously improve our sustainability management capabilities by identifying weaknesses and pain points and finding directions for improvement.

Management Priorities

As our business continues to grow, the opportunities and impacts resulting from our operations and products have increased. To address this, in 2015 we defined the following management priorities to strengthen our sustainability management system and reduce negative social and environmental impact.



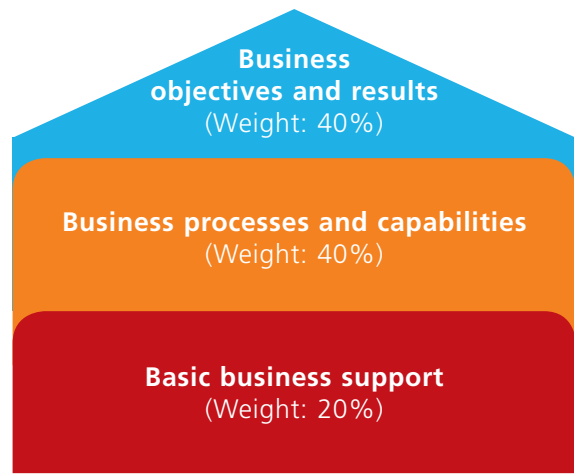
Sustainability Standards

We have formulated sustainability standards based on the ISO 26000 Guidance on Social Responsibility, international standards and norms, and applicable laws and regulations. These standards are used to create our maturity assessment framework and drive performance improvement within our sustainability management system. The standards apply to all Huawei employees, suppliers, and subcontractors. They define expectations and accountability at every level, and clarify the processes and requirements that everyone is required to follow.

Sustainability Maturity Assessment (SMA)

In 2015, we refined our sustainability maturity assessment mechanism and tools in accordance with industry-leading assessment practices while considering our business characteristics. We also conducted the first comprehensive assessment covering all business domains and departments. The assessment included eight dimensions: strategy and policy; risk management; KPIs and priorities; organization and staff; baselines; process integration; monitoring and reporting; and stakeholder communication.

This systematic maturity assessment shed light on how well our sustainability management system had been implemented in different domains and departments. Through this, we have identified our weaknesses and pain points, explored directions for improvement, continuously improved business capabilities, and moved closer to our strategic sustainability goals.



SMA Model



Sustainability Management

“Golden Seeds” of Sustainability

In 2015, we continued to roll out the Sustainability Golden Seeds Program to provide customized training, high-level forums, and workshops. These initiatives helped our departments develop sustainability capacity, nurture sustainability professionals, and create a leading sustainability-focused culture.



Sustainability Trends Forum

Initiatives launched in 2015 included the Sustainability Trends Forum, EHS Leadership Training, special training on GRI and AA1000 standards, and onsite courses on defensive driving and manufacturing safety. These training sessions contributed greatly to the company's overall capacity and leadership in sustainability.



EHS Leadership Training

Granting Awards to Foster a Sustainability-focused Culture

In 2015, we organized a global sustainability/EHS awards campaign. This campaign served several purposes: inspiring all departments, teams, and staff to focus on sustainability and EHS management; embedding management requirements in business activities; and encouraging all employees – especially sustainability and EHS professionals – to improve their awareness and expertise.

Three types of awards were included in the campaign: organization, project, and individual awards. Award-winning teams were given both recognition and monetary incentives. The campaign garnered a positive response and participation across the company. It served as a platform to share best practices in sustainability/EHS management, publicize role models from whom business departments can learn, and drive management improvements. The campaign also inspired employees to actively engage in sustainability/EHS management and foster a positive culture.



Huawei Sustainability/EHS Awarding Ceremony

Sustainability Objectives

To guide our sustainability efforts, we have set both annual and mid- to long-term objectives. In the following sections of this report, we disclose our 2015 performance and major objectives in 2016, which were set based on our strategy workshops and analysis. The following table displays our performance in 2015:

Item	2015 Objective	Performance	Progress
Sustainability Strategy Execution	Launch the Bridging the Digital Divide flagship program	Achieved	Approved and launched the program
	Release a white paper on bridging the digital divide	Achieved	Released the white paper <i>Digital Enablement: Bridging the Digital Divide to Connect People and Society</i> in Hong Kong in November 2015
	Ensure 100% network stability during major events (including natural disasters)	Achieved	Successfully supported network stability during 138 major events and natural disasters worldwide
	Reduce the energy consumption per unit of traffic of core routers, wireless base stations, and servers by 15%	Achieved	Increased the energy efficiency of core routers, wireless base stations, and servers by 25%, 20%, and 28% respectively
	Decrease GHG emissions per unit of sales revenue by 2%	Achieved	Decreased GHG emissions per unit of sales revenue by 13.8%
	Ensure that at least one device product can pass the UL110 Platinum green certification	Achieved	Passed the UL110 Platinum green certification for five mobile phones
	Ensure that no more than 2.25% of waste goes to landfills	Achieved	Reduced the landfill rate of waste to 2.03%
	Expand the Supplier Energy Conservation and Emissions Reduction Program to cover 30 suppliers	Achieved	Involved 35 suppliers in the program and avoided 72,000 tons of CO ₂ emissions
	Roll out the Seeds for the Future program in 45 countries and regions	Achieved	Implemented the program in 67 countries and regions worldwide
	Host the Huawei Global Supplier Sustainability Conference	Achieved	Hosted the 7th Huawei Global Supplier Sustainability Conference in September 2015
Management System	Conduct onsite audits on all the 73 medium- and high-priority suppliers	Achieved	Developed and implemented the plan to conduct onsite audits on all medium- and high-priority suppliers
	Assess the maturity of the sustainability management system	Achieved	Undertook a maturity assessment to identify strengths and weaknesses and gave recommendations to each business unit
	Provide sustainability training and improve sustainability capabilities	Achieved	Provided five Sustainability Golden Seeds training sessions









Sustainability Management

1.5 Stakeholder Engagement

Stakeholder engagement is at the core of our sustainability management efforts. We work closely with our stakeholders, listen to their needs, and use them as key inputs for management improvements. We have established the Stakeholder Engagement Management Process to engage with stakeholders through a broad range of activities, such as holding individual meetings, attending or organizing events, contributing to or publishing research reports, and participating in working groups and pilot projects. Several examples are listed below:

- We pride ourselves on being customer-centric and proactively engage with our customers regularly.
- Our Public Affairs and Communications Department, Legal Affairs Department, and Standardization & Industry Department regularly engage with governmental and intergovernmental bodies and community groups, while participating in hundreds of specific industry standards bodies and associations.
- Our HR, Procurement, Finance, and Corporate Communications Departments regularly engage with key stakeholders (i.e., employees, suppliers, financial institutions, and the media) and have specific strategies for doing so.

From all these activities, we seek to understand stakeholders' expectations, requirements, and suggestions. Following this, we adjust our sustainability goals and actions accordingly to ensure we respond rapidly and effectively.

Stakeholder Group	Engagement Approaches and Activities
 Customers/Consumers	<ul style="list-style-type: none"> ○ Customer satisfaction surveys ○ Customer meetings ○ Huawei Fan Club for consumers ○ Participation in audits, surveys, and collaborative projects on sustainability (e.g., the BT Better Future Supplier Forum [BFSF])
 Employees	<ul style="list-style-type: none"> ○ Meetings with employee representatives ○ Employee surveys (e.g., organizational climate survey) ○ Manager feedback processes
 Suppliers	<ul style="list-style-type: none"> ○ Supplier meetings and audits ○ Supplier contracts and questionnaires ○ Supplier training sessions and conferences (e.g., annual Huawei Global Supplier Sustainability Conference)
 Governments	<ul style="list-style-type: none"> ○ Meetings on government policies ○ Inputs to government standards and consultations ○ Governmental and inter-governmental conferences ○ Participation in government projects (e.g., Shenzhen Greener Supply Chain Pilot Project)
 Industry/Standards Associations	<ul style="list-style-type: none"> ○ Industry forums and working groups (e.g., the UN's ITU, GeSI, and QuEST Forum) ○ Standards workshops ○ Publication of research reports
 NGOs and Communities	<ul style="list-style-type: none"> ○ Participation in community projects ○ Attending conferences organized by NGOs and inviting them to attend our conferences ○ Meetings on specific issues of mutual concern ○ Responding to requests for information
 Media and Opinion Leaders	<ul style="list-style-type: none"> ○ Individual meetings and interviews ○ Specific events for the media and opinion leaders in key markets ○ Inviting the media and opinion leaders to attend our events ○ Engagement through social media
 Research Institutes/Academia	<ul style="list-style-type: none"> ○ Joint research projects (e.g., 5G project with the University of Surrey) and technical collaboration ○ Participation in events (e.g., "Climate Change – The Implications for Asia" by Chatham House)

We have identified areas for further focus, while in no way reducing our attention to existing stakeholder engagement activities. These include:

Being more proactive when engaging with stakeholders on cyber security and privacy due to the rapid changes in this field, as well as diverse regulations around the world. We regularly engage with legal experts, attend events, and talk to specific stakeholders about this topic.

Deepening our relationships with academic institutions and the developer community. We have established our European Research Institute to manage our growing array of European R&D facilities, and hired new staff to engage with academia in key countries. We have launched new initiatives to engage with the developer community.

Expanding our engagement with the sustainability community. We seek proactively to learn from others' best practices, share our experiences, and identify opportunities to collaborate closely. Therefore, we have been more active in engaging with sustainability experts, participating in external events, and organizing our own events.

Material Issues ("Materiality") Assessment

By identifying our material issues, we are able to focus our efforts for improvement and optimize our sustainability management. To assess our material issues, we specify which issues affect our business and which issues are important to our stakeholders. The result is a matrix that displays the issues of highest concern to stakeholders (vertical axis) and to our own business (horizontal axis). Based on the overall rankings from the survey reports of multiple stakeholders, we determine the priority of issues on the vertical axis. Based on risk analysis (led by in-house experts), strategy alignment, and maturity assessment results, we then determine the priority of issues on the horizontal axis.



Sustainability Management

Stakeholder Engagement Activities

Every year, Huawei hosts various sustainability-related events – particularly sustainability conferences and workshops – to engage stakeholders. In 2015, Huawei representatives spoke at over 10 conferences on sustainability around the world, including Indonesia, South Africa, Singapore, and the US. We also organized several of our own events to engage with the sustainability community. The following are examples of sustainability-related events held in 2015.

Huawei Sustainability Conference

On June 4, 2015, Huawei and CSR Europe co-hosted a sustainability conference themed *The Future of Supply Chains: From Compliance to Innovation*. More than 150 stakeholders from business, politics, and development communities attended the conference. The conference focused on three themes related to sustainable supply chains: best practices from businesses, EU policies, and sector-wide initiatives.

The event featured speeches from a member of the European Parliament; a principal advisor on EU CSR Strategy; head of procurement at BT; and corporate responsibility director at Deutsche Telekom, founding member of the Global e-Sustainability Initiative (GeSI) and the Joint

Audit Cooperation (JAC). Other speakers included representatives from Arcelor Mittal, HP, Philips, DHL, AIM Progress, and the EICC.



Huawei Sustainability Conference

Sustainability Salon

In December 2015, Huawei organized our first sustainability salon with the theme of *Achieving the Sustainable Development Goals: Innovation and Collaboration for Amplified Impact*. We brought together more than 30 sustainability experts from business and development communities from all over Asia, and discussed how to set priorities and create solutions to achieve the UN Sustainable Development Goals (SDGs) and implement new models and new approaches for amplified impact. Participants included the UN Development Programme, Asian Development Bank, UPM, Coca-Cola, CJ Corporation, BASF, Deutsche Telekom, Intel, DHL, Globe Telecom, German Embassy, Dutch Consulate, BSR, CSR Asia, and the Japan Philanthropic Association.



Huawei Sustainability Salon

Bridging the Digital Divide Workshop

In 2015, we launched a research program to identify how to bridge the digital divide and achieve digital enablement. More than 100 interviews took place across 11 countries. We also held a focus group discussion with participants from industries of 10 countries.

Subsequent events were organized to share the project's findings with relevant stakeholders in London and Brussels. Around 30 participants from the telecom industry and development community participated in a three-hour workshop co-organized by Huawei and the GSMA in London. The workshop focused on new business models that could bridge the digital divide and allow digital inclusion. We also systematically shared our ideas regarding the challenges and solutions to bridging the digital divide. In Brussels, 15 members of the European Parliament and their staff attended

a breakfast briefing with the European Commission to analyze the latest situation in Europe alongside Huawei's research findings.



Bridging the Digital Divide Workshop

What Do Huawei's Customers Think of Our Sustainability Performance

Interview with Brigitte Dumont, Orange

What do you think of Huawei's sustainability performance in 2015 and why?

Huawei is a faithful partner in our efforts to discuss and develop the CSR standard and support the Orange 2020 strategic plan.

By implementing high-standard CSR practices in its own supply chain and also by offering and working out with Orange the innovative and CSR caring solutions, Huawei has demonstrated that CSR could be an accelerator of business and responsible growth is a reality.

Please comment on any specific initiatives where Huawei has worked closely with you.

One of the most important illustrations of Huawei's high commitment is the implementation of "zero watt @ zero load" approach in energy saving. Huawei and Orange have started to work together since 2013 and have reaffirmed in 2015 our will to boost our cooperation to invent and build high energy efficiency telecommunications networks by 2020.

This partnership will accelerate the implementation of high energy-efficient solutions in Orange's infrastructure to achieve our 2020 objective of reducing CO₂ emissions per customer usage by 50%. This innovative approach in research and development of ecosystems will assist society in energy and environmental transition.

We highly appreciate Huawei's active support for the worldwide CSR alliance of telecom operators (JAC, Joint Audit Cooperation) and OSI (Observatoire Social International). We are confident that we will pursue this collaboration on a wider and deeper basis in the future.



Brigitte Dumont, Orange

Participation in Sustainability Initiatives

Huawei is a member of multiple sustainability organizations and initiatives, where we learn from and share best practices, explore areas for future cooperation, drive standardization, and collaborate with peers to improve sustainability performance across the industry. We have joined the following sustainability-related organizations: UN Global Compact, GeSI, UN Broadband Commission, CSR Europe, QuEST Forum, and Business for Social Responsibility (BSR).







02

Sustainable Operations



Sustainable Operations

2.1 Operational Compliance

Context

Operational compliance is crucial to companies' survival; it can also drive their long-term, healthy development, and create economic benefits. However, some companies are too concerned with profits, and do not abide by applicable laws and regulations. This type of behavior causes severe harm to themselves and society at large. Operational compliance is vital to long-term business development and social progress, and thus necessitates effective regulation and attention.

Approach

Adherence to business ethics, international conventions, and laws and regulation is the cornerstone of Huawei's operational compliance worldwide. This reflects our unwavering commitment to integrity. We advocate fair competition, ensure trade compliance, protect intellectual property rights, and oppose bribery and corruption. We have benchmarked ourselves against leading industry practices, embedded compliance requirements into our corporate policies, regulations, and processes, and set up professional teams to manage compliance.

Compliance Management

Operational compliance is always our first priority, and compliance requirements have been integrated into our routine operations. In key areas such as trade compliance (export controls) and cyber security, we have established a compliance management system in accordance with industry standards that has been scrutinized by third-party auditors. To ensure compliance, we hold frequent talks with government agencies, and obtain the necessary approvals and licenses. To enhance our transparency and earn trust from stakeholders, we maintain routine communication with them. Together, we have created a favorable business environment and defined full compliance as a baseline.

The Legal Affairs Department provides legal guidance on building a global compliance system, trade compliance, IPR protection, anti-bribery and anti-corruption, and HR management. The department also conducts issue identification and evaluation, specifies compliance requirements, and releases warnings about internal and external legal risks. This helps other departments ensure legal compliance throughout their operations.

Building a Global Compliance System

In 2015, we stepped up efforts to establish effective compliance systems in subsidiaries outside China. In terms of organization, we appointed and trained compliance officers in 85 key countries. In terms of business management, we engaged professional consultants to manage compliance risks based on feasible methodologies. As a result, our subsidiaries ensured effective compliance management process and results. In addition, we established supervisory organizations in subsidiaries outside China to systematically oversee operational compliance. In 2015, our subsidiaries in

122 countries presented a total of 235 compliance reports to local supervisory organizations, thereby achieving operational compliance and aligning their compliance management goals with Huawei's operational compliance strategy.

The Goal of Huawei's Operational Compliance Strategy

Establish comprehensive operational compliance management systems at both our HQ and in regional offices, and ensure the standardized application of the systems in routine operations to sustain Huawei's long-term development.

Trade Compliance

We conform to the trade laws and regulations of the countries and regions in which we operate. Through policies, organizations, processes, systems, and tools, we have embedded compliance requirements into the business activities of all functional departments. We have also established an end-to-end Internal Compliance Program (ICP), which was highly praised by authoritative third parties during assessments and audits. The ICP has gone a long way toward mitigating the import and export control risks faced by our business units.

We keep a close watch on changes in international trends, remain sensitive to compliance issues, and promptly and effectively identify compliance risks in key countries and regions. We also engage in regular communication with government authorities, industry peers, and partners.

Protecting Intellectual Property Rights

Huawei respects the intellectual property rights (IPR) of others, complies with international IPR laws, and resolves IPR issues through negotiation, cross-licensing, and product cooperation in an open, positive, and friendly manner. We also employ legal means to protect ourselves against malicious infringements on our IPR.

Huawei is one of the world's largest patent holders and investors in R&D, so protecting IPR is in our best interest.

As of December 31, 2015, we had filed 52,550 patent applications in China and 30,613 outside China, with a total of 50,377 granted.

50,377

patents worldwide as of December 31, 2015

52,550

patent applications in China

Huawei had become a member of over 300 standards organizations, industry alliances, and open source communities, holding more than 280 important positions. We are also a board member of IEEE-SA, ETSI, WFA, TMF,

OpenStack, Linaro, OASIS, and CCSA. We submitted more than 5,400 proposals in 2015, with the total number exceeding 43,000.

In 2015, we ranked first in terms of invention patents in China, 9th in Europe, and 23rd in the US.

Anti-bribery and Anti-corruption

Integrity is at the heart of our operations, and we have zero tolerance for bribery or corruption. We have launched various activities to increase employees' awareness of ethics and legal compliance. For example, all employees are required to understand and sign our *Business Conduct Guidelines* (BCGs), and pass an online test on the subject every year. To enhance our positive influence on suppliers, we have included strong ethical provisions in all contracts with suppliers, and require them to understand and sign the *Honesty and Integrity Agreement*. In addition, we have established complaint channels through which employees and other parties can report unethical and illegal behavior.

Business Conduct Guidelines

The BCGs include regulations on the general business conduct that all Huawei employees must abide by. All new hires must learn and sign these guidelines.

Public channels for lodging complaints and reporting violations:

✉ E-mail: BCGcomplain@huawei.com

☎ Tel: +86 (0)755 2856 2338

Huawei strictly protects the information and legal rights of whistleblowers who report BCG violations under their own names. We forbid any attempts – direct or indirect – to obstruct, suppress, retaliate or discriminate against whistleblowers.

99.4%

of employees studied and signed the BCGs in 2015

Sustainable Operations

2.2 Caring for Employees

Context

In the information society, which is teeming with rapid change and opportunities, ingenuity is of increasing importance to social transformation and development. Competition between businesses is escalating: What matters to a company's competitive edge is not merely its market presence, technology or knowledge base. Talent is a new differentiator. How to build a caring workplace and effectively select, deploy, develop, and retain talented employees so they can unlock their full potential are key issues confronting every company.

Approach

Employees are the backbone of our sustainability drive, and an important factor in maintaining our competitiveness and industry leadership.

We consistently prioritize the well-being of our employees. To this end, we have created a safe and healthy working environment. Our incentive policy attaches equal importance to monetary and non-monetary incentives, providing timely and reasonable rewards to dedicated employees. As Huawei continues to grow, we have emphasized the career development of our employees, offering them varied career paths to help them realize their individual value.

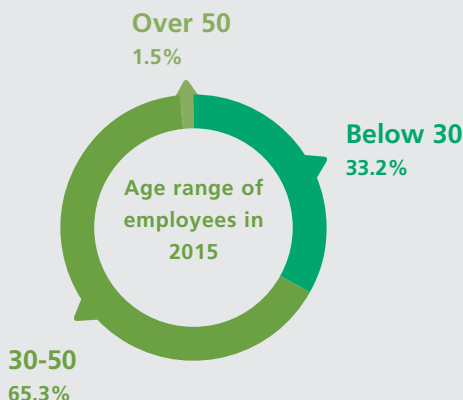
Workforce Diversification

As of December 31, 2015, Huawei employed approximately 170,000 staff in various business segments worldwide. In total, 45% of our employees were involved in R&D.

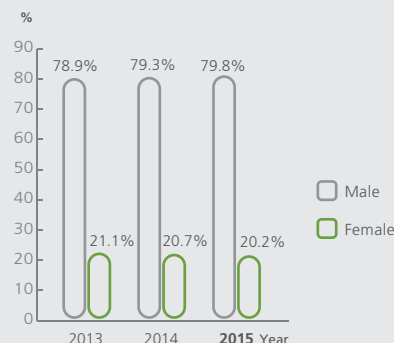
In total,
45% of our employees were involved in R&D



Hailing from many different countries, races, and ethnicities, our 170,000 employees form a diverse family. They come from 163 countries and regions around the world. In China alone, our employees are from 39 ethnic groups. We have developed and launched many diversification initiatives in areas such as nationality, gender, age, race, and religion.



Ratio of female employees to male employees (2013-2015)



As Huawei operates in the ICT industry and the majority of our employees come from technical backgrounds, there is a relatively low ratio of female employees. As part of our efforts to address this issue, we strictly obey all applicable international conventions, as well as local laws and regulations, to ensure gender equality in employment and prohibit job discrimination based on gender. As a result, the ratio of female employees has remained stable over the past three years. We also prioritize the selection of female managers – we have adopted a female manager development plan that gives female employees priority for promotion when they have the same qualifications as their male counterparts. In 2015, women made up 8.0% of our management team. Of our 17 board members, 4 are women.

As a global company, we actively recruit staff from all over the world to accelerate workforce localization. Hiring local employees enables us to better understand the unique culture of each country and region where we operate, while boosting local employment and economic growth. In 2015, Huawei employed over 34,000 staff in countries outside China, with a localization rate of 72% for non-managerial employees and 17.7% for middle and senior managers.

Developing Employee Skills

Training is about more than just sharpening employees' skills – it also helps them develop, realize their individual value, and contribute to the company's business growth. Training also facilitates communication between the company and employees and between employees and management, helping to create the cohesion essential to developing an outstanding corporate culture.

To help employees grow and realize their individual value, we have offered ample and equal opportunities for training and promotion. In 2015, total attendance at training sessions exceeded 1.12 million, with each employee spending an average of 31.06 hours on training.

We have established an e-Learning platform to allow employees to access online training courses anytime, anywhere. The platform keeps employees up to date with the latest practical skills, allowing them to develop personal competence and keep pace with the knowledge economy.

The e-Learning platform offers a variety of high-quality training courses. Its interactive training model makes training efficient and interesting. In 2015, attendance for e-Learning training sessions totaled 6.54 million.

We value individual development and encourage employees to chart their own careers according to their abilities and interests. We provide employees with two career development paths: managerial and professional. Our effective performance management system inspires managers at all levels to pay more attention to employee growth and development. We have also explored different ways to improve how we manage employee performance, helping employees to grow together with the company. In 2015, all employees received a performance appraisal and career development assessment. In line with talent needs and corporate policies, we have accelerated the promotion of outstanding employees, helping them realize their career aspirations.

Women made up **8.0%** of our management team

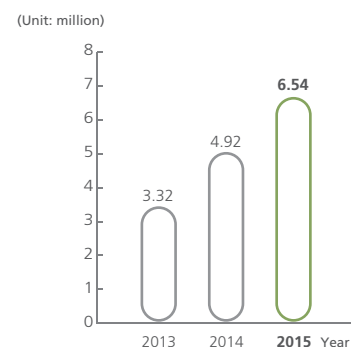
The localization rate of non-managerial employees reached

72%

In 2015, total attendance at training sessions exceeded

1.12 million

Total attendance at e-Learning training sessions from 2013 to 2015



Sustainable Operations

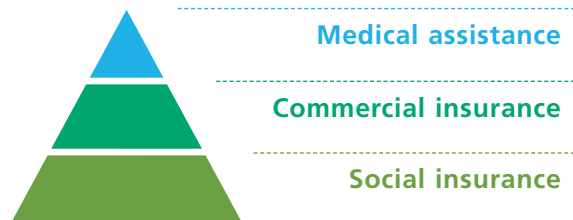
Compensation and Benefits

One of Huawei's core values is Inspiring Dedication. We encourage employees to develop their expertise, and at the same time we help them realize their individual value. We provide both monetary and non-monetary incentives to promote employee well-being.

At Huawei, we have implemented a competitive compensation system. We have established long-term partnerships with consultancies (e.g., the Hay Group, Mercer, and Aon Hewitt), regularly surveyed compensation data, and promptly adjusted employee compensation based on survey results, corporate performance, and individual performance. There is no gender bias in our compensation standards.

We employ a "Contribute and Share" bonus distribution system, which links employee bonuses to corporate, departmental, and individual performance. In line with our corporate compensation policy, we have reviewed the bonus distribution plan each year and revised it as necessary. In 2015, we continued implementing the Time-based Unit Plan (TUP) worldwide, granting time-based units to employees so they can share in the benefits of Huawei's growth. This long-term incentive mechanism aligns employees' personal contributions with the company's long-term development, thus allowing for Huawei's continuing success.

We have implemented an effective employee benefits system, which acts as an *umbrella* to protect our employees. Employee benefits include three parts: social insurance, commercial insurance, and medical assistance. Apart from mandatory insurance plans, we offer every employee global accident insurance, critical illness insurance, life insurance, medical insurance, and business travel insurance, as well as other forms of commercial insurance. We have also implemented medical assistance mechanisms to protect our employees under special circumstances. By combining these three types of employee benefits, we are able to offer sufficient benefits to spare employees from troubles and difficulties.

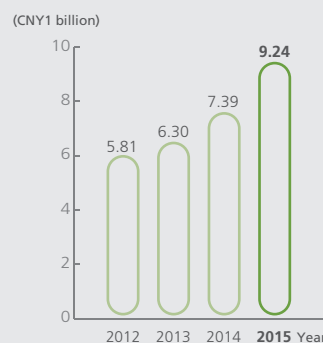


Our investment in global employee benefits in 2015 exceeded

US\$ 1.4 billion

(CNY9.24 billion), an increase of 25% year-on-year.

Investment in global employee benefits from 2012 to 2015



Natural disasters, critical illnesses, and deteriorating safety situations in certain regions have considerable implications for employee health and safety. Huawei regards employee safety as a top priority, at all times and under all circumstances. We convey this principle to our employees, and have collaborated with international insurance companies and emergency rescue institutions to offer 24/7 employee healthcare services all over the world. In the event of an emergency, we waste no time in rapidly taking action. For employees suffering from critical illnesses or accidental injuries, we help them and their families address financial concerns and mental pressures. Employee care is an integral part of our corporate obligations.

Taking Rapid Response Measures to Protect Employee Health and Safety

On April 25, 2015, a devastating earthquake with a magnitude of 8.1 on the Richter scale struck Kathmandu, the capital of Nepal. The earthquake caused a great number of fatalities and injuries and left several buildings in ruins.

In the aftermath of the earthquake, we took a series of measures to guard against potential epidemics that could compromise employee health. For example, we provided medical supplies for healthcare and epidemic prevention, and offered professional onsite medical support to local employees. We also enlisted International SOS doctors to provide three-week onsite healthcare services to employees in our Kathmandu-based Huawei Nepal Project Camp. Additional actions were taken to prevent epidemics and diseases, such as managing drinking water; ensuring a healthy living environment and personal hygiene (e.g., requiring everyone to use disinfectant for when washing hands); taking protective measures for employees and vehicles going out of the camp; and monitoring, in real time, the health and day-to-day changes in temperature of employees who continued to work onsite after the disaster.

During the disaster relief period, all our local employees remained in good health, and no one was infected with cholera, measles, or respiratory infectious diseases. Thus, our employees were able to effectively support local disaster relief and network recovery efforts.



International SOS doctor giving a training course on first aid

Creating a Relaxing and Efficient Working Environment

Industry research shows that organizational climate is critical to an organization's performance. A positive working climate can boost organizational performance, and allows employees to feel cared for, respected, and trusted. Accordingly, employees are better able to contribute to the organization's productivity. A positive working climate can also reduce employee turnover and safety incidents, and inspire passion across the organization.

Huawei believes in creating a workplace where employees can enjoy both work and life. To this end, we have created an efficient, relaxing, caring working environment, which gives employees a strong sense of happiness and inspires them

to find the right work-life balance. Every year we organize a series of activities, including "Family Day", "3+1", and the "Charity Fun Run". These activities encourage managers at all levels to devote themselves to employee care. Our employees are also inspired to take care of others, remain optimistic, and spread positive energy to change the workplace for the better.

We have regularly organized organizational climate surveys, employee interviews, and open discussions to better understand employees' opinions and requirements. Following this, we have been able to identify and analyze issues' root causes, and design constructive solutions to improve management and elevate employee engagement.

Sustainable Operations

Expanding the “3+1” Program Overseas

The “3+1” program encourages employees to make a friend, participate in a sports activity, take up a hobby, and read a thought-provoking book.

First launched in China in 2009, this program aims to raise health awareness, both physically and mentally, through various entertainment and sports activities every year. It calls on employees to care for themselves and others, and to develop healthy habits at work and in life.

In 2015, we expanded the program to more countries and regions, including India, the South Pacific, and Southeast Africa. Approximately 130,000 employees joined the initiative.



Plank challenge of the “3+1” program

Creating a Favorable Workplace

As a global company with a presence in over 170 countries and regions, Huawei has built a global value chain with the best resources from around the world. In every country and region, we operate in compliance with local laws and regulations, and share value with our global partners and customers. When executing corporate HR management policies, as well as developing and implementing local regulations, we always keep in mind local laws, regulations, and industry standards. We also give special consideration to local customs and conventions.

We have placed significant emphasis on the management and development of local hires. In addition to boosting the operating efficiency of our local offices, we support local communities by creating jobs and paying taxes. Through smooth communication, we have enhanced mutual understanding between Huawei and local governments, the media, and other external stakeholders. Our goal is to become an innovative enabler of the information society and a collaborative industry contributor.

When recruiting, promoting or setting compensation for employees, we never discriminate against our employees on the basis of race, gender, nationality, age, pregnancy, or disability. We prohibit the use of forced, bonded, or indentured labor. Moreover, we have enacted detailed, equitable regulations covering each major phase of an employee’s relationship with the company, including recruitment, employment, and exit. No incidents of forced labor have taken place over the course of Huawei’s history.

We strictly prohibit the use of child labor, and have effective policies and preventative measures in place to prevent the recruitment and use of child labor. We also require the same of our suppliers and conduct regular audits to ensure their compliance.

We respect employees’ legal rights with regard to freedom of association and collective bargaining. In our China HQ and overseas subsidiaries, we have established or joined labor union organizations, and signed or endorsed collective agreements. Our local subsidiaries abide by local laws and regulations on labor unions, and have formed close relationships with labor bureaus, employer associations, and consultancies. We never prevent employees from participating in the legal activities of registered labor unions so long as participation is voluntary and is not in violation of local laws.

Our Employee Relationship Department has created smooth communication channels to collect and understand employees’ opinions and suggestions. Employees can file complaints through the following channels: complaint hotline of the Committee of Ethics and Compliance (CEC); BCGs violation hotline; HR services complaint and suggestion hotline; grievance mailbox for performance appraisals; and complaint mailbox for procurement.

2.3 Health and Safety First

Context

In recent years, safety has attracted increasing attention from governments, the media, non-governmental organizations (NGOs), and industry organizations. Safety regulations and standards have been constantly enhanced. Nevertheless, health and safety incidents show no signs of abating, and safety remains a major challenge as companies pursue higher levels of sustainability. Every ICT company should emphasize both operational safety and the safety of employees and subcontractors working in high-risk scenarios during project delivery.

Approach

In all countries and regions where we operate, we have implemented effective management system, and established a corporate-level global safety incident ownership mechanism. In addition, we have developed and enforced the EHS Absolute Rules, strengthened managers' involvement in onsite projects, and built a positive safety-first culture. These actions have minimized safety risks and protected the health and safety of our employees, subcontractors, and other partners.

We have assigned great importance to operational safety, and developed a highly efficient safety management system in all areas of operations, including building a safety-first culture, manufacturing safety, working environment safety, fire control safety, food safety, road traffic safety, and engineering delivery safety.

Employee health and safety is at the core of our operations. We have established the OHSAS18001 management system, enforced safety management requirements in all countries and regions where we operate, and implemented comprehensive safety management systems, processes, and regulations to build a strong safety-first culture. Our management practices cover all aspects of employee safety: safety management systems, manufacturing safety, working environment safety, road traffic safety, and engineering delivery safety. These practices have effectively safeguarded our employees, subcontractors, and other stakeholders.

Implementing the EHS Absolute Rules to Minimize EHS Incidents

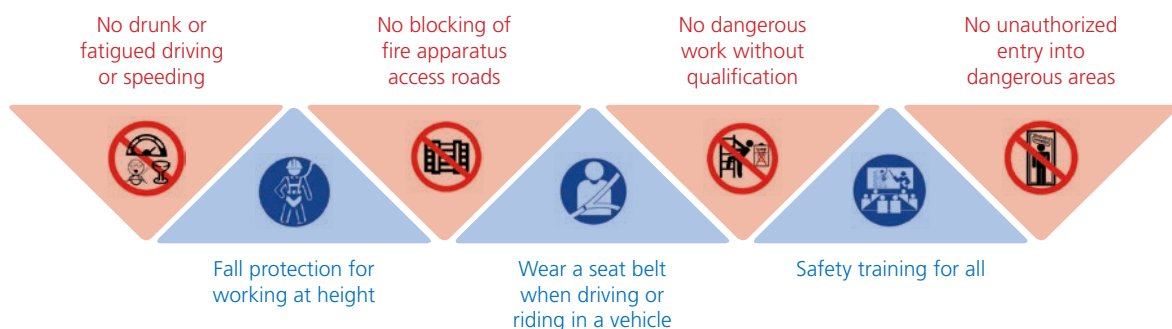
Research by third parties reveals that the majority of safety incidents are a direct result of dangerous behavior. It thus makes sense to minimize dangerous behavior in order to effectively reduce EHS incidents.

We have evaluated our business scenarios and EHS risks, and analyzed our EHS incidents and cases as well as those of peers. Following this, we have established the EHS Absolute Rules at different levels (e.g., engineering delivery, administrative service, capital construction, R&D, manufacturing, and corporate) in accordance with industry

best practices (e.g., Vodafone), customer requirements, and applicable laws and regulations.

By disseminating information, providing training, and integrating business processes, we have promoted the rules on a global scale. These rules have been turned into EHS Management Redline requirements, and all employees are required to comply with them. Following these measures, we have managed to minimize dangerous behavior and, more importantly, the number of EHS incidents.

Huawei's EHS Absolute Rules



Sustainable Operations

Drawing Competition: "Being Safe" – As Seen by Our Children

In August 2015, our New Zealand Representative Office held an EHS drawing competition themed "Being Safe" – As Seen by Our Children.

The competition was open to the children (under the age of 18) of all employees in New Zealand. Participants submitted a drawing which reflected the theme "Being Safe" (e.g., at home, at work, during sports, on the road).

This event garnered much interest from local staff and their families, as evidenced by the flood of submissions reflecting how children view safety. The winning entries were turned into a calendar and distributed to all staff as a Christmas gift. As a result of this event, local employees and their families learned more about safety issues, both at work and in life, and enhanced their own safety awareness.



Selected entries

Manufacturing Safety

At Huawei, the core goal of manufacturing safety is ensuring employee health and safety anytime, anywhere. In 2015, we ensured a high level of manufacturing safety, with no major manufacturing incidents occurring throughout the year. Last year, our Manufacturing Department refined its manufacturing safety management by developing and releasing 31 rules, regulations, and technical specifications. One example is the *Baselines for Safety Design (Design for Serviceability) for the Manufacturing Department*. To systematically attain our manufacturing safety goals, we executed skill improvement projects, and teamed up with external safety consultants and experts to complete a safety improvement project.

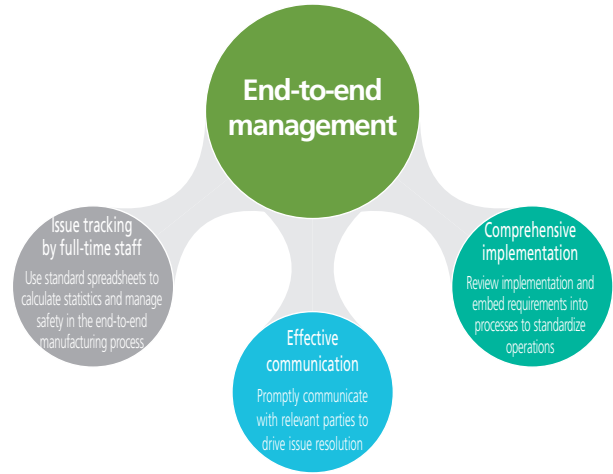
To strengthen the safety-first culture, we required all employees to sign a statement regarding their safety responsibilities; urged workshop directors and higher-level managers to develop and implement action plans for safety assurance; and launched the Manufacturing Safety Month and safety lectures. These initiatives increased safety awareness, improved the company's safety leadership, and contributed to our safety-first culture.

Safety Improvement Project with Assistance from DuPont Experts

Our Manufacturing Department has optimized its EHS management by benchmarking itself against leading EHS practices, analyzing gaps, and rolling out multiple improvement projects.

We hired leading safety management company DuPont as our advisor, who helped us systematically review and optimize our safety management. As part of this collaboration, we organized three onsite consultant-led coaching sessions and eight training sessions, and trained over 1,000 managers and EHS professionals. Together with DuPont, we identified 173 key EHS items for improvement, and introduced industry-leading safety management methodologies, including Safety Training Observation Training (STOP), Job Safety Analysis (JSA), lock-out and tag-out, and territorial management. Our EHS initiatives reinforced onsite safety management capabilities and laid a solid foundation for future improvements.

Closed-loop management of safety improvement



Sustainable Operations

Working Environment Safety

Creating a safe, comfortable working environment to ensure employee health and safety is an ongoing mission. In 2015, we continued launching projects to upgrade water purification systems in our campuses across China as well as modernize offices in hardship regions outside China.

Modernizing Office Facilities Outside China

In 2015, 34 Huawei representative offices outside China initiated projects to modernize their working environments, and spent over US\$100 million on employee health and safety.

Specifically, we established standards for improving office environments, safety and fire control, dormitories, canteens, and vehicles. We also released specifications for leased offices as well as regulations on malaria prevention and treatment. In Nigeria, Nepal, Laos, Pakistan, and many other countries, we installed drinking water purification systems, fitness equipment, and sports facilities.

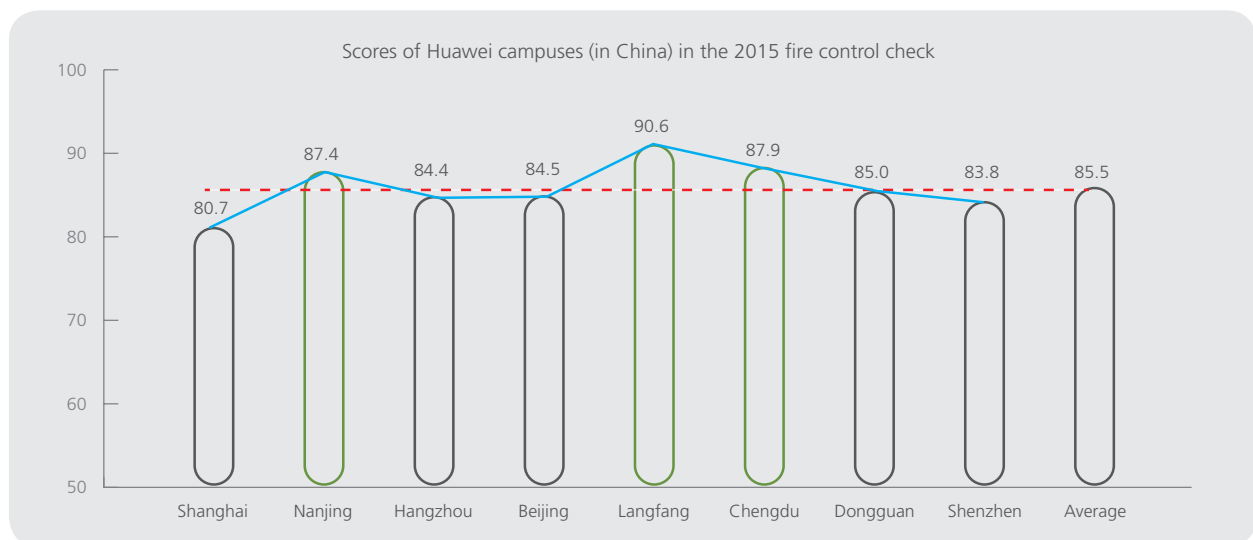
These efforts have been recognized by our employees, who now enjoy greatly modernized work and lives. In 2016, we will continue these initiatives to create a safer and more comfortable environment for our employees, especially those in hardship regions.



New office in a representative office outside China

Fire Control Safety

We have continuously implemented a fire control ownership system, organized training sessions and drills, and performed both routine checks and spot checks (e.g., checks on labs and gas use) to promptly identify and eliminate fire risks. In 2015, we released the *Guide to Fire Risk Control*, and designed a comprehensive approach to prevent fire risks in buildings throughout their lifecycle. We also engaged internal experts and third-party consultants to review our fire control designs, conduct acceptance and testing on fire control facilities, test fire control systems annually, and evaluate management systems.



Food Safety

We strive to provide our employees with a diverse range of safe, nutritious, and healthy foods. Outside China, we have effectively managed 140 canteens through our Staff Life Management Committee and minimum standards for canteen safety management. In 2015, all overseas canteens completed self-check and issue resolution; 16 national level-A canteens were constructed; and 19 national canteen modernization projects were completed. In China, we increased the variety of foods, urged 17 suppliers to obtain the ISO22000 certification, and adopted video monitoring technology to link our canteens in Shenzhen and Dongguan.

Road Traffic Safety

In 2015, we continued to optimize our road traffic management system by implementing standards for vehicles and driver qualifications, offering driving safety training, organizing Road Safety Week, and providing incentives to drivers with solid track records. In hardship regions, we bought or upgraded in-house vehicles and rented vehicles (e.g., sports utility vehicles and pickup trucks) based on delivery and onsite operational requirements. We also added in-car emergency kits to better protect our employees.



New vehicles for the Ghana Representative Office



Driving safety training at the Thailand Representative Office

Engineering Delivery Safety

Huawei delivers projects and services in over 170 countries and regions around the world, and provides telecom services to hundreds of customers, including those in war-torn and hardship countries and regions. In 2015, our delivery workload increased by 13.9% compared to the previous year. This growth posed huge challenges to delivery safety management. In response, we have set the corporate goal of 0 injuries and 0 fatalities for delivery projects, and adopted effective measures to guarantee delivery safety. For example, we have provided all employees and subcontractors with required safety information, publicity concerning our safety-first culture, training, guidance, working equipment, and incentives. We have assigned safety owners to every delivery project. Any key safety events are reflected in managers' performance reviews. We have also made continuous efforts to improve our leadership and ensure that safety management tasks are implemented from the top down.

Ensuring Systematic, Standardized EHS Management in Delivery Projects Worldwide

In 2015, we appointed EHS managers for 16 regional offices and the local representative offices, and released a solution for EHS management maturity assessment. EHS-related performance appraisals were completed in 16 regions to evaluate various issues, including EHS incidents, early warnings, and tracking; manager involvement; EHS Red and Yellow Cards; customers' EHS complaints; and EHS exam performance. The quantitative appraisal results of regional offices were published internally. This encouraged regional offices to identify management gaps, and contributed to EHS management globally.

Quality is a critical factor in the selection and qualification of our suppliers and subcontractors. Our Supplier Relationship Management (SRM) System helps us manage subcontractors' qualifications and performance. Our Supplier Corrective Action Request (SCSR) System allows us to reward or discipline subcontractors according to their performance. With the iResource System, we can record the skills, qualifications, training, and key events of subcontractors' employees. These three systems enable us to adopt digital means to efficiently manage subcontractors' qualifications, selection, training, routine operations, and rewards/discipline.

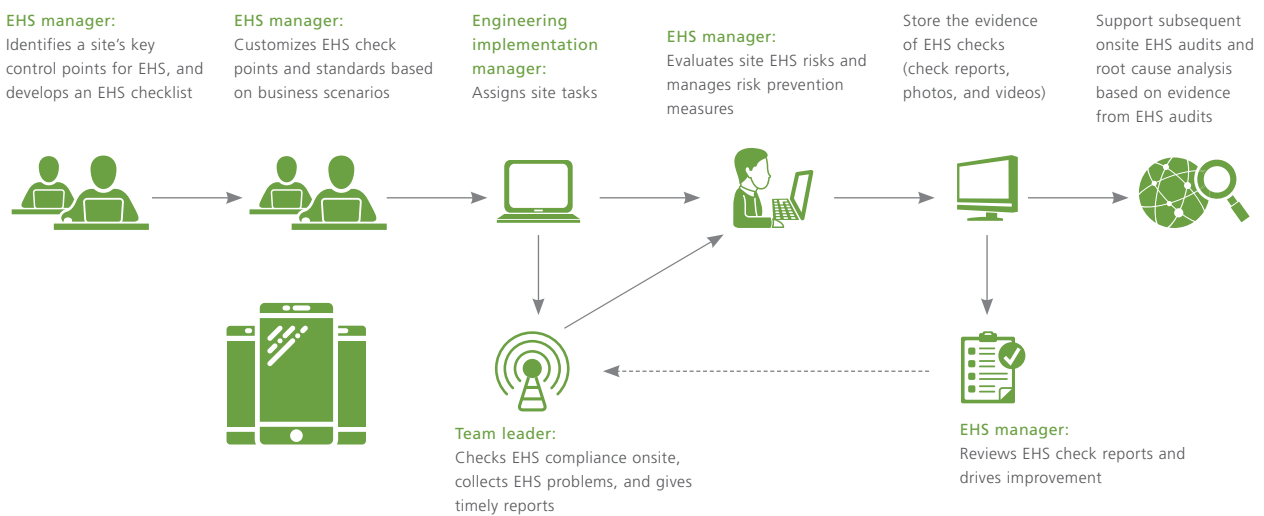
Sustainable Operations

Utilizing EHS Management Tools in Delivery Projects

We believe that management tools can help us effectively monitor risks at all stages of a delivery project to maximize management efficiency and minimize safety incidents. In 2015, we deployed the Smart QC tool and the On-Board Diagnostic (OBD) system to manage EHS in delivery projects. These tools produced impressive results.

- In 2015, we developed the Smart QC phone app and piloted it in 206 delivery projects around the world. This tool helped us visibly manage and review onsite operations. We will further roll out the app as part of more projects in 2016.

- In 2015, we established a cross-departmental OBD workgroup and installed the OBD system in 446 new vehicles used for all projects (12) of Vodafone subsidiaries. We also released monthly driving behavior monitoring reports, a practice which has been adopted in 79 countries and regions.
- System statistics show that, in 2015, the number of drivers who scored 90 points or higher in their driver behavior assessments increased month by month. No delivery project involved any major road accidents throughout the year. We also actively participated in Vodafone's quarterly safe driving forum. Our case study *How Huawei Uses the OBD System in Vehicles* has been recognized by Vodafone as a best practice for driving safety management.



How Smart QC is used

Enhancing Communication and Cooperation with Customers to Strengthen EHS Management in Delivery Projects

At the 8th Vodafone and Huawei Group EHS Summit in Shenzhen dated August 19, 2015, Huawei presented the EHS management business plan for 2016-2018 which will not only focus on the traditional high risk areas, but also the new risks brought by the new business areas such as the data center, managed service, and fiber optical project. We will also focus on the promotion of the EHS culture as well as the IT solutions for the EHS management such as OBD and Smart QC.

Vodafone fully supported the presented business plan, and highly recognized the effort Huawei had put on EHS management as well as the significant improvement Huawei had made to change from following customer requirements to having Huawei's own management system and proactive EHS management practices to protect the lives. Meanwhile, Vodafone suggested that Huawei set up the minimum requirements on EHS management across all the markets, in order to align the target and realize our EHS objectives.



8th Vodafone and Huawei Group EHS Summit



Vodafone representative giving a speech at the EHS Leadership Training Session

2.4 Reducing Our Environmental Impact

Context

Social progress over past centuries has depended heavily on the consumption of natural resources, and this pattern has caused serious global pollution and damage to the natural environment. The world is now witnessing an increasing number of environmental problems: global warming, biodiversity loss, and resource depletion. In the future, the Earth will need to support a growing population, more cities, and greater consumption. Traditional growth patterns face tremendous challenges – sustainability will be impossible if old ways of production and consumption are not changed.

Approach

Huawei has proactively responded to climate change. While using ICT technologies to help society reduce energy consumption, we also strive to minimize the direct environmental impact of our operations. We have decreased our energy consumption and CO₂ emissions through a range of measures. These include introducing energy management systems, replacing traditional energy with renewable energy, and adopting technological and managerial approaches to energy conservation.

Energy Management

Due to our continued business growth and expansion of construction areas, in 2015 our energy consumption (measured in standard coal) totaled 176,000 tons, an increase of 18.1% year-on-year. Energy conservation and emissions reductions have been the focus of our green initiatives in recent years. Through a variety of measures, in 2015 we managed to decrease our energy consumption per unit of sales revenue by 13.8% year-on-year. By adopting managerial and technological improvements, our China Region saved 44.3 million kWh of electricity, equivalent to a CO₂ emissions reduction of approximately 40,000 tons.

Decrease our energy consumption per unit of sales revenue by

13.8% year-on-year

Strengthening energy management: We set energy conservation targets, regularly collected and analyzed energy statistics, and kept track of energy management tasks and energy conservation projects. We also organized energy management training programs, and held publicity events to promote the concepts of energy conservation and increase awareness.

Improving electricity metering and management systems: We built and connected electricity management systems in our campuses, and established a nationwide facility operations management center in China to monitor and analyze real-time electricity usage in different locations to achieve refined management.

We met our energy conservation goals by continuing to develop energy management systems, promote technological approaches for energy conservation, and optimize the management of laboratory equipment.

Optimizing energy management in laboratories: Laboratory equipment runs for long periods of time and uses a lot of energy, with their electricity consumption accounting for around 40% of Huawei's total. In 2015, we cut laboratory energy usage by replacing legacy direct current power modules with energy-efficient equipment, deploying automatic switch-off tools, monitoring equipment utilization efficiency via IT tools, identifying and removing equipment that had been idle for a long time, implementing independent control on power branching, and enclosing the hot and cold air conduits within air conditioners. Thanks to these initiatives, we saved 30.4 million kWh of electricity.

Promoting technological approaches for energy conservation projects: We upgraded multiple systems, including lighting systems (e.g., T5 energy-efficient bulbs, LED bulbs, and light control systems) and air conditioners (e.g., controlling refrigeration stations by group; cleaning condensers with the power on, and modernizing and connecting building automation systems). In 2015, these measures saved 7.3 million kWh of electricity.

Huawei's Energy Consumption Statistics from 2011 to 2015:

Energy	Unit	2011	2012	2013	2014	2015
Natural gas	10,000 m ³	630	450	423	491	522
Gasoline	Ton	1,474	1,543	1,668	390	363
Diesel	Ton	67	48	60	46	41
Electricity	10,000 kWh	71,793	86,885	94,082	113,325	134,700

Sustainable Operations

Cleaning Air Conditioners' Condensers with the Power on

In 2015, we installed cleaning devices for the condensers of 38 air-conditioning chillers in our HQ. These cleaning devices can be used to clean condensers with the power on. This feature decreases the temperature differences during heat transfer, and can thus boost heat transfer efficiency.

Empirical data reveals that every 1°C decrease in condensing temperature translates into a 3% improvement in cooling efficiency, or an annual reduction of around 2 million kWh of electricity.



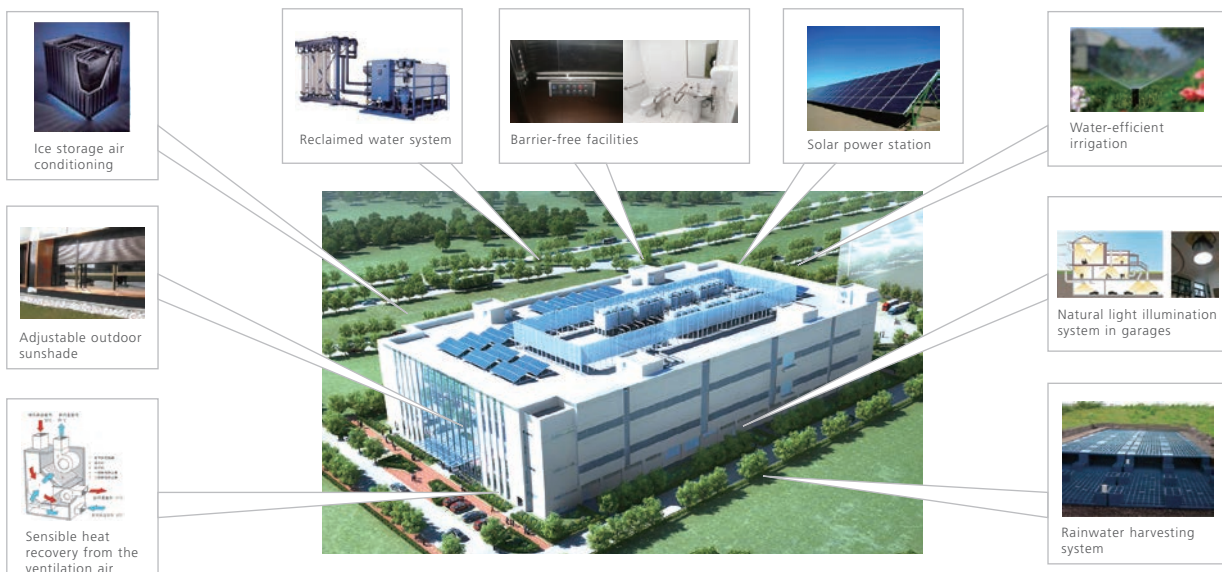
Cleaning devices for air-conditioning condensers

Green Buildings

In 2015, we began to pilot green building concepts in our Global Compliance and Testing Center (GCTC) at our Songshan Lake Campus in Guangdong, China. The new center has been designed and constructed in accordance with world-leading green standards, from site selection and energy and water conservation to material utilization. After conducting energy consumption analysis and thermal simulation, we applied 13 leading energy-efficient technologies at the center (see the following table). The center is expected to reach the Gold level of the US Leadership in Energy and Environmental Design (LEED) and pass China's Green Building (3-Star) certification.

The new center will consume much less water and electricity than our older buildings, and will be less costly to maintain. Every year, the building is expected to help us save 2,375,000 kWh of electricity, and avoid 1,415.5 tons of CO₂ emissions.

No.	Energy-efficient Technology
1	Sensible heat recovery from the ventilation air
2	Ice storage air conditioning
3	Renewable energy (solar power) system
4	Permeable paving
5	Rainwater harvesting system
6	Reclaimed water system
7	Water-efficient irrigation
8	Water metering based on category
9	Barrier-free facilities
10	Adjustable outdoor sunshade
11	CO ₂ concentration monitoring system
12	Indoor natural light illumination system
13	Dustproof grating at entrances; garbage room



Managing Greenhouse Gases

Greenhouse gas (GHG) management is an integral part of our operations. We have adopted the ISO14064 standard to identify GHG emissions, and have taken concrete steps to save energy and reduce emissions.

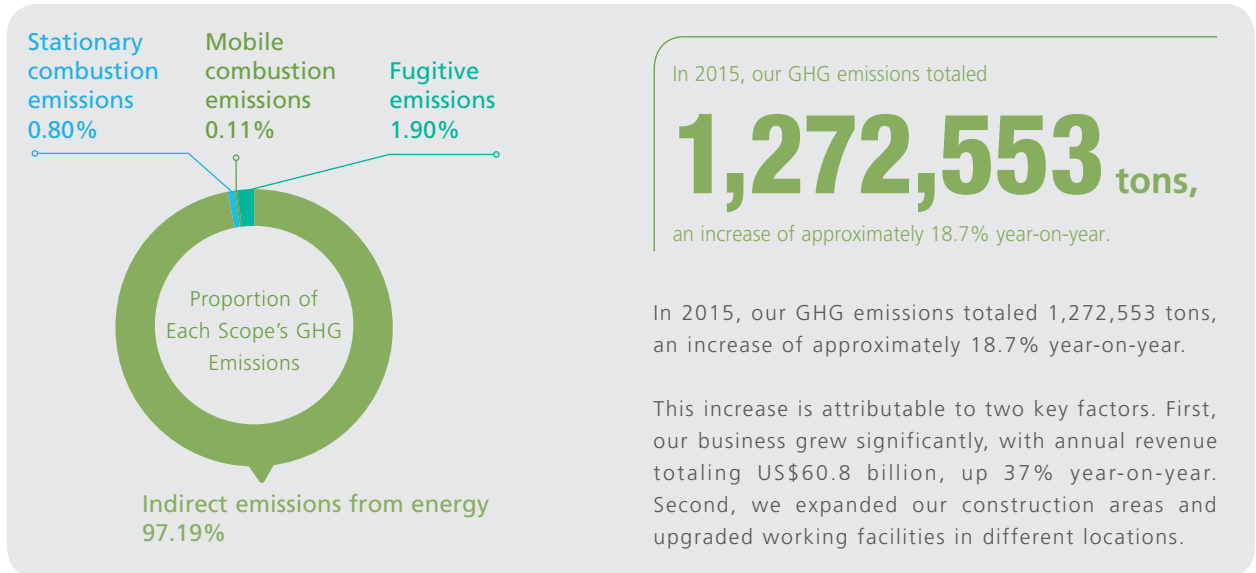
After quantifying and analyzing our GHG emissions, in 2014 we set a goal of reducing the GHG emissions per unit of sales revenue by 10% in five years (compared to 2012). Since then, we have continuously monitored and improved our GHG management performance. To decrease our carbon footprint, we have established energy management systems, rolled out energy conservation projects, and introduced clean energy.

Huawei's Greenhouse Gas Policy

- Set increasingly challenging goals for GHG emissions reductions, conduct regular internal audits and management reviews, and continuously monitor and improve GHG management performance;
- Introduce green concepts at the design phase to maximize products' energy efficiency and reduce GHG emissions at the usage stage;
- Develop a procurement strategy that highlights safety and green concepts, and strive to influence suppliers in terms of GHG management;
- Actively reduce resource consumption and promote clean production approaches to lower GHG emissions during operations.

GHG Emissions by Type

Type of GHG	CO ₂	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Total Emissions (Unit: Ton)
Emissions (t-CO ₂ e)	1,253,496.17	6,266.91	43.59	12,746.08	0.00	0.00	1,272,552.75
Ratio	98.50%	0.49%	0.003%	1.00%	0.00%	0.00%	100.00%



Note:

Scope 1 includes stationary combustion emissions, mobile combustion emissions, and fugitive emissions.

Scope 2 includes indirect emissions from energy.

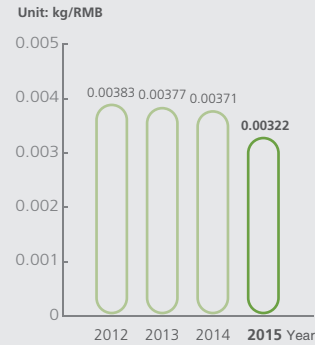
Sustainable Operations

In 2015, Huawei's CO₂ emissions per unit of sales revenue were **0.00322kg**, **13.8%** lower than in 2014.

GHG emissions from 2012 to 2015

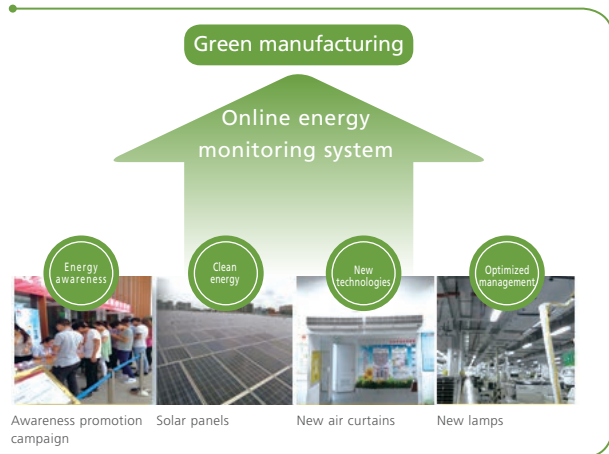


Intensity of GHG emissions from 2012 to 2015



Reducing Carbon Emissions from Manufacturing

Green manufacturing is always at the forefront as we consider how to maximize energy efficiency and minimize our energy use and carbon footprint at the manufacturing stage. In 2015, we adopted a combination of approaches to save 9,639,800 kWh of electricity, equivalent to a CO₂ emissions reduction of 9,011 tons. Approaches include increasing employees' energy awareness, optimizing energy management, improving technologies, refining product packaging, redesigning logistics and transportation systems, and introducing clean energy.



Green Logistics

Green logistics cut our operating expenses (OPEX) and reduce energy consumption and pollution. As such, it is an important part of our end-to-end green strategy.

Fuel consumption and exhaust emissions during transportation are the major sources of logistics-related pollution. To realize green logistics, we have analyzed huge amounts of data to plan shorter transportation routes and increase vehicles' load ratios. In 2015, we adopted the following green logistics measures to reduce energy consumption and carbon emissions from logistics.

<p>From air to sea freight</p> <p>Where possible, we use sea freight, so long as we can meet our delivery deadlines</p> <p>Impact</p> <p>2,039 tons of materials switched from air freight to sea freight</p>	<p>Diversified transport</p> <p>Use mixed strategies (sea/air, air/road, rail/road) instead of single transport strategies to shorten routes and cut energy use</p> <p>Impact</p> <p>1,165 tons of materials switched from air freight to mixed transport</p>	<p>Lightweight pallets</p> <p>Use lightweight pallets that weigh 70% less than ordinary pallets</p> <p>Impact</p> <p>Over the year, we carried 275 tons less because of lightweight pallets</p>	<p>Multi-packing</p> <p>Reduce the number of small orders to improve the availability of containers</p> <p>Impact</p> <p>303 tons of products (in 406 batches) shipped in the empty space in containers used for other orders</p>
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Maximizing Resource Efficiency

In the face of accelerating socioeconomic progress and population growth, natural resources are being consumed faster than they are replenished. If this trend continues, sustainable development will be impossible. This resource dilemma is also a major challenge for enterprises: They have to use resources efficiently to maximize value, increase competitiveness, and reduce OPEX.

Water Resource Management

In recent years, water shortages have increased in severity for two reasons. First, water resources are in tremendous demand but they are not being used responsibly. Second, the accelerating pace of industrialization is leading to severe water pollution. For example, the chemical, printing, dyeing, paper, and electroplating sectors use a high volume of water and produce high emissions.

Huawei takes water conservation seriously and has launched water conservation initiatives to better manage our water consumption. By adjusting the proportion of water types

and changing the way we use water, we have increased water utilization and reduced waste. For example, we have built facilities to recycle and reuse rainwater, wastewater, reclaimed water, cooling water, and condensates. We have also effectively managed and maintained water supply networks, water facilities, equipment, and appliances to prevent water leakage.

Most of the water we consume in our operations is used for landscaping, canteens, and air-conditioning systems. To reduce water consumption, we have promoted clean production technologies and adopted a variety of measures such as collecting rainwater, recycling cooling water, and buying reclaimed water for cleaning and landscape maintenance on campuses.

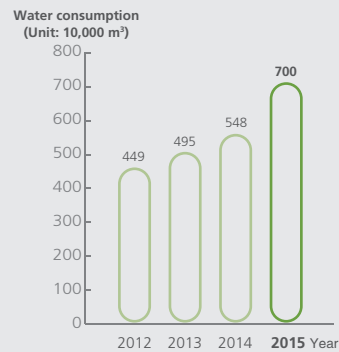
In 2015, we used 7 million m³ of water, an increase of 1.5 million m³ year-on-year. This increase is largely attributable to our business growth, larger construction and landscaping areas, and use of reverse osmosis water purification systems on all our campuses across China.

By using reclaimed water for cleaning and landscaping on our Beijing Campus, we managed to reduce the use of ordinary municipal water by

80,000 m³.

For our new building projects in 2015, we deployed rainwater harvesting systems and water reclamation facilities to reuse reclaimed water and increase water utilization efficiency. For example, by using reclaimed water for cleaning and landscaping on our Beijing Campus, we managed to reduce the use of ordinary municipal water by 80,000 m³.

Water consumption in Huawei's China Region from 2012 to 2015



Sustainable Operations

Our effluent discharges come primarily from domestic sewage. Domestic sewage at all of our campuses is sent to municipal wastewater plants for treatment, and is monitored by third parties to ensure compliance with local and national standards.

Lowering the Landfill Rate of Waste

We obey e-waste laws and regulations in all countries in which we operate. By recycling and reusing as many waste products as possible, we have lowered the landfill rate of waste.

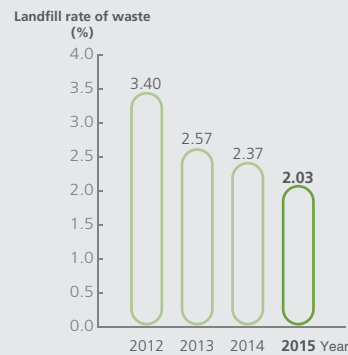
We disposed of 9,692 tons of waste globally, of which

97.97%

was recycled or reused

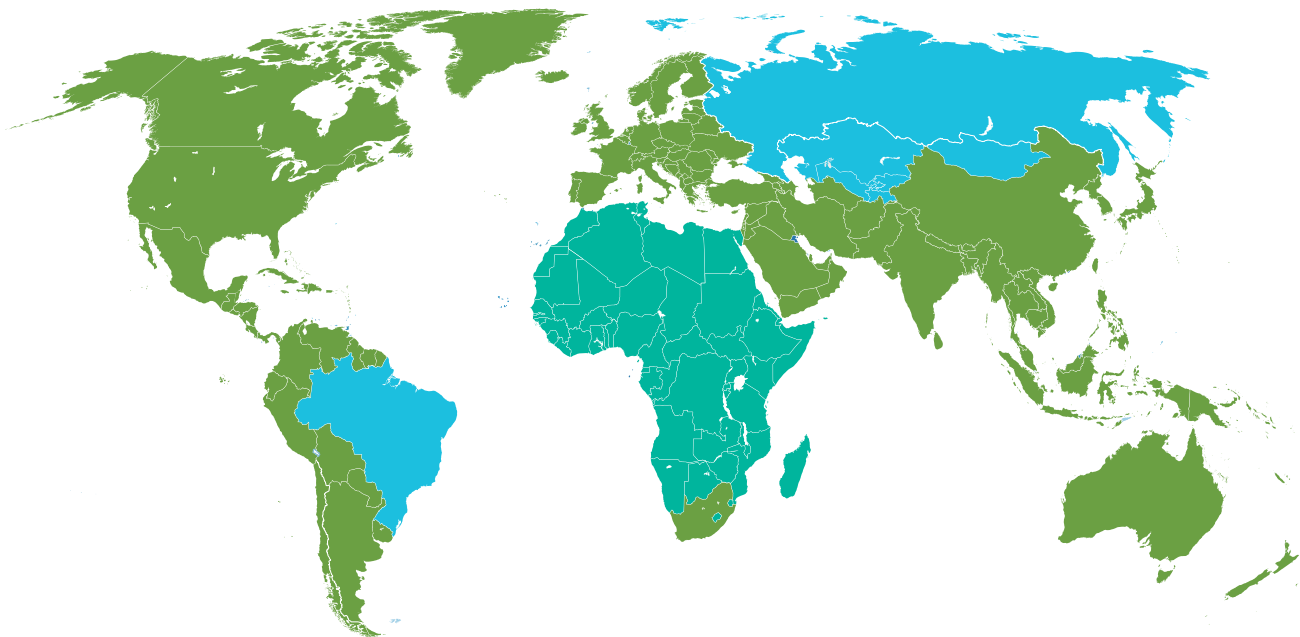
In 2015, we disposed of 9,692 tons of waste globally, of which 97.97% was recycled or reused, and only 2.03% ended up in landfills. The landfill process complied with environmental regulations.

Landfill rate of waste from 2012 to 2015



Bringing Together Scrapping Service Providers to Effectively Dispose of E-waste

In 2015, we selected leading scrapping service providers in line with our needs and local government requirements. Our close collaboration with these service providers resulted in more effective disposal of e-waste, reduced the rate of waste that went to landfills, and ultimately ensured the green processing of waste.



- Local scrapping
- Scrapping in a specific region; fewer service providers
- Scrapping in Hong Kong; fewer service providers

2.5 Sustainable Supplier Ecosystem

Context

Supply chain sustainability involves a number of issues, such as labor, health and safety, the environment, business ethics, and management systems. These issues have been followed closely worldwide and have influence on the sustainability of the entire industry. We understand that these issues relate to customers' and stakeholders' requirements on our products and the production process throughout the product lifecycle. Supply chain sustainability presents both challenges and opportunities.

Approach

Sustainability has become an integral part of our procurement activities, processes, and supplier lifecycle management. While using business opportunities to drive suppliers' improvements, we have taken effective measures to oversee and control their risks. In addition to ensuring legal compliance and satisfying customer needs, we have collaborated with suppliers to analyze the root causes of problems, solve problems, explore valuable opportunities, boost procurement efficiency, slash costs, and enhance competitiveness. Together with industry organizations, we have engaged in cross-disciplinary dialogs and cooperation, and participated in industry standards setting. Huawei is now a role model in the industry, setting the trends for sustainability and supporting a more healthy business ecosystem.

Sustainability is a basic requirement of our supplier qualification and selection. This means our suppliers must operate in accordance with a sustainability agreement in addition to applicable laws and regulations. We also use procurement quotas to drive suppliers' continuous improvement.

In 2015, we launched the Quality First strategy and fully embedded it into our procurement strategy, procurement process, and supplier management. To urge our suppliers to continuously improve, we adopted the "Top Four Initiative", which aims to achieve IT-based management, promote production automation, develop employee expertise, and retain staff in key positions. Sustainability is now a key requirement for our products and production process. In fact, it has become a key element of our product lifecycle, value chain operations, and strategies for reducing costs and gaining differentiated competitive advantages. By emphasizing the business benefits of sustainability, we have developed our competitive advantage and identified opportunities for customer satisfaction, risk control, efficiency enhancement, and business innovation. In addition, we have made continuous improvements by analyzing the cost effectiveness of sustainability efforts.

In 2015, we focused on the following areas as we managed supply chain sustainability:

- Better cooperation with customers: Sustainability was further embedded into our procurement process. In cooperation with our customers, we implemented joint audits and capability development projects, identified business opportunities concerning sustainability, and explored innovative practices and business cases relating to sustainability.
- Better cooperation with suppliers: Sustainability was assigned greater weight in our supplier qualification and

performance appraisals. We redoubled our efforts to train suppliers, gave them the required support, and shared experiences. Our business-driven approach to supplier management encouraged our suppliers to improve their sustainability performance.

- Better cooperation with governments and NGOs: This allowed us to increase our supervision of suppliers' green practices and transparency. We identified market factors that promoted a greener supply chain. To help suppliers further reduce energy consumption and emissions, we used software from the Institute of Public and Environmental Affairs (IPE) to regularly query data on 465 key suppliers' environmental performance. We also worked with a certain government agency on a pilot program for a greener supply chain.
- Better management of conflict minerals: In line with industry best practices, we analyzed the latest trends related to the conflict minerals problem, improved our internal management process, and pushed for the use of smelters certified by the Conflict Free Sourcing Initiative (CFSI). We investigated 977 suppliers based on the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-affected and High-risk Areas* and the CFSI conflict mineral questionnaire.
- Better cooperation with industry players: We participated in discussing and setting industry standards, and played a leading role in developing the IPC-1401 standard for supply chain sustainability. We also encouraged peer cooperation and collaboration with upstream and downstream supply chain players, in order to convert best practices into industry standards and actions. Huawei is a partner of many academic institutions, including the Humboldt University of Berlin (Germany), Waseda University (Japan), Peking University (China), and the Chinese Academy of Social Sciences.

Sustainable Operations

Supplier Sustainability Management Model



Year	Number of New Suppliers	Number of Qualified New Suppliers
2013	38	38
2014	56	56
2015	110	110

Table 1: New Supplier Qualification

New Supplier Qualification

We implement a comprehensive qualification process for all new suppliers, including suppliers' sustainability systems. This qualification process examines suppliers' capacity and their compliance with applicable laws, regulations, and the *Supplier Sustainability Agreement*. This process includes three stages, in which different departments shortlist, audit, and review suppliers to ensure fairness throughout the process.

- **Shortlisting phase:** Sustainability requirements are one of the minimum conditions that potential suppliers must meet. Those who fail this phase are excluded before selection begins.
- **Qualification phase:** Onsite audits are performed to assess whether a supplier meets the criteria stipulated in the *Supplier Sustainability Agreement*. The audits include activities such as management interviews, employee interviews, document reviews, onsite inspections, and third-party information searches.
- **Review phase:** An expert panel reviews the results of the supplier audit. Compliance with sustainability requirements is the precondition for acceptance. Any supplier that fails to meet the standards will not be accepted. Suppliers are also required to conduct regular internal audits to ensure continued compliance with Huawei's sustainability requirements and make continuous improvements.

Supplier Sustainability Agreement

In accordance with the Electronic Industry Code of Conduct (EICC) and the social responsibility guide of the Joint Audit Cooperation (JAC), Huawei has formulated the *Supplier Sustainability Agreement*, which covers five areas: labor, health and safety, the environment, business ethics, and management systems.

Huawei requires that all our suppliers sign the *Supplier Sustainability Agreement*, and this requirement is a prerequisite for supplier qualification, auditing, and performance appraisal. In addition to applicable laws, regulations, and international standards, our suppliers are required to incorporate sustainability into their product and production process, embed sustainability into business decision making and daily operations, and establish effective management systems. These efforts will enable our suppliers to manage risks, work more efficiently, and hone their competitive edge.

Huawei reserves the right to inspect or audit suppliers at any time, in order to assess whether they meet the requirements specified in the *Supplier Sustainability Agreement*. We also require our suppliers to extend the same requirements to their own vendors.

Annual Risk Ranking and Auditing

We divide suppliers into different categories to ensure their continued compliance with our sustainability requirements. Every year, we audit suppliers, which combined represent 90% of our procurement value, and assign them one of three priority levels: high, medium, and low. On this basis, a list of suppliers which require particular attention is drawn up. The factors considered during the audits are: the country where a supplier is based; product/material type; potentially high-risk manufacturing processes; business volume and relationships; sustainability performance; environmental risks; and risk management systems.

Year	Number of Audited Suppliers	Number of High-priority Suppliers	Number of Medium-priority Suppliers	Number of Low-priority Suppliers
2013	735	28	146	561
2014	753	20	67	666
2015	870	14	59	797

Table 2: Supplier Audit Results from 2013 to 2015

Every year, we conduct onsite audits on medium-priority and high-priority suppliers. Before conducting the audits, we require suppliers to perform self-checks based on the terms of the *Supplier Sustainability Agreement*, so as to identify their own strengths and weaknesses and create correction plans. During onsite audits, we assess each supplier's ability to manage its own sustainability, and identify any potential problems, particularly high-risk problems and issues regarding management systems and capabilities.

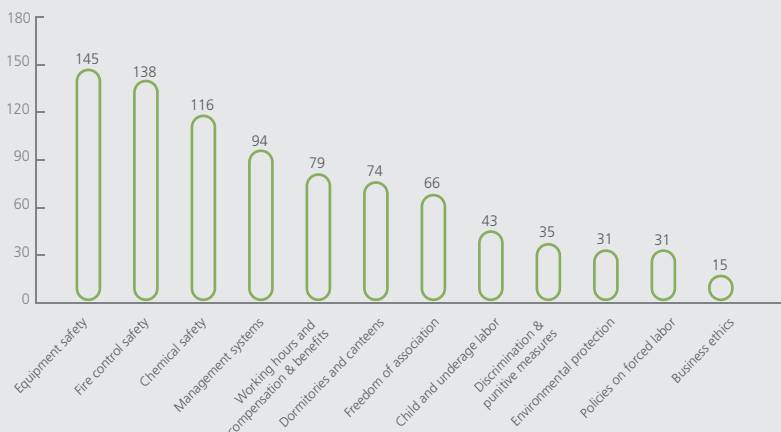
Routine audits are a key part of our approach to supplier sustainability management: We focus on using audits to discuss with suppliers' management teams about their buy-in and ownership concerning sustainability, find out where problems are, and then solve them and prevent future problems.

If we discover a problem during an audit, we help the involved supplier analyze root causes, identify ways to solve it, and take targeted actions using the Check, Root cause, Correct, Prevent, and Evaluate (CRCPE) methodology. All problems are logged in the Supplier Corrective Action Requirement (SCAR) system for follow-up until closure. We are always ready to help our suppliers improve.

Year	Number of High-priority Suppliers Audited	Number of Medium-priority Suppliers Audited
2013	28	57
2014	20	67
2015	14	59

Table 3: Supplier Onsite Audit Results from 2013 to 2015

Typical Problems Discovered during 2015 Supplier Audits



Notes:

- Recent years have seen an increasing awareness of issues surrounding forced labor and human trafficking in global supply chains, as demonstrated by the *California Transparency in Supply Chains Act* and the *UK Modern Slavery Act*. Huawei refers to these regulations when updating our supplier audit requirements, which have been included in our supplier training, risk assessments, routine audits, and continuous improvement processes.
- During supplier audits conducted in 2015, we discovered no incidents relating to child labor or forced labor, although certain suppliers' management systems were inadequate in this regard.

Sustainable Operations

Supplier Performance Management

We appraise suppliers' sustainability performance annually based on onsite audit results and improvements. Performance appraisals cover key factors such as labor, health and safety, the environment, business ethics, and management systems. Suppliers are classified into four grades (A, B, C, and D) based on their sustainability performance, which represent their performance level in descending order. In 2015, we appraised the performance of 707 suppliers and rated 324, 276, 104, and 0 as A, B, C, and D, respectively.

The sustainability performance of each supplier is published internally, and is communicated by our procurement managers to the supplier's managers to drive continuous improvement. Our amount of business with each supplier depends on their performance, which is also a factor considered in our tendering, supplier selection, portfolio management, and other processes. Suppliers that perform well are given higher procurement quotas and more business opportunities, while the reverse is true for low-performing suppliers. Depending on the situation, we instruct low-performing suppliers to correct existing issues within a specified timeframe and may even terminate business relationships with suppliers that display exceptionally poor performance. In 2015, we restricted the tendering rights or reduced the quotas of three suppliers due to poor sustainability performance.

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Supplier Capability Development

Sustainability awareness and capability development are crucial to suppliers' self-management. We provide training and coaching for suppliers as necessary. Suppliers are also encouraged to integrate sustainability into their business models and strategies, view sustainability as the key to reducing business risks, enhance operating efficiency, and develop a competitive edge in cost or differentiation. Additionally, we continuously help suppliers identify opportunities through root cause analysis and cost effectiveness analysis. By benchmarking themselves against industry best practices, suppliers can optimize their sustainability management, and proactively integrate sustainability into their operations.

Joint Supplier Capability Improvement Project with a Customer

Huawei is a member of Together for Sustainability, a supplier capability improvement program launched by Deutsche Telekom in partnership with three suppliers and an international consultancy. The program encourages participants to integrate sustainability into their businesses, explore improvement opportunities through benchmarking, adopt sustainable approaches for greater management efficiency, and regularly review improvement progress.

Through their unwavering efforts to improve capabilities, the three suppliers have made great progress in sustainability management. For example, one of the suppliers has achieved better customer satisfaction, operating efficiency, cost reduction, energy performance, and working environment. Ultimately, the supplier earned an award from Deutsche Telekom.



We have made huge progress in sustainability, and our efforts have been recognized by multiple stakeholders. We'd like to thank Huawei's CSR expert team for their training and instruction. We are delighted to have the chance to work with this professional team.



– Supplier's compliance manager

The Huawei Global Supplier Sustainability Conference and Regional Supplier Conferences have been held annually since 2009. At these conferences, Huawei and our stakeholders (e.g., customers and suppliers) share ideas and learn from each other. These conferences are well received as they allow our suppliers to understand the needs of Huawei and our customers, stay updated on industry trends, learn about sustainability best practices, and optimize their sustainability management.

Co-building a Learning Supply Chain; Accelerating a Sustainable Ecosystem

In September 2015, Huawei held the Global Supplier Sustainability Conference with the theme of "Co-building a learning supply chain; accelerating a sustainable ecosystem." The event was attended by over 220 guests. Huawei's Senior Vice President and Chief Supply Officer, Mr. Liang Hua explained the importance of incorporating sustainability thinking into the product lifecycle and value chain. He remarked that throughout each stage, we should encourage suppliers to identify opportunities for improvements that make our products and services more competitive. Mr. Liang also made it clear that suppliers who consistently provide sustainably-made and quality products will receive more business opportunities from Huawei.



Global Supplier Sustainability Conference

Sustainable Operations

Building a Greener Supply Chain

Huawei Green Partner Certification

The Huawei Green Partner (HW GP) Program aims to ensure that no products or parts contain any chemicals banned by law. It requires full compliance with environmental laws, directives, standards, and customer requirements. The program encourages our suppliers to systematically manage their environmental protection efforts and follow green initiatives throughout a product's lifecycle, from green design to green manufacturing. By controlling the use of restricted substances from the outset, we have contributed to a greener supply chain. In 2015, Huawei certified 53 suppliers as Green Partners.

Year	Number of Certified Suppliers
2013	34
2014	47
2015	53

Table 4: Number of Certified Suppliers

Green Choice

Since 2011, Huawei has been a member of the Green Choice Alliance, which was established by the NGO Institute of Public and Environmental Affairs (IPE). IPE maintains a national database of corporate environmental performance, which can be used for supplier sustainability management. In 2014, we began using IPE's Ferret software to regularly investigate 465 suppliers' environmental performance and urge them to improve management. We have required low-performing suppliers to solve their issues within a specific period, and have regularly provided information about query results and improvement progress to IPE. On IPE's 2015 Greening the Global Supply Chain – Corporate Information Transparency Index (CITI), Huawei was scored as the leading Chinese company and ranked 7th in the ICT sector.

Greener Supply Chain

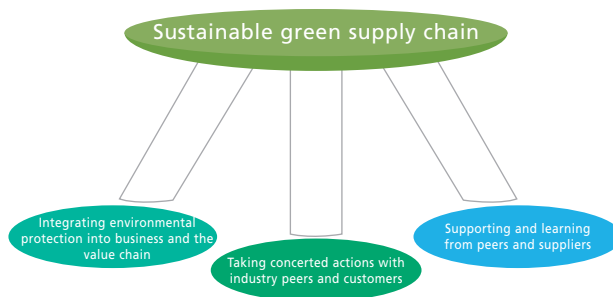
The Greener Supply Chain Pilot Project is a pilot initiative between Huawei and the Human Settlements and Environment Commission of Shenzhen. In 2015, we expanded the pilot project further down our supply chain. Ten of our suppliers selected several of their own suppliers to join the pilot, and Huawei invited nine other large companies and their suppliers to participate. Together, we aim to create a learning network that helps build a greener supply chain.

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Through factory tours, expert-led training, technical exchanges, and experience sharing, we have encouraged suppliers to embed green requirements into their products and production process; analyze financial results from the perspective of environmental protection; identify opportunities for risk control, efficiency improvements, and business innovation; and design and implement improvement measures. Industry peers are encouraged to align their goals. We also enable upstream and downstream players to share experience, study best practices, and explore new cost-effective ways to increase their expertise in environmental protection.

Building on the experience of the pilot project over the past two years, we have created a new model (see above) for building a sustainable green supply chain. At a project review meeting in 2015, experts from the Greener Supply Chain Pilot Project praised our market-driven approach to building a greener supply chain. At green supply chain workshops held in Dongguan and Tianjin, in China, we also shared our practices for building a greener supply chain. Our efforts were recognized by experts in attendance.

Reducing Supply Chain Carbon Footprint

In 2012, we launched a pilot program for supplier energy conservation and emissions reductions. The aim is to encourage suppliers to audit their energy usage, identify opportunities to reduce energy use and emissions, align with industry-leading practices and business case studies, and develop and implement the energy conservation and emissions reduction plan. In 2015, 35 suppliers joined the program, reducing CO₂ emissions by over 72,000 tons.

Year	Number of Suppliers	CO ₂ Emissions Reduction (Ton)
2013	4	23,839
2014	20	53,652
2015	35	72,309

Table 5: Total CO₂ Emissions Avoided by Suppliers

Managing Conflict Minerals

“Conflict minerals” refer to tin, tantalum, tungsten, gold, and other minerals that are mined under conditions of armed conflict, notably in the Democratic Republic of the Congo and adjoining countries. The profits from the sale of these minerals finance ongoing armed conflicts in countries where they are mined or smelted. The problem of conflict minerals has drawn the attention of the electronics industry and other industries. Governments in the US and Europe have also passed laws to address the problem. The types of conflict minerals and the involved regions are expanding. The problem is complex and will only be resolved through collective commitment and deep cooperation between businesses, governments, and NGOs.

Huawei takes the problem of conflict minerals very seriously. We began to address this problem in 2002, and have released an open statement to announce that we will not procure or support the use of conflict minerals. We require all suppliers to not procure conflict minerals. We also ask our suppliers to cascade this requirement to their suppliers. Through the Conflict Free Sourcing Initiative (CFSI), we have worked with companies around the world to jointly address this problem, using the CFSI conflict mineral questionnaire and the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* to survey the supply chain and share results with our customers. In 2015, we teamed up with Ernst & Young to analyze conflict mineral trends worldwide, and refined our conflict mineral management process and solution on the basis of leading management practices.

Huawei Statement on Conflict Minerals:

<http://www.huawei.com/en/about-huawei/declarations/statement-on-conflict-minerals>

In accordance with the *OECD Due Diligence Guidance*, we evaluated all materials we used, and developed a list of materials and suppliers that involve conflict minerals in 2015. We also used the CFSI conflict mineral questionnaire to investigate 977 suppliers. Following this, we analyzed supplier feedback, developed questionnaire summaries, launched due diligence concerning conflict minerals, and shared investigation results with our customers. We encouraged suppliers to use smelters with the Conflict Free Smelter (CFS) certification, and urged uncertified smelters to become certified.

We will continue to play an active role in the programs organized by industry organizations such as GeSI, Association Connecting Electronics Industries (IPC), and CFSI. Together with our customers and suppliers, we will actively seek sustainable solutions to the problem of conflict minerals.

Industry Cooperation

Cooperation with industry players is a key factor when it comes to building a sustainable supply chain. Together with industry players, we keep a close eye on sustainability opportunities and challenges, hold interdisciplinary dialogs, and cooperate with industry organizations. Maintaining a consistent understanding, taking coordinated actions, and sharing resources helps us combine our strengths and gain leverage on these issues. Ultimately, we can boost industry competitiveness.

In 2014, IPC entrusted Huawei and Flextronics to lead the development of IPC-1401, a standard for supply chain sustainability. IPC-1401 uses the CSR criteria of the ISO26000 standard as customer requirements for products and production process. IPC-1401 embeds sustainability into procurement processes, and encourages all players in the supply chain to collaborate with each other. In 2015, the activities of the IPC-1401 technology group attracted nearly 150 experts from electronics companies, original equipment manufacturers, electronic component makers, research institutions, and industry associations. The IPC-1401 technology group held six technical workshops in Shenzhen, Beijing, Shanghai, and Guangzhou, China. The draft standard (open for discussion) has been completed and the final version will be released in 2016.

Huawei has also played a key role in the development of the CSR standard for China’s ICT industry. Based on the framework of the ISO9001 management system, the standard incorporates CSR requirements into companies’ value chain. It will be released in 2016.





03

Sustainable Products and Services



Sustainable Products and Services

3.1 Cyber Security and Privacy Protection

Context

With the flourishing of various new technologies including cloud computing, virtualization, Big Data, IoT, and mobile Internet in recent years, cyberspace and the physical world are increasingly converging and connectivity has become a ubiquitous part of our life. Notwithstanding the tremendous personal, social, and enterprise benefits that we have realized as a result of the digital and broadband revolutions, security threats are increasing, and vandalism, theft, and disruption are ongoing issues.

Meanwhile, data traffic is continuing to surge with more and more personal data stored and processed in ICT systems. Whether people like it or not, personal data are collected and used by enterprises and individuals. Complex privacy issues related to personal data protection continue to emerge. Countries promulgate their own data protection laws which vary from country to country even though cross-national data transfer has become very common.

Approach

Huawei always treats cyber security as an important corporate strategy and has implemented an end-to-end global cyber security system. We emphasize that our commitment to cyber security will never be outweighed by the consideration of commercial interests. This commitment is the guiding principle for our operations.

Similar to our cyber security efforts, Huawei makes a solemn commitment to the public, governments, and customers on privacy protection and honors this commitment as part of our corporate social responsibility. We comply with changing local, regional, and international laws and regulations and take all necessary measures to boost privacy protection in accordance with laws and regulations.

End-to-End Assurance System

We have established and implemented an end-to-end and trusted global cyber security assurance system in terms of policy, organization, process, management, technology, and specifications. In this assurance system, we first clarify the overall strategy and governance structure. The Global Cyber Security & User Privacy Protection Committee is the highest organization in Huawei to manage cyber security and privacy protection. We have appointed a Global Cyber Security & Privacy Officer, who reports directly to the CEO. All Huawei's relevant business units have set up cyber security and privacy protection offices and these also extend to our regional offices.

Senior Management Focus on Cyber Security & Privacy Protection

If cyber security doesn't matter to the Board of Directors (BOD) and other senior executives, it doesn't matter to the staff. The Global Cyber Security & User Privacy Protection Committee is the highest committee in Huawei managing cyber security and privacy protection and is chaired by a Deputy Chairman of Huawei's BOD. On this Committee sits the main board members and the global process owners, each of whom has a role in ensuring that cyber security requirements are embedded in all processes, policies, and standards and that they are executed effectively.

Huawei senior executives have stated Huawei's position and commitments in cyber security and privacy protection on various occasions. For example, in 2011, Ren Zhengfei, the founder and CEO of Huawei, signed off on the *Statement on Establishing a Global Cyber Security Assurance System*.

(<http://www.huawei.com/en/about-huawei/declarations/cyber-security>)

In the New Year speech of 2015, Ken Hu, the Rotating CEO, stated:

"We should enhance cyber security and user privacy protection. Network coverage is now higher than ever. Customers not only require secure and reliable networks, but also secure data storage. Therefore, protecting customers' information assets and privacy is absolutely critical. No matter what the challenges might be, we must adopt every possible means to provide higher levels of assurance to ensure the secure and stable operations of customer networks. We must make a solemn commitment to the public, governments, and customers regarding cyber security and user privacy protection, and honor this commitment as part of our corporate social responsibility. We will take all necessary measures to boost user privacy protection in accordance with local laws and regulations."

To ensure sustained security, our cyber security assurance system is built on consistent, repeatable, and globally rolled-out processes. We take a built-in approach to cyber security to embed cyber security requirements into business processes including R&D, manufacturing, service & delivery, procurement, and supply chain. Besides process controls, we have built “many hands” and “many eyes” verification procedures and disciplines around an ABC approach – “Assume nothing, Believe no-one, and Check everything.” We believe that from an efficiency, effectiveness, and security perspective, the more people who are looking, touching, testing, and questioning everything we do, the better it is for Huawei and the better it is for our customers. It is something we positively encourage for all vendors.

People are important assets to companies. However, from a security perspective they can also be one of the major causes of security issues. Therefore, we continuously carry out large-scale cyber security training programs to help employees understand cyber security issues. With the improvement of all employees’ awareness, we have now developed training courses internally and introduced courses from external parties to improve employees’ cyber security knowledge and skills for their specific roles. In addition, we have identified cyber security critical positions and enhanced cyber security management during pre-job, on-job, and off-job stages of those critical positions.

Meanwhile, we proactively nurture a healthy internal culture to ensure every employee, partner, and external advisor can accurately understand Huawei’s basic requirements on cyber security and privacy protection and strictly implement relevant processes and rules. We have also integrated cyber security and privacy protection requirements into the BCGs. All employees are required to understand and sign the BCGs every year.

The ability to respond effectively to issues and learn lessons when anything goes wrong is critical. Huawei has established a comprehensive vulnerability management system to rapidly discover and respond to customer issues and maintain communication with customers during the resolution process. When things go wrong, being able to quickly identify where it has gone wrong, what hardware or software component caused the issue, and where else that component is used is crucial to timely recovery. We have established a mature system for tracing supply chain components and enhanced security management through version control, reverse logistics management, and traceability to ensure that virtually every process and component is traceable. For software incorporated into configuration management, the affected products and customers can be identified automatically within one hour of a vulnerability’s disclosure. We have also built basic software integrity protection capabilities into our end-to-end processes, through the inspection of materials from suppliers, digital signatures in product versions, integrity protection for gold images, and cloud-based software management in manufacturing and delivery.

To ensure the implementation of the end-to-end system, we have an independent Internal Audit Department conduct cyber security audits each year on business units and regions. The Internal Audit Department has released the audit report and regularly reports to the Global Cyber Security & User Privacy Protection Committee.

User privacy protection is high on our priority list. We have a growing team of privacy experts who have rich experience in privacy protection, many of whom have passed the International Association of Privacy Professional certification (CIPP). We have a legal team dedicated to global privacy protection, and legal experts and local lawyers worldwide who review applicable laws and regulations on an ongoing basis. We engage law firms with established reputations and experience in privacy protection. All this work provides important inputs to our global privacy compliance policy. By following the path of “laws and regulations → compliance policies/requirements → baseline requirements → incorporation into processes”, we include these requirements in the processes, standards, and guidelines of our daily business activities.

To help business departments identify and mitigate privacy risks in business activities, Huawei has implemented industry recognized approaches and practices, and introduced the Privacy Impact Assessment (PIA) methodology recommended by European and American data protection regulators to assess privacy risks of business involving personal data. This methodology includes the Privacy Impact Assessment Framework (PIAF) released by the European Union in 2012, and consists of the following six steps: identifying the need for a PIA; describing information flows; identifying privacy and related risks; identifying and evaluating privacy solutions; obtaining internal approval at different levels; and integrating the PIA outcomes into the project plan. For risks identified by PIA, we take a close-looped management approach to follow up the risk’s resolution or mitigation. With regard to high-risk businesses involving personal data, we have established a management mechanism so that before such a business goes live, it should get the approval of both the Chief Legal Officer and the Global Cyber Security & Privacy Officer to ensure it is legally compliant and its security and privacy risks are under control.

Throughout the whole lifecycle of data from collection, processing, storage, transfer to its deletion, we follow basic principles in the industry which are “lawful, fair and transparent”, “limit to the purposes”, “minimum data”, “accuracy”, “minimum storage”, “integrity and confidentiality”, and “accountability”. Based on those principles, we have developed corresponding measures and adapted those measures to local laws in regions. As a global company, Huawei needs to transfer and process data across borders worldwide. We keep a close eye on each country’s regulations on cross-border data transfer (e.g., unrestricted transfer, conditional transfer, and prohibited cross-border transfer of certain types of personal data). Any Huawei entity that hopes to transfer personal data across borders is required to consult our data protection officer and Legal Affairs Department in advance. Our corporate regulations stipulate that a data transfer agreement that meets the EU requirements must be signed or explicit customer consent must be obtained before personal data is transferred out of the European Economic Area (EEA). The entity that receives personal data must provide sufficient guarantees to ensure privacy.

Sustainable Products and Services

Communication and Cooperation in an Open and Transparent Manner

Cyber security is not a single country or company-specific issue. All stakeholders need to recognize that cyber security is a shared global problem requiring risk-based approaches, best practices, and international cooperation to address the challenge. Taking on an open, transparent, and sincere attitude, Huawei is willing to work with all governments, customers, and partners, encourage mature conversations, and advocate for fair, reasonable and non-discriminatory international standards, policies and regulations.

Huawei issues white papers to contribute to industry standards based on our experience and lessons in cyber security. To date, we have released three cyber security white papers. The first two white papers systematically introduce our cyber security position and approach, detailed processes, and practices. The third white paper summarizes cyber security questions Huawei used to be asked by customers into 100 questions that ICT buyers may consider when selecting providers in a bid to raise security levels across all technologies. What's more, Huawei proactively pushes the development of security standards in standards organizations. For instance, Huawei is leading the development of security standards in 3GPP. In 2015, 106 of Huawei's security proposals were adopted by 3GPP, ranking top. 27 of Huawei's proposals were adopted by the security work group of ETSI NFV, ranking top. In ONF, Huawei submitted 3 RFC and 15 security proposals and became the chair of the ONF security group.

We also proactively communicate and share our practices in industry conferences. In September 2015, we sponsored and attended the 6th Global Cyberspace Cooperation Summit held by the EastWest Institute (EWI) in New York. Andy Purdy, Huawei US Cyber Security Officer, delivered a keynote speech sharing our cyber security practices and expressing our attitude toward open and transparent collaboration. As a co-leader of the Breakthrough Group on Increasing the Global Availability and Use of Secure ICT Products and Services, we contributed to cyber security standards with our third white paper *Cyber Security Perspectives: 100 requirements when considering end-to-end cyber security with your technology vendors* as important input for the Breakthrough Group.

We have received positive feedback and have been widely recognized by governments, customers, and industry for our efforts in cyber security. In April 2015, Huawei received the Transparency Award for cyber security from the governments of four cities in Lower Saxony, Germany. This is the first cyber security award received by Huawei from governments in Europe.

About 70% of our components come from suppliers. We realize that in the face of a global challenge such as cyber security, it is not enough if only Huawei does cyber security well. Hence, while consolidating our own cyber security practices, we also enhance cyber security management by our suppliers. Cyber security is the foundation for our



September 2015, Andy Purdy, Huawei US Cyber Security Officer, made a keynote speech in the EWI Summit, New York

cooperation with suppliers. We have established a comprehensive supplier cyber security management system and helped suppliers to improve their capabilities to drive advancements across the entire industry chain.

We conduct regular supplier risk assessments, and manage suppliers based on their risk levels. Through our cyber security agreement, we have conveyed our cyber security risks to our suppliers. Suppliers are required to fix the issues found in audits, and to improve their cyber security system and capabilities. To better meet customer requirements, we have established processes for detecting, warning, and responding to vulnerabilities on the supplier side.

Communication is also a key method to enhance suppliers' cyber security awareness. In 2015, we organized training for senior managers of 116 suppliers. In the Global Engineering Provider Conference held in February 2015, we introduced our cyber security requirements and management mechanisms for suppliers.

Networks are shifting toward fully-connected services, SDN/NFV-based architecture, and Internetized operations. The emergence of smart lifestyles will bring about more challenges for user privacy protection and cyber security. We will continue to position cyber security and user privacy assurance as a core corporate strategy. We will continue to enhance our cyber security and user privacy protection methods and practices. By relying on our ICT knowledge and expertise in cloud, pipe, and devices, end-to-end security approaches and expertise, we will continue to support customers, governments, and key stakeholders so that they can understand the role ICT will play over the coming years, and benefit from our knowledge on security and privacy. We hope that our key concepts of teamwork, openness, and transparency will create more value for customers so that they can better prepare themselves for future challenges and future benefits.



Huawei was granted the Transparency Award for cyber security from the governments of four cities in Lower Saxony, Germany in CeBIT



At the Global Engineering Provider Conference held in Shenzhen in February 2015, Huawei introduced the cyber security requirements and management mechanism to suppliers

3.2 Green Products and Services

Context

As society continues its rapid development, the number of network connections is soaring, leading to enormous traffic growth and huge bandwidth demand. ICT infrastructure is becoming smarter and can offer faster and smoother connectivity. However, ICT infrastructure and smart devices are consuming increasingly more energy and resources. The ICT industry is facing the significant challenge of how to maximize the efficiency of networks and minimize energy consumption and other environmental impacts, without compromising network performance and user experience.

Approach

Our approach to environmental protection is based on the circular economy concept, which seeks to improve resource and energy efficiency and enable the reuse of raw materials, components, and products. At the product design stage, we aim to maximize product lifespan and ensure easy take-back, maintenance, recycling, and reuse. Our design approach also adopts the lifecycle assessment methodology and tools to help us select recyclable or compostable materials, thus minimizing material use. We are committed to providing our customers with green and efficient products and solutions that consume less energy to lower operating expenses (OPEX) and carbon emissions.

Leading Green ICT Technologies

We strive to provide highly efficient and energy-saving green products and solutions that help customers slash their operating expenses and carbon emissions. To make this happen, we have embedded green requirements into our end-to-end product lifecycle, from development and manufacturing to delivery and operations and maintenance (O&M). All our offerings can meet or exceed applicable laws, regulations, standards, and customer requirements, allowing our customers to enhance their environmental performance. Through continuous technological innovation, we offer energy-efficient solutions for networks, sites, and equipment that enable customers to operate at lower costs and with higher energy efficiency.

We also actively cooperate with customers, industry partners, and universities to develop innovative green technologies. So far, we have led and driven the formulation of various energy efficiency standards and technical specifications. Our involvement promotes the innovation and development of green ICT technologies, and contributes to our competitiveness and influence in terms of energy conservation and emissions reduction.

In 2015, we implemented the following four initiatives regarding green product design:

1. We developed low-power chips and improved hardware design, software, and dynamic energy management technologies. Consequently, we increased the energy efficiency of core routers and wireless base stations by 25% and 20%.

Increased the energy efficiency of core routers and wireless base stations by

25% and 20%

Huawei Kirin 950 Chipset: High Performance, Low Energy Consumption, Long Battery Life

The Huawei Mate8 smartphone uses the latest Kirin 950 chipset, the world's first system-on-a-chip (SoC) powered by the 16nm FinFET Plus technology, and ARM's Cortex A72 architecture and Mali T880 GPU. The new architecture makes the GPU 125% more efficient than the predecessor Kirin 930. Several leading designs translate into a 70% reduction in energy consumption: state-of-the-art heat dissipation, smart temperature control, 6-level heat conduction structure, and DX19 high thermal conductivity alloy.

The smartphone's SmartPower 4.0 system, coupled with the chip-level Heartbeat Agent app, intelligently identifies which scenario the user is in, and then chooses the most suitable power solution to extend battery life. The power-saving firewall can monitor the operating system's running status in real time to prevent abnormal power consumption. Thanks to these technologies, users can enjoy the excellent performance of the Mate8 without constantly worrying about charging their phones.



2. We conducted research into innovative energy-saving technologies to support future network evolutions:

- In the 5G domain, we made ground-breaking progress in multiple areas such as networking architecture, spectrum utilization, air interface technology, and base stations. The results were many leading technologies, including new air interface technology and digital radio frequency technology. These technologies can lower end-to-end network costs and boost spectrum efficiency and energy efficiency.
- Huawei performed exceptionally in China's 863 Green Network R&D and Demonstration Project. This project focused on researching and developing breakthrough technologies for the evolution and management of end-to-end green network architecture. The results are green networks with high energy efficiency, as well as their evaluation system. Huawei's involvement contributed to faster industry development and more energy-efficient green networks, which boast a 30% decrease in end-to-end energy consumption compared to traditional networks.
- In other domains, we worked closely with customers to enhance their energy efficiency and contribute to their goals of energy conservation and carbon emissions reduction.

Exploring Innovative Approaches with Customers to Cut Energy Consumption and Emissions

In December 2015, Huawei and Orange signed the green ICT network 2020 agreement in Paris, France. Both companies reaffirmed their strategic cooperation on energy, with Huawei offering energy-efficient solutions to help Orange achieve their energy conservation and emissions reduction goals by 2020.

The companies have been working together on improving energy design in multiple areas since 2013. This collaboration has enabled the design of customer connector cards that reduce energy consumption by 50% for ADSL access and 70% for fiber optic access. An innovative modular convergent

“This partnership will accelerate the implementation of high energy-efficient solutions in Orange's infrastructures to achieve our 2020 objective of reducing CO₂ emissions per customer usage by 50%. This innovative approach in research and development of ecosystems will assist society in energy and environmental transition.”

— Mari-Noëlle Jégo-Laveissière, Senior Executive Vice President of Orange Group

infrastructure platform has already been set up at Huawei's research laboratories in Shenzhen, China. This infrastructure uses Huawei's latest energy supply solutions and cooling systems.

In terms of energy conservation and emissions reduction, Huawei is a long-term strategic partner of Orange, China Mobile, Vodafone, BT, and many other leading carriers. In the future, we will expand our partnerships with ICT carriers as we seek to boost network energy efficiency, tap into ICT's potential as an enabler of energy conservation and emissions reduction, and contribute to customers' goals.



Huawei and Orange representatives signing the green ICT network 2020 agreement

Sustainable Products and Services

3. We provided services to enhance the energy performance of customers' existing networks. Network modernization is an efficient, cost-effective approach which carriers can adopt to cope with rapid business development. Energy conservation is one of the key factors needed to push network modernization. In 2015, we helped several customers redesign networks according to actual conditions such as traffic distribution, networking characteristics, and the power consumption of equipment and infrastructure. Our energy conservation solutions and configuration policies for soft features on equipment were highly feasible and ensured the networks' quality of service.

Best of Show Award for the Huawei NE5000E Core Router at Interop 2015

The Huawei NE5000E core router is leading the network industry in several areas. Its 128 100GE ports support line rate forwarding. And its multi-frame clustering technology allows smooth capacity expansion to 256 Tbit/s. This elasticity significantly increases the capacity of customers' backbone network nodes, reducing the need for frequent capacity expansions.

The router is a perfect embodiment of end-to-end green design in terms of chips, line cards, software platform, and hardware. Its overall power consumption is the industry's lowest, below 1 Wh of electricity per 1 Gbit/s of data. It greatly decreases carriers' energy use and operating expenses, and has thus been hailed as an industry leader.

4. We collaborated with industry peers to develop and optimize energy efficiency standards. As a member of energy efficiency standards teams of ITU, ETSI, and CCSA, we submitted multiple proposals as a major contributor. These proposals involved broadband access, base stations, radio access networks, servers, and NFV. In doing so, we boosted the standards' accuracy and feasibility. We also participated in the development of multiple standards, such as ETSI's energy efficiency evaluation standards for future network evolution, and ETSI's energy efficiency measurement standards for base stations and networks.

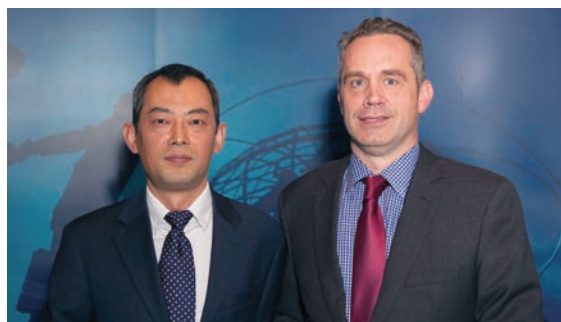


Best of Show Award for the Huawei NE5000E Core Router

Product Innovation Leadership Award in Telecom Energy Solutions

Our next-generation energy solutions for ICT infrastructure can maximize networks' energy efficiency, and enable automated, simplified operations management while greatly enhancing the reliability of ICT infrastructure. Our solutions have helped our carrier customers and partners achieve business success and sustainable development.

In 2014, Frost & Sullivan presented Huawei with the Product Innovation Leadership Award in Telecom Energy Solutions. In 2015, we received the award again, indicating that our next-generation energy solutions have been well received and widely deployed by ICT carriers, and that Huawei has become a leader in eco-design and innovation for communications energy products.



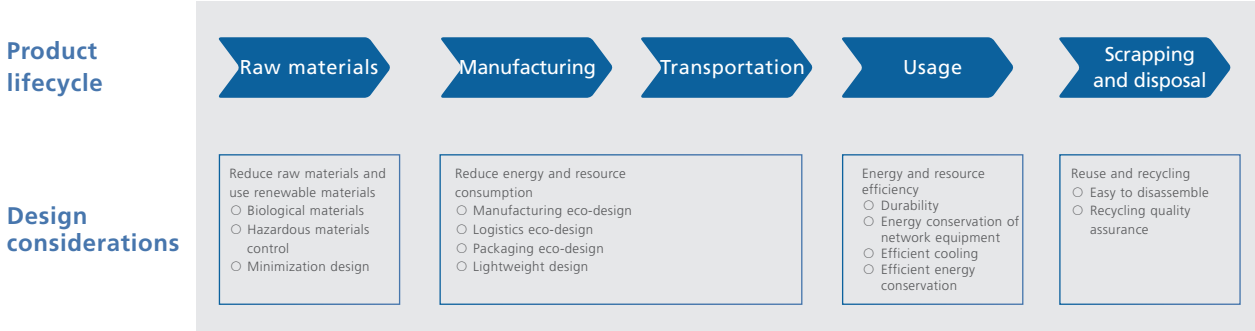
Huawei presented with the Product Innovation Leadership Award in Telecom Energy Solutions

Lifecycle Assessment (LCA)-based Eco-design

We use an eco-design methodology to assess products' environmental impact throughout their lifecycle, including raw material acquisition, manufacturing, transportation, usage, scrapping, disposal, recycling, and reuse. With a deep understanding of our products' impact on resources and the environment, we have identified key influencing factors, set improvement targets, and incorporated energy conservation and emissions reduction requirements into our product design and development processes. In this way, our products can achieve higher resource efficiency and environmental performance.

In 2015, we drew up internal guidelines on product eco-design and assessment. We also worked closely with industry standards organizations and certification institutions on researching and drafting eco-design standards for ICT products. As part of this, we identified seven key factors for assessing eco-design over the lifecycle of ICT products, and this model was approved by industry bodies such as the China Electronics Standardization Institute (CESI), the China Quality Certification Center (CQC), and

the China Communications Standards Association (CCSA). Our assessment standards and indicators were incorporated into the *General Standards for Assessment of Eco-design in Electrical and Electronic Products* and the *Technical Standard for Assessment of Eco-design in Optical Network Terminal (ONT) Products*.



Eco-design in Huawei's Optical Network Terminals (ONTs)

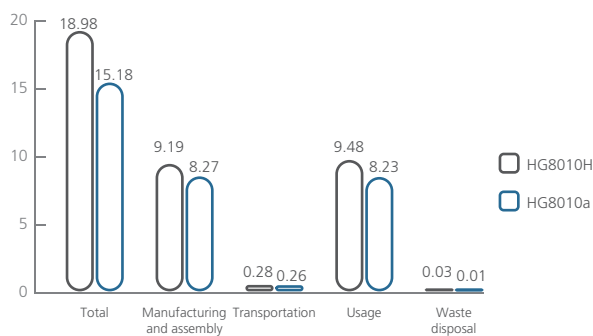
Designed and optimized based on an eco-design approach, the Huawei HG8010a ONT emits 20.1% less CO₂ compared to the HG8010H ONT throughout its lifecycle (five years). This is equivalent to a CO₂ emissions reduction of 3.797 kg. Major optimization measures adopted were as follows:

Reducing the number of printed circuit boards to 2, and replacing the radiator with a natural heat dissipation system – CO₂ emissions were cut by 0.7 kg over a lifecycle of five years

Compact design: product size reduced by 22.3%

Package size reduced by 16% and weight reduced by 13.7%, equivalent to a CO₂ emissions reduction of 0.12 kg and a 28% decrease in transportation costs over a lifecycle of five years

ONT LCA analysis & comparison



- Notes: Prerequisites of LCA assessment include
- The ONT's lifespan is five years
 - The terminal generates 0.758 kg of CO₂ per 1 kWh of electricity on a low-voltage electricity distribution network

Sustainable Products and Services

Use of Renewable Materials

Bioplastics are made from natural, usually plant-based raw materials. These renewable resources are very environmentally friendly, and they are a substitute for non-renewable oil-based materials. Huawei began using bioplastics in our phones in 2013, and by 2015 we had extended their use to five different models: the P8, Honor 5X, Honor 7i, Mate S, and Mate8 smartphones. The bioplastic front cases of the P8 and Mate8 contain more than 30% castor oil. As inedible oil, castor oil reduces the need for edible oil used in device products, and is also an ideal replacement for nonrenewable materials.

To minimize the impact of our product packaging on forests, Huawei has sought FSC® certified packaging for our phones. FSC is a supply chain management certification that ensures the materials for our packaging come from well-managed sustainable forests. In 2015, the packaging for many of our products was FSC certified, including the P8, P8max, G8, Mate S, Mate8, and Honor X2.

The bioplastic front cases of the P8 and Mate8 contain

more than **30%** castor oil



Forest Stewardship Council (FSC) certification on the packaging of the Mate8 smartphone

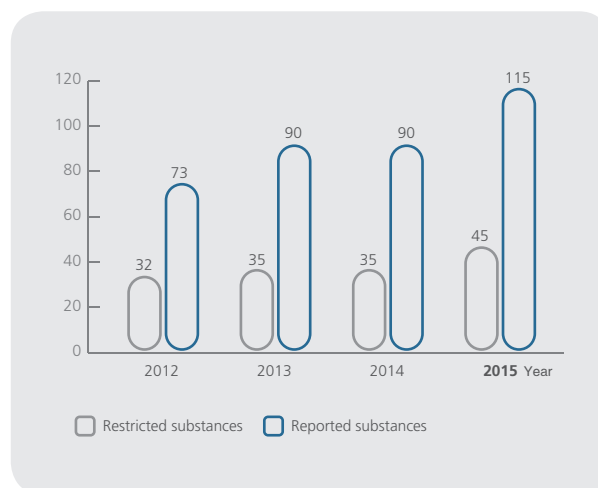
Forest Stewardship Council®

The Forest Stewardship Council® (FSC®) is an independent, non-governmental, non-profit organization committed to promoting responsible forest management worldwide. FSC® certification involves monitoring and review of suppliers by an independent third party to ensure that the forestry, transportation, and processing of timber meets FSC standards. Those standards ensure that the whole process is sustainable and responsible, and protects biodiversity.

Management of Hazardous Substances

Hazardous substances are substances which pose a potential danger to people, other living things, or the environment. As environmental problems continue to escalate and technologies advance worldwide, more and more substances are being banned or their use curtailed. Complying with laws and regulations on hazardous substances is not our only goal: We have gone one step further by restricting the use of hazardous substances that are not yet outlawed but can significantly affect the environment. Starting in 2016, we plan to invest more than US\$75 million each year to restrict the use of six substances in our new mobile phones, tablets, and wearables. These substances include brominated flame retardants, chlorinated flame retardants, PVC, phthalates, antimony trioxide, and beryllium and beryllium compounds. We have already ceased using these substances in our flagship phones (the Mate S and Mate8) and in our wearable Huawei Watch.

In 2015, we published the fifth edition of the *Huawei Substance List*, listing 45 restricted substances, to which specific usage restrictions apply; and 115 reported substances, the use of which must be reported.



Restricted and reported substances in the Huawei Substance List

Green Product Certification

In 2015, over 60 Huawei switches and routers were awarded the TÜV Rheinland Green Product Mark, up 120% from the previous year. TÜV Rheinland and Huawei presented a joint display at CeBIT 2015, and Huawei is the first ICT solutions provider in the world to have an entire range of campus network switches certified with the Green Product Mark. The Green Product Mark is confirmation that Huawei switches are at the forefront of green technology; that Huawei products are leaders in terms of environmental performance, recycling, energy efficiency, regulatory compliance, and minimal carbon footprint; and that Huawei is setting the pace for green operations in the ICT industry.

Green Certification: Sustainable Mobile Phones

UL110 is an environmental standard developed by Underwriters Laboratories (UL) specifically to assess sustainability for mobile phones. UL110 certification is one of the industry's most recognized green standards. It assesses products in eight areas: sourcing of materials, manufacturing and processing, emissions, energy efficiency, health and safety, transportation, disposal and recycling, and innovation; and produces a final certification assessment. In 2015, several Huawei phones achieved the highest level (Platinum) of UL110 certification, including the P8, G8, and Mate8. Six products, including the Honor 6Plus, P8, T1-821w, and Honor

5X, also received the highest A certificate for green electronic/electrical products from the China Quality Certification Center (CQC).

Huawei is able to achieve certification because we have built in green design from the beginning. We aim to minimize impact and damage to the environment throughout the entire product lifecycle, from material selection and sourcing, processing, transportation, usage, logistics, and distribution, to waste treatment.



Award for UL110 platinum certification for the Huawei P8



CQC A certificate for the T1-821w

Sustainable Products and Services

Green Packaging

Huawei complies strictly with environmental regulations across the entire lifecycle of packaging materials, including selection, manufacturing, usage, and disposal. We use green packaging materials that are reusable, renewable, and sustainable. Our steel pallet plus high-density cardboard packaging solution has replaced wooden pallets and plywood crates, cutting our use of forest products. In 2013, Huawei was recognized by the Chinese Ministry of Industry and Information Technology as a leader in the use of wood substitutes. Since then, we have continuously increased the use of green packaging to conserve more resources and reduce carbon emissions.

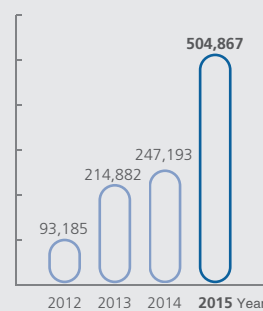
We have implemented the green packaging strategy summarized as “6R1D”: Right Packaging (the core), Reduce, Returnable, Reuse, Recycle, Recovery, and Degradable.

- Right Packaging: At the core of 6R1D is selection of the right packaging. Choosing the right type of packaging is an expression of Huawei’s commitment to sustainability by “getting it right first time” in every phase of the lifecycle.

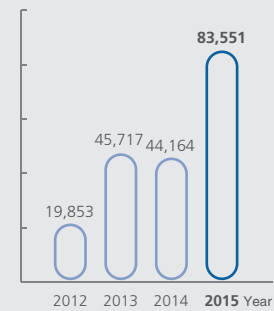
- Right and Reduce: These Rs represent Huawei’s smart use of technology to design green packaging that responds to customer needs. We make ongoing reductions to our packaging, reducing the volume, and using wood substitutes, transparent packaging, and multi-packs.
- Returnable and Reuse: These Rs explain how Huawei’s green packaging approach extends to the entire supply chain. Effective reuse extends the lifecycle of packaging along the supplier-Huawei-carrier customer chain.
- Recycle, Recovery, and Degradable: These factors represent Huawei’s resource efficiency in the way it selects and processes green packaging materials.

In 2015, Huawei shipped 505,000 pieces of green packaging, saving 84,000 m³ of wood and **177,000 tons** of CO₂ emissions.

Green packaging (pieces)



Reduced use of timber (m³)



Circular Economy

Resources are the lifeblood of human development. The growing global economy is driving increased competition for resources, sometimes to crisis levels, and the extensive model for economic growth has led to resource scarcity and environmental pollution. This realization has sparked widespread interest in a new circular economy model.

Huawei is committed to comprehensive resource management, and to using the latest technology to improve resource efficiency. We have incorporated circular economy practices into the entire product lifecycle to create our circular economy business model, including *cradle to cradle* practices for sustainable resource use.

Product Design for the Circular Economy

Bringing the circular economy concept into product design is the starting point for maximizing value recovery and reducing environmental pollution. Huawei uses a platform-based, modular approach to design to extend the working life of products while still allowing for technological advances and network evolution; to increase reliability, maintainability, and the use of green materials; and to fully realize the value of every product.

Elements of the Design Approach for the Circular Economy

- Recyclable design: Use more recyclable materials and secondary raw materials
- Coatings: Coatings compatible with product recycling processes
- Design for disassembly: Avoid welds, glue, rivets, and other permanent joins where possible
- Uniformity of materials: Reduce recycling costs for higher returns
- Surface mounting: Improve the reusability of PCBs and make materials more recoverable, recyclable, and reusable

Business Models for the Circular Economy

We have put in place a global management system for returned materials, incorporating the collection, storage, disassembly, testing, repair, and disposal of waste. Every scrapped item is categorized by lifecycle phase and quality, so that we can recover as much of its value as possible. Reusable materials are allocated to our internal reuse channels – such as the R&D, manufacturing, parts, and assets departments – where materials are reused or auctioned off. Non-reusable materials are allocated to the raw material recycling channel, in which certified recycling service providers dismantle and recycle the materials.

In 2015, we updated our disposal strategy and process. Rather than destroying optical cables, fiber leads, power supply components, heat sinks, and other waste products and components, we are now auctioning them as scrap, creating a secondary lifecycle and reducing waste.

These strategies helped us reduce carbon emissions by 355.7 tons.

Sustainable Products and Services

Global Green Recycling Program

In 2015, we expanded the Global Green Recycling Program, in which we strive to fulfill our extended producer responsibility by taking back scrapped mobile phones and tablets. As part of our Circular Economy approach, the expanded program provides a channel for our consumers to recycle their e-waste, helping maximize product value and ensure legal disposal.

2015 saw the beginning of the phase 2 program. By the end of 2015, we had 444 recycling stations in 23 countries and regions; 166 of the recycling stations had been added in China, and 102 added in 14 other countries and regions this year.

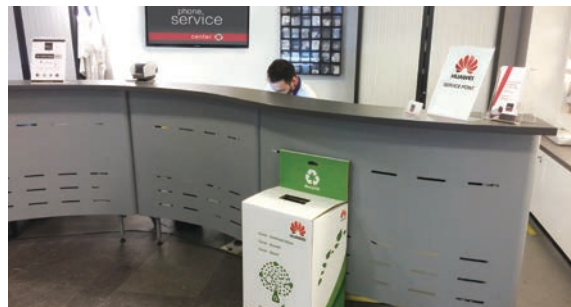
Global distribution of recycling stations (2015)



Global distribution of recycling stations (as of end of 2015)



Recycling station in Helsinki, Finland



Recycling station in Antwerp, Belgium

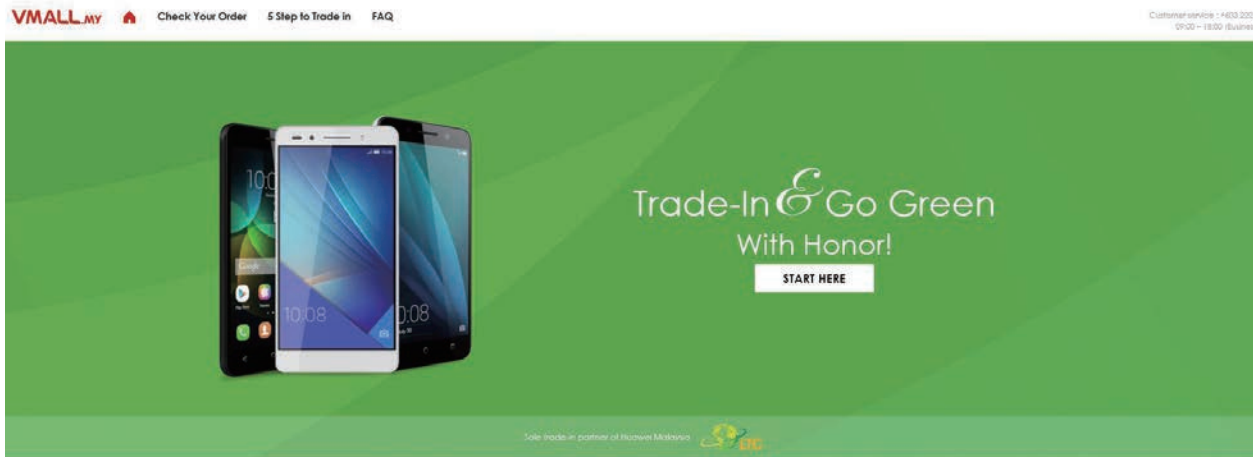
Phone Trade-in Program

In 2015, Huawei's Consumer Business Group (BG) launched a trade-in program for mobile phones. This program has increased the recycling and reuse rates in China and around the world.

The trade-in program is currently available in China and Malaysia. It operates through Vmall online stores, where consumers can trade in their old phones for new ones. This brings the phone recycling program directly to consumers, encouraging higher levels of recycling and reuse; and it offers consumers an improved, discounted buying experience. Owing to this program, the environment is protected, and sustainable development is guaranteed.

As of the end of 2015, we had recovered an average of 4,177 phones every month, 40% of which were Huawei phones.

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Vmall phone trade-in page for Malaysia

Website: <http://vmall.trade-in.litong.com/huawei/takeback/startSelectDevice>

3.3 Safe Products

Context

In recent years, ICT technology has advanced rapidly, and mobile broadband, smartphones, and wearables are now reshaping the way people work and live. ICT products and services are delivering rich user experience while also increasing safety challenges. That's why users are more concerned about product safety (e.g., electromagnetic radiation, noise, and allergens) than product quality.

Approach

Huawei has developed strict systems for product safety control, and enforced strict product safety standards. Our goal is to deliver safe, dependable products and services to customers and consumers. As part of this goal, we are committed to researching and innovating product safety technologies, and adopting best practices. Reducing electromagnetic radiation remains one of our focus areas, and we have increased our research into dermatological reactions. We have also worked with leading international organizations on the issue of noise control, to ensure that our products conform to every noise standard. And we have adopted a user scenario-based approach to product safety design, thereby ensuring that our products are easy to install, easy to use, and meet all relevant health and safety standards.

Sustainable Products and Services

Electromagnetic Radiation

Huawei has developed strict standards for controlling electromagnetic radiation levels. Our ongoing research and innovation helps to ensure that our products conform to all legal and technical standards. Base stations are becoming smaller, lighter, and are being installed closer to ground level. In response, we are building additional electromagnetic radiation protection into their design, and carrying out more research and testing. This allows us to deliver both excellent communications services and product safety. We have helped our customers to carry out many electromagnetic surveys of residential areas, and engaged with public concerns over electromagnetic radiation. The widespread adoption of smartphones has also brought forth new challenges in consumer safety. In addition to our base stations, Huawei products for consumers, homes, and enterprises all satisfy the relevant standards for electromagnetic radiation.

Dermatological Safety

The explosion of new smart devices in recent years has brought consumers a rich range of new experiences, but has also created health and safety challenges. In non-ICT industries, there are existing standards for allergens, such as those for textiles and children's toys, and EU directives for medical devices. However, in the communications industry, there is not yet a widespread understanding of the issue of allergic reactions, and dermatological worries are particularly acute for wearables and children's products.

We are well aware of the potential risks to health posed by allergic reactions, and are managing the dermatological safety of our products. We have invested in research with the Japanese Dermatological Association and the Japan Medical Association Research Institute (JMARI), which is laying a solid foundation for reducing the risk of allergic reactions.

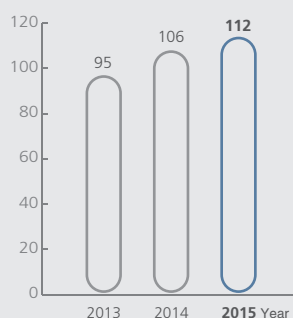
In 2015, we worked with the TÜV SÜD, SGS, and other specialist organizations to develop an allergen standard for smartphone accessories, referencing the standards already available for medical equipment, toys, and textiles. We also developed manufacturing control mechanisms, and established the Huawei Device Anti-allergen Team to set our internal standards for allergens and control processes. We aim to raise awareness of allergy issues within the communications industry, and are working with industry partners to draft standards. We are committed to minimizing the negative impact of communication products on human health and safety.

Ergonomics

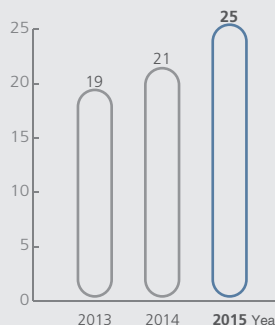
Huawei has a specialist ergonomic design team, which promotes safe product design based on real user scenarios. Ergonomic design is built into every phase of product planning, design, development, and testing, so that our products are adapted to users' engineering habits and technical needs while reducing health and safety risks at the installation and usage stages.

As of the end of 2015, we had collected user scenarios in 25 countries and regions, including major telecom carriers across Europe, North America, Latin America, Africa, and Asia. We increased our focus on Africa, gaining deeper insight into local engineering delivery practices and user habits. With innovative designs based on real user scenarios, we have been able to deliver products that are easy to use, easy to install, and better meet ergonomic requirements.

User scenarios analyzed by Huawei globally



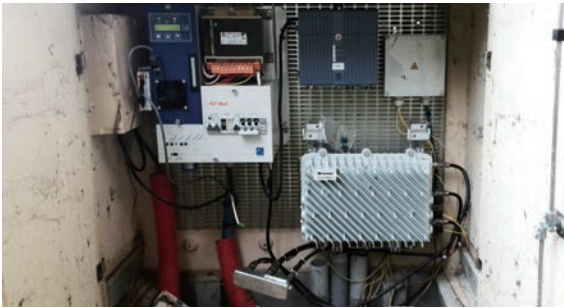
Number of countries in which user scenarios have been analyzed



Optimizing Ergonomic Design to Prevent Safety Risks

The Huawei Distributed Converged Cable Access Platform (D-CCAP) has been developed using the Data over Cable Service Interface Specification (DOCSIS) to integrate into FTTx systems, supporting simplified network roll-out and management. The solution reduces health and safety risks during installation and usage, and ensures a clearer, smoother audiovisual experience for Internet users. The solution has been implemented in 30 countries and regions around the world. Its excellent ergonomic design elements are as follows:

- **Adaptable:** The multifunctional installation brackets provide 100% support for installation on cables, in equipment cabinets, on exterior walls, or on simple poles. Such a high degree of adaptability avoids the need for network reconstruction.
- **Pre-assembly:** Units to be installed on cables can be pre-assembled, freeing up the hands of the installation engineer. Single engineer installation allows for faster rollout.
- **Modular:** One of the common problems faced by customers is that they cannot easily swap out single pieces of equipment, but must remove entire units. The modular design of the D-CCAP solution allows for the easy swapping of equipment by a single engineer, so that equipment can be maintained and upgraded without replacing entire cables.



D-CCAP equipment in a ground cabinet in Denmark



D-CCAP suspended installation in Malaysia

Noise Reduction

As part of our commitment to ongoing improvements in product quality, we are always working to decrease product noise levels, thus minimizing our impact on the environment. We have carried out ongoing noise level surveys, and have made significant improvements in the design of many products. For example, at one data center, a noise survey and diagnostic analysis led us to design improvements into the ventilation pipes and sound baffles in the switches. As a result, noise was reduced by 6.5dB (A). We also redesigned the fan housing of a router to achieve a noise reduction of 6dB (A), with no reduction in cooling power.

We track the latest developments in noise reduction technology, and have close links with universities and research institutes working on noise control. The Huawei Environmental Acoustics Lab has long been ISO/IEC 17025 certified by both the American Association for Laboratory Accreditation (A2LA) and the China National Accreditation Service for Conformity Assessment (CNAS), and is recognized by major testing and certification organizations such as UL, MET Laboratories, and National Technical Systems (NTS). The lab supports our efforts to measure, locate, and control environmental noise with some of the world's most advanced noise testing equipment.





04

Sustainable
World



4.1 Bridging the Digital Divide

Context

A key concern for the world is whether the growth in ICT is helping to reduce inequality or is increasing it. There is a real fear that those who are offline are falling further behind those with digital technologies. And the gap between economies without the necessary ICT infrastructure, skills or expertise will grow compared to those with. According to the UN, the digital divide is still narrowing but more slowly than before, and it is also rapidly deepening: Less people are getting left behind, but the consequences for those left behind are greater.

Approach

As an ICT industry player, Huawei is applying our core expertise to bring communications and broadband to all. We also seek to apply ICT to specific sectors and strengthen the overall ICT ecosystem through skills development, local capacity building, and R&D.



In 2015, Huawei launched a new white paper entitled *Digital Enablement: Bridging the Digital Divide to Connect People and Society*. It discussed in detail the challenges of bridging the digital divide, and provided specific tools and recommendations that we can all use. The report can be read at www.huawei.com/minisite/digital-enablement

Communications for All

More than 87% of the world's population is within reach of a mobile phone signal, but what about the other 13%? These people usually live in remote, less-developed areas. The technical difficulties of building and powering networks in

these remote areas only increase the already high per capita cost of building networks to reach these people.

Considering geographical locations and economic situations, often the most appropriate solution is to provide a mobile network which can cost-effectively reach wide areas. In general, mobile networks run on spectrum from 700 MHz up to 2.5 GHz. Those operating at lower frequencies are able to reach further, but offer lower data speeds and are able to handle fewer simultaneous connections. Therefore, a 2G (or 2.5G) network running on lower frequencies is often the most economical approach to providing the unconnected with communications services for the first time, as well as low-speed access to the Internet. These 2G (or 2.5G) networks can reach low-density populations across wide areas at lower access costs.

Huawei is working with our customers to install 2G networks in some of the remotest and poorest parts of the world, often powered entirely or partly by solar power. Our innovations have helped customers reduce their CAPEX and OPEX. We intentionally build these networks with our customers so that they can be upgraded with minor hardware and software tweaks at a later date to bring faster broadband speeds as local circumstances (including the availability of spectrum resources) change. In 2015, we built many 2G and 2.5G networks in the remote areas of many countries, including India, Ghana, Azerbaijan, and Jordan, allowing more local people to enjoy the convenience of mobile communications.

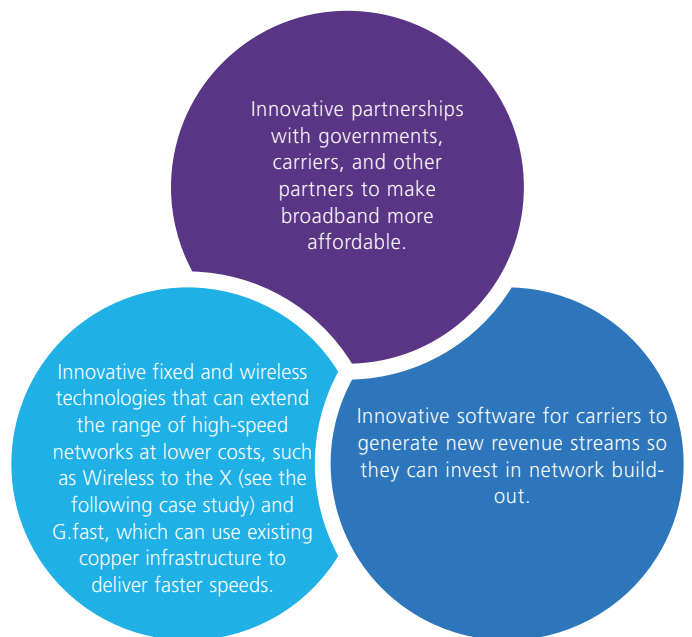
Broadband Inclusion for All

As over four billion people are still offline and the rate of new Internet users has begun to drop, there exists a real fear that the benefits of broadband Internet may never reach the majority of the world's population. The problem is most severe in many emerging economies with hundreds of millions still out of reach of a signal and often more than two thirds of citizens offline. The reasons are complex, yet even in developed economies, more than 15% of citizens are still offline. Why? Huawei's recent white paper, *Digital Enablement: Bridging the Digital Divide to Connect People and Society*, identified four main reasons, including:

- **Availability:** Network access is complex as it requires a high quality network connection, a smart device, and relevant applications or services.
- **Affordability:** Network connections, smart devices, and relevant applications and services must be available and affordable for consumers, especially those of lower-incomes.
- **Attitude:** Many people are not aware of the benefits of broadband Internet, or are unaware of its full potential, while others may be afraid of using it.
- **Ability:** Using the Internet can also be challenging: Some consumers lack the physical ability needed to use a device, are illiterate and unable to read text, or cannot create content or use ICT on a daily basis.

In Africa, we have deployed more than 50% of wireless base stations, over 70% of LTE networks, and at least 50,000 km of optical fiber, to provide better telecom connectivity to the continent.

Our network solutions seek to reduce the total costs for carriers to provide high-speed network connectivity and enable new business models. This means carriers can continue to invest in building networks and providing services to users. We provide a full range of solutions including international submarine networks, backhaul networks, backbone networks, fixed networks, and mobile networks, as well as the software that enables them all. This includes developing:



Sustainable World

Offering Broadband Access for the First Time to Households in Sri Lanka

In March 2015, Huawei announced the commercialization of the Wireless to the X (WTTx) broadband access solution using LTE-TDD technology. Using only mobile technologies, WTTx provides an alternative to a home-based fixed broadband connection at much lower costs (up to 80% less) and much faster deployment (up to 90%). The WTTx solution (with a customized terminal) can be used inside or outside the home to turn a mobile signal into a Wi-Fi signal. Its multi-antenna technology allows a fast mobile broadband network to be accessed across a greater coverage radius.

WTTx can enable fast broadband at lower costs for individual users who can access it using any low-cost Wi-Fi-enabled smartphone, and connection costs can be shared by all household users. WTTx is also an excellent solution for SMEs that would otherwise need a fixed broadband solution which would be more expensive and slower to roll out.

Broadband penetration rates in Sri Lanka are low, even compared to other South Asian countries. Though mobile phone usage is fairly high, ITU estimates that only 25.8% of the population had access to the Internet at the end of 2014.

In Sri Lanka, the telecom company Dialog began to deploy WTTx in 2013 and rapidly expanded it in 2015 with 500 new base stations reaching numerous households, 80% of which had never accessed broadband before. After the initial connection fee of US\$27, the service costs as little as US\$4 per month for 5 GB of data and a voice line. As few users possess a 4G device in Sri Lanka, people can access broadband using any Wi-Fi-enabled device, including more prevalent 3G devices, personal computers, and tablets.

Enabling Mexico Conectado

Mexico Conectado is a federal government program rolled out by the Ministry of Communication and Transportation, which aims to guarantee citizens' constitutional right to Internet access. The program, implemented in coordination with state and municipal governments, offers free Internet access in public places such as schools, hospitals, universities, governmental offices, and parks. In many areas, it is expected to be a primary means for millions of Mexicans to access the Internet free of charge. The program will allow people to access knowledge via the Internet, receive better education and healthcare remotely, improve the quality of public services, and bridge the digital divide.

With our ICT expertise, Huawei has worked with the Mexican government to give more people access to stable, fast, and secure networks. We have so far provided equipment for 30,000 Internet hotspots (sites) for this program. We have also provided a safe, reliable, scalable, and easy-to-manage solution which can reduce network construction and maintenance costs.

- Each site includes two access points (Wi-Fi routers), which provide stable and high-performance wireless Internet access in both indoor and outdoor locations.
- Mexican users can go through authentication via the next-generation firewall deployed at each site before accessing the Internet. The authentication page is flexibly customized by Huawei's eSight system back at the HQ and stored in a local cache. This can avoid access delays caused by remote authentication.

- The next-generation firewall deployed at each site can identify and filter 5 million malicious and illegal websites, thus securing Internet access and ensuring legal compliance. The firewall can effectively manage the traffic of the entire network, ensure that limited network bandwidth is fully utilized, and offer a better user experience.

Mexico Conectado has so far provided more than 65,000 public Internet hotspots and an additional 35,000 are being installed. A total of 96% of the country's municipalities now have a public Internet access site and there are 18 million users annually.

Huawei looks forward to working with the Mexican government to expand this initiative in the future, and sharing the experience in other countries where it can be replicated.

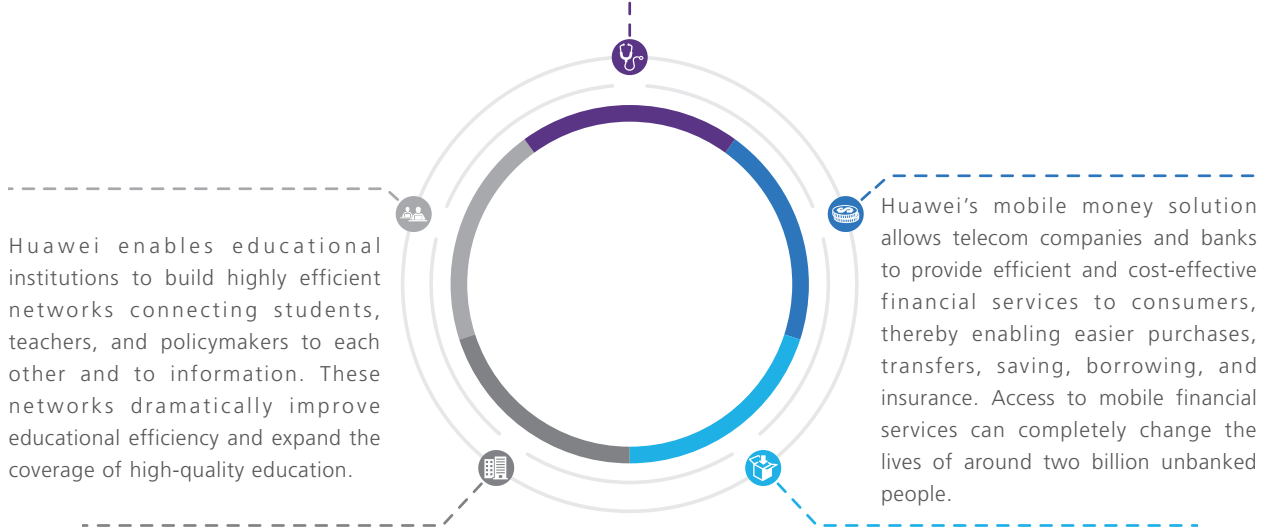
A total of **96%** of the country's municipalities now have a public Internet access site and there are 18 million users annually.

ICT Applications

ICT has changed the way we work, live, and consume. ICT also delivers efficiency gains and enables flexible resource usage and management. It is a powerful tool that allows businesses to create greater value, innovate new offerings, and stay competitive in the new business environment. ICT has shifted from a support system to a vehicle of value creation.

Huawei has promoted the application of ICT in sectors such as education, healthcare, and finance. Our technologies have significantly increased resource utilization efficiency and decreased resource consumption, and are playing a meaningful role in driving forward the sustainable development of society.

Huawei helps health institutions to go digital, so as to increase efficiency, reduce costs, and improve health outcomes. Our products and solutions enable better storage and analysis of crucial data, and better sharing of scarce health expertise between institutions.



Sustainable World

Connecting 64 Schools in Ethiopia to Transform Education

The Ethiopian government aims to advance ICT-based education and nurture an ICT-skilled workforce, both of which are crucial to building an information society. In Addis Ababa, the Education Bureau runs more than 150 schools and aims to use high-quality and effective information systems to improve ICT-based education. With a full understanding of the government's needs and long-term strategic plan, Huawei has implemented the Schoolnet project, hoping to evolve it into a benchmark and promote ICT-based education in the country.

For this project, Huawei provided an integrated ICT solution, which included a Cloud Desktop System and software. Unlike traditional computers with hard drives, Huawei's Desktop Cloud System comprises a small thin client, a monitor, a mouse, and a keyboard. The system's hard drive is stored in a centralized data center and can be accessed via the cloud. The solution also incorporates software to protect and restore the network connection, as well as software to compress image and video data, which reduces bandwidth use. In addition to interacting with others and accessing customized content, students can enjoy better video-on-demand services over low-bandwidth Internet with the help of Huawei's solution.

After the switch to this Desktop Cloud System, computer usage in these schools increased from 10% to 60% and power consumption has been greatly reduced. With a unified cloud management platform, the Education Bureau's O&M personnel can easily manage all the education resources through a unified portal, and remotely monitor and manage the entire network. This has significantly improved the quality of O&M and provided users with high-quality educational resources. Huawei's solution has significantly improved the ICT utilization and management efficiency in 65 schools covered by this project, and also lowered the schools' annual operating cost. By the end of 2015, more than 50,000 students had benefitted from our solution. We also provided extensive training to those in the schools and in the Education Bureau to manage the system and improve their overall ICT skills.

The project has been recognized by the Minister of Education as a key initiative that is leading the transformation of education in Ethiopia.



Students using computers via Huawei's Desktop Cloud System

Engaging in China's Largest Telemedicine Initiative

In Henan province, China, healthcare resources are distributed very unevenly. Many patients waste a great deal of time traveling to and from hospitals in different cities, and waiting in queues, which often result in costly delays before receiving the right diagnosis and care.

To address these issues, Huawei has provided a professional telemedicine solution, enabling remote consultations and remote diagnoses for patients as well as distance training for doctors. In partnership with the First Affiliated Hospital of Zhengzhou University and the Henan Health and Family Planning Commission, Huawei has deployed a telemedicine platform that covers hospitals across the province's cities, counties, townships, and villages. The system uses high-quality video conferencing systems (also known as telepresence systems) to connect the provincial hospital, 18 city-level hospitals, 130 county-level hospitals, ambulances throughout the province, and hospitals in townships and villages which are now in trial operation. The telemedicine platform can offer all nine remote medical services suggested in the national telemedicine standards, making it China's largest, most comprehensive telemedicine system. Each

year, the hospital provides more than 10,000 remote consultations and 30,000 remote diagnoses.

With the hospital's data growing dramatically, it is becoming increasingly important to effectively handle and apply this data. To meet this need, Huawei has built a Big Data platform that enables the hospital to store and process huge volumes of data. This platform allows the hospital to access data more quickly and provide more efficient management. It also enables easy and rapid analysis of data to turn it into critical insights. The result of the project is more effective remote consultations and better care for patients.

Huawei is committed to providing leading telemedicine solutions to address inequalities and inefficiencies in healthcare, and is thus working with the First Affiliated Hospital of Zhengzhou University to establish a joint innovation center to promote and develop the use of telemedicine and Big Data so as to improve health outcomes.



Henan Telemedicine Center

Sustainable World

Nurturing ICT Professionals and Transferring Skills

Overcoming the digital divide is difficult and requires strong efforts from different parts of society. A number of challenges exist in nurturing ICT professionals, transferring skills, and creating a robust ICT ecosystem.

- **ICT skills:** Many countries – both developing and developed – face a large shortage in skilled ICT workers to develop ICT solutions. For example, the European Commission is anticipating a shortage of up to 800,000 skilled ICT workers by 2020.
- **Ecosystem capacity:** With the rapid evolution of technologies, policymakers lack the necessary skills, knowledge, and experience to set the right frameworks and policies to grow a strong ICT industry.
- **R&D:** A lack of R&D capacity to develop local solutions to meet local needs.

HAINA in Pakistan Changes Fatima's Life

The Huawei Authorized Information and Network Academy (HAINA) is a non-profit program implemented in collaboration with universities. It aims to promote the development and dissemination of ICT technologies, train professionals, and meet the ICT ecosystem's long-term need for talent. HAINA partners with educational institutions to provide certifications across three levels (Associate, Professional and Expert) and multiple courses including routing and switching, transmission, WLAN, security, storage, and cloud computing.

The HAINA network is rapidly expanding. In 2015, Huawei signed an agreement with UET Lahore and FAST National University and set up two HAINAs in Pakistan. We are helping the universities to provide a cloud computing and Big Data course, and we will set up a cloud lab, train professors, provide a curriculum, and also offer training and internships in cloud computing.

Fatima Sameeullah, graduating from FAST National University in Islamabad, is one of the 110-plus students participating in the HAINA program in Pakistan. In fall 2015, she took part in the Huawei Certified Network Associate–Unified Communications training as part of our HAINA partnership with FAST. Fatima was selected along with 25 other students to take part in Huawei's three-month internship program. At the end of 2015, the HAINA program had been operating in Pakistan for one year, and over 30 program participants had already found a job. Following her internship with Huawei,

Huawei provides a wide range of ICT training programs around the world to help students increase skills, find employment, and receive continuous professional training. Our training programs include:

- Our **Seeds for the Future** program, which provides students from around the world a chance to come to China for one month and increase their understanding of Chinese culture and learn about the latest technologies from Huawei experts. (For more information, see the Supporting Local Communities section.)
- Our 140 **Huawei Authorized Information and Network Academies (HAINAs)** in 13 countries, which have provided highly practical and certifiable training for 4,000 students (15% are female) in order to bridge the gap between academia and industry.
- Our 45 training centers, which offer ICT training for our customers and other staff.
- Our network of **Huawei Authorized Learning Partners**, which provide professional training solutions in local markets.

Fatima joined the company and became a training manager. Six other students also joined Huawei after completing internships. Among these six students, four had taken part in the HAINA program.

Students at FAST generally believe that collaboration between industry and academia is increasingly necessary. With the HAINA program, FAST National University functions as a training center for more and more future professionals for Huawei and the broader ICT sector in Pakistan. HAINA has helped them enhance their knowledge and skills, and encouraged them to take an interest and participate in technology innovation. The program also helps Pakistan build a talent pool for the ICT industry and enables more Pakistanis to find jobs.





FAST students who participated in the HAINA project

Providing ICT Training to 240,000 Women in Bangladesh

In November 2015, Huawei announced a joint initiative to provide ICT training for women in rural areas of Bangladesh, in cooperation with the Ministry of Posts, Telecommunications & Information Technology (MoPT&IT) and telecom carrier Robi Axiata. This initiative aims to equip women with ICT knowledge and skills.

Together, we will provide basic ICT training to 240,000 women across 64 districts of the country over the next three years. Six buses, fully equipped with modern ICT training facilities, will be deployed to offer ICT training, with Huawei, MoPT&IT, and the carrier each providing two buses. Huawei will operate these buses 40 weeks a year, and they will be driven to different places across the country. We will also provide two or three days of training per person depending on the local situation and the number of participants.

Each special purpose bus will be equipped with 23 workstations with customized learning software and a computer. MoPT&IT will provide the curriculum and trainers. This initiative, the first of its kind in Bangladesh, will contribute to the country's Vision 2021 initiative and will enable rural women to learn about ICT and apply it in their daily lives.

 *We are extremely happy to be part of this CSR project. We think that it is a milestone as it is the first ICT training program especially designed for women who cannot move from their native locality due to various constraints.* 

---Huawei Bangladesh CEO

4.2 Supporting Network Stability

Context

Connectivity is fundamental to modern life. When networks are down, there are real economic and social consequences. In recent years, natural disasters have struck the planet one after another: the tsunami in Indonesia, earthquakes in Wenchuan and Ya'an (China), the Fukushima nuclear leak in Japan, and the earthquake in Chile, just to name a few. Every second without connectivity could be the matter of life or death. During major events (e.g., major sports and traditional events), growing demand for data and voice services results in huge impact on networks. Network reliability and stability will have a direct influence on user experience and loyalty.

Approach

We have established a mature business continuity management (BCM) system that provides a contingency plan for ten typical scenarios (e.g., earthquakes and wars) and allows us to quickly restore customers' networks and resume stable operations following critical emergencies, thus helping safeguard life and property. Even under extreme conditions, our employees will do their utmost to support network stability. This is the responsibility shouldered by each and every Huawei employee, and this obligation outweighs our own commercial interests.

Sustainable World

Huawei invests heavily in network stability, striving to ensure that everyone is able to communicate, access data, and share information at anytime, anywhere. Specifically, we have established a comprehensive customer network support system that considers a range of factors, including organizational structures, designated personnel, processes, and IT tools. We have established three global and nine regional technical assistance centers. More than 3,900 Huawei technical support engineers provide services worldwide 24/7. In 2015, we ensured smooth communication for nearly 3 billion people worldwide, and supported the stable operations of over 1,500 networks in more than 170 countries and regions. We guaranteed network availability during 138 major events, natural disasters, and special occasions (e.g., the Nepal earthquake, the Asian-African Conference in Indonesia, China Victory Day Parade 2015, Copa America 2015, German Beerfest 2015, and the Hajj in Saudi Arabia).

Against All Odds: Restoring Networks After the Nepal Earthquake

On April 25, 2015, a devastating earthquake with a magnitude of 8.1 rocked Nepal, causing severe damage and many casualties in local communities. Communications infrastructure in the worst-hit areas was badly damaged.

Despite the risk of aftershocks, engineers in our Nepal Representative Office ran all the way to the local carrier's equipment room within 20 minutes after the earthquake. They knew they had to work with the customer to keep the network operational. Back at the office, Huawei launched a business continuity management mechanism and emergency response plan, set up a disaster recovery team, issued an earthquake alert, and began stocking medical supplies and other essential items. The supply chain and procurement departments swung into action to support our engineers in the field. Within 30 hours, the first shipment of emergency equipment arrived.

In the aftermath of the earthquake, voice traffic on local networks rose to four times its normal levels, and it remained high over the following week. This placed enormous strain on the already damaged networks. The power grid was down, and many base stations did not have enough diesel or other energies to keep their emergency generators running, so even key stations began failing. We swiftly coordinated all resources (diesel and satellite phones). A joint technical

support group with employees from our Shenzhen HQ, Southern-East Asia Region, India Representative Office, and Nepal Office worked closely with the customer to keep voice traffic flowing while we scrambled emergency repairs. As a result, we were able to restore the networks, help those in the earthquake zone to reach their families, enable rescuers to stay connected, and ensure that the media could report on the disaster and the relief efforts.

Twenty-four hours after the earthquake, Huawei and the customer had repaired 40 key base stations at hospitals, government agencies, disaster relief centers, and embassies. Over the next few days, we cut the number of non-functional base stations from 30% to below 6%. Some of our competitors were unable to organize effective disaster recovery efforts, so we helped our customer repair 260 non-Huawei base stations. In areas where the roads were blocked, our engineers were ferried by helicopter deep into the earthquake zone to restore communications.

Because of these comprehensive measures, local network equipment was able to perform stably with dramatically reduced congestion, even though voice traffic remained high one week after the earthquake. Once again, we lived up to our commitment with our actions.



Huawei engineers restoring communications networks in the customer's equipment room



Distributing supplies to victims

Guaranteeing Connectivity for the Asian-African Conference

To celebrate the 60th anniversary of the Bandung Conference, leaders from over 100 Asian and African countries and 25 international organizations attended the Asian-African Conference, which was covered by thousands of reporters. While many festive activities were underway, some involving tens of thousands of people and high demand for Internet access, network quality and stability were essential.

Starting two months before the conference, we began organizing resources to prepare for network stability assurance. Specifically, we established a network stability assurance team and assigned over 100 experts and engineers to take part in the extensive and intense preparatory work. This included predicting user behavior and traffic trends; network planning; inspections; developing an emergency response plan jointly with the customer; network deployment and equipment installation; and preparing emergency communications vehicles.

During the event, the conference hall in Jakarta saw a 70% increase in 3G traffic, and 4G traffic rose seven-fold above normal levels. The celebrations commemorating the Bandung Conference were the culmination of the event. On April 25, a huge celebration took place on a walking street near the former site of the Bandung Conference. The mayor and tens of thousands of citizens flocked to the site to witness the festivities and share the moments online or via phone calls.

As a result, voice and data traffic peaked several times, putting great pressure on the local networks and base stations. It was quite difficult to guarantee network security and experience.

Our onsite network optimization experts worked with the customer team to continuously refine our work plan every day based on the developing situations. Through our joint efforts, the customer's network operated stably during the conference and celebrations, recording zero network incidents and disruptions. Our efforts ensured a superior communication experience for the government officials and citizens participating in the celebrations.



Huawei network stability assurance room during the Asian-Africa Conference

4.3 Contributing to a Greener World

Context

Growing global populations are increasing our use of resources, which has led to higher energy consumption and associated carbon emissions. These increased carbon emissions are causing climate change, which will significantly impact our planet. The *Smarter 2030* report issued by GeSI in 2015 identified that ICT can decrease the consumption of scarce resources and reduce global CO₂ emissions by 10.71 Gt by 2030.

Approach

Huawei is deeply concerned with climate change. We are committed to contributing to a low-carbon world by providing clean energy solutions, and enabling smart cities and industries which produce fewer carbon emissions. Through these efforts, we aim to make the world greener.

Smart Network Energy Solutions

In the ICT industry, a large portion of carbon emissions comes from generating the electricity used to power telecom networks (for transmitting information) and data centers (for storing information), though powering devices is also a significant factor. As more and more devices and equipment are connected, they will generate and transmit more information. This will require more network equipment and data centers, with a subsequent increase in the energy usage. To cope with these changes, Huawei has provided and deployed highly energy-efficient products and solutions to reduce carbon emissions.

Our highly energy-efficient network energy solutions and clean (solar) energy solutions have helped customers reduce energy consumption. We never cease innovating and we have proactively employed the latest technologies to help customers upgrade their existing energy systems.

Sustainable World

Huawei's Micro-modular Data Center Solution Helps China Unicom Guizhou Cut the PUE of Equipment in a Cloud Center to 1.3

As data usage climbs globally, data centers (DCs) are increasingly using more energy. We have constructed more than 660 DCs globally (including over 255 cloud DCs), and reduced their power usage effectiveness (PUE) to 1.45 thanks to our ongoing innovation and efforts over the past years. If natural cooling is used, this number can be further reduced to 1.2, ranking among the best in the industry.

Our micro-modular DC solutions are green, efficient, and particularly useful for on-demand DC deployment.

We have deployed micro modules for the China Unicom Guizhou cloud data center, with one micro module cluster integrating 48,000 servers. These modules are powered by uninterruptible power supply systems and use in-row

air-conditioning technology to ensure precision cooling. We have also adopted leading technologies to drive energy efficiency improvements in areas such as buildings, electric systems, power supply systems, and equipment rooms. As a result, PUE can be further reduced to 1.3, far below that of traditional equipment rooms which stays between 1.5-1.8.



Huawei Helps Telstra Build a Highly Reliable and Efficient Power System

As Australia's largest telecom company and a global Top 20 carrier, Telstra has 16 million mobile subscribers and 11.2 million fixed line subscribers, providing a full portfolio of communications products and services.

While providing high-quality communications services, Telstra also works to save energy and reduce emissions. Before cooperating with Huawei, Telstra planned to cut carbon emissions by 62% from 2015 to 2017 compared with its 2013 benchmarks. Its power system was old and unreliable, and it was hard to acquire spare parts. Energy efficiency was only 89.27% and power consumption was high across the network. As a result, Telstra's power system was in urgent need of upgrading.

As a leading communications energy solutions provider, Huawei is committed to providing our customers with efficient energy solutions. To meet Telstra's immediate need for energy conservation, emissions reduction, and reliability, we upgraded their power system by deploying rectifier modules with the world's highest efficiency (98%). After

the upgrade, the power system's efficiency jumped to 97.96% (8.7% higher), saving 13,800 kWh of electricity per site per year, and cutting CO₂ emission by 13.75 tons per site per year.

We also reused Telstra's existing cabinets. With our ultra-dense energy solution, we saved 20U of space in existing cabinets that can later be used to house communications equipment and remove space constraints on capacity expansion.



Clean Energy

More telecom sites will appear as network coverage and capacity worldwide continue to expand. This will inevitably incur higher carbon emissions. To alleviate this problem, Huawei provides our customers with energy-efficient network energy solutions which consume less energy at telecom sites. On top of that, we are adopting clean energy solutions, such as solar-powered base stations, to minimize carbon emissions.

With our advanced energy scheduling technologies, we can intelligently schedule the use of solar energy, power grids, stored energy, and diesel for base stations. In addition to ensuring a sufficient power supply for sites, we have refined our power supply structure to prioritize the use of clean energy and circular energy storage systems. In areas without

stable electric grids, we have deployed our solar hybrid energy solution, which significantly lowers energy use and O&M costs for telecom sites.

Our pioneering smart photovoltaic (PV) plant solution is based on our two decades of experience in diverse spheres, including digital information, Internet, and PV technologies. Inspired by new concepts such as *all digital*, *simplicity*, and *global and automated O&M*, we aim to construct smart PV power plants that feature efficient electricity generation, smart O&M, and safe and reliable operations. PV power plants such as these will allow customers to enhance their return on investment and use clean energy on a larger scale worldwide.

Contributing to a Low-carbon Society with Huawei's Smart PV Power Plant Solution

Huawei's latest smart PV solution provides an open platform which is viable under diverse use scenarios such as fishery, subsidence areas, mountainous areas, and agriculture. The solution helps boost electricity generation and results in a 50% increase in O&M efficiency. It can also cut carbon emissions and deliver socioeconomic benefits.

Customers can apply the smart PV solution in their farms, without taking up the arable land. The land can thus generate revenue both from the electricity and from agricultural use. Our solution is both energy-efficient and ecologically friendly.



Smart PV plant in the UK

Greener World Activities

Energy Efficiency Summits 2015 for a Greener and Better Connected World

In 2015, Huawei embarked on its journey toward green energy and held several Energy Efficiency Summits themed "Together Building a Greener and Better Connected World". The Melbourne summit held in July 2015 and the Dubai summit held in November 2015 brought together over 200 energy experts from more than 30 carriers, telecom organizations, and analyst institutions.

By giving keynote speeches, sharing practices relating to communication energy, and discussing industry trends, attendees explored the key driving forces for sustainable energy and cost saving in the ICT industry.



Energy Efficiency Summit Melbourne



Energy Efficiency Summit Dubai

4.4 Supporting Local Communities

Overview of Huawei's Major Social Contribution Activities in 2015



Countries where the Seeds for the Future program was implemented:

Colombia, Brazil, Mexico, Panama, Ecuador, Venezuela, and Canada

The US:

- Partnered with K to College to donate school supplies and money to two local schools.

Mexico:

- Donated e-education equipment to the State of Jalisco, gaining recognition from the Office of the President of Mexico.



Countries where the Seeds for the Future program was implemented:

Denmark, Spain, Portugal, the Netherlands, Sweden, Iceland, Norway, France, the UK, Ireland, Poland, Belgium, Bulgaria, Hungary, Macedonia, Austria, Russia, Belarus, Romania, and Turkey

Turkey:

- Operated a Children's Summer Camp to allow young kids to experience Chinese culture.

Belarus:

- Donated telecom equipment and built a HAINA in partnership with the State University of Informatics and Radioelectronics (BSUIR) and Belarusian University of Posts and Telecommunications.



Countries where the Seeds for the Future program was implemented:

Ghana, Algeria, Tunisia, Egypt, Ethiopia, Kenya, Zimbabwe, Angola, Morocco, Zambia, Botswana, and Mozambique

South Africa:

- Supported the flagship program of the Jano Zuma Foundation, a local charity organization.
- Donated 50 tablets to the HX Cultural School's library.
- Donated money to Adopt-a-School, a non-profit organization that supports underprivileged schools.
- Initiated The Bunker Business Incubator to fund medium, small, and micro startups in black communities.

Zambia:

- Donated 50 computers, desks, and chairs to schools in remote areas.
- Partnered with Zamtel to offer free phones and tablets to local women through the Women Bank charity program.

Mauritania:

- Donated 500 tablets to underprivileged students in collaboration with the Fondation Errahma.

Mauritius:

- Donated 100 tablets to underprivileged young students through the ICT digital literacy program, launched by the Ministry of Information and Communication Technology.
- Sponsored the traditional lantern festival to promote traditional culture together with the Ministry of Arts and Culture.

Mozambique:

- Donated US\$100,000 to help more local people gain access to education.

Cameroon:

- Worked with the Cameroonian Ministry of Posts and Telecommunications to donate computers, food, and other supplies to local orphans and young kids.
- Partnered with the Network of Women and Men Associations of the Meyomessi District (RAFHAM) to donate farming and production equipment and tools to underprivileged women to help them get out of poverty.
- Established the three-year Cameroon-Huawei ICT scholarship at the School of Engineering of University of Yaoundé I.

Zimbabwe:

- Sponsored a charity program that extends care to orphans.

Papua New Guinea:

- Donated money to highland areas suffering from high frosts and drought.



Country where the Seeds for the Future program was implemented

 **Countries where the Seeds for the Future program was implemented: Mongolia, South Korea, Japan, Saudi Arabia, the UAE, Kuwait, and Pakistan**

Pakistan:

- Sponsored the Summer Youth Mandarin Learning program and provided trainers and textbooks.

Kazakhstan:

- Built a HAINA.

Uzbekistan:

- Built a HAINA.

Kyrgyzstan:

- Donated disaster relief supplies to the quake-hit Osh State.

Azerbaijan:


- Partnered with the Nakhchivan University to build a HAINA, and donated multiple sets of telecom equipment.

Saudi Arabia:

- Established an LTE joint innovation center in collaboration with the King Abdulaziz City for Science and Technology (KACST).

Nepal:

- Donated telecom equipment worth US\$600,000 to earthquake-hit areas to help restore communications.

 **Countries where the Seeds for the Future program was implemented: Singapore, Thailand, Malaysia, the Philippines, Indonesia, Brunei, Bangladesh, Vietnam, Australia, and New Zealand**

Cambodia:

- Donated US\$200,000 to the Red Cross for local charity programs.
- Donated telecom equipment to the National Institute of Posts, Telecommunications and Information Communication Technology to cultivate local ICT professionals.

Vietnam:

- Partnered with the Vietnam Information Technology Association to hold the 2nd software innovation competition for university students.

Myanmar:

- Donated HAINA telecom courses and computers to Thanlyin Technological University.
- Donated emergency rescue funds worth US\$400,000 after severe flooding in Myanmar.

Bangladesh:

- Worked with the government's ICT Division to hold the first youth ICT knowledge competition.

Thailand:

- Made donations to the Chulalongkorn University to contribute to local higher education.

Sustainable World

Context

Every company, large or small, can contribute to the local community by providing employment, reducing poverty, and fostering an entrepreneurial environment. Companies enrich local culture, support local healthcare, generate income, and build infrastructure. Today, as communications technology evolves at a lightning pace, the ability to access and use information as well as ICT literacy and skills are the keys to narrowing the gaps between different countries and regions. All companies, particularly ICT companies, should embrace the opportunities they have to deliver training and education to local communities, and to support the spread of new technologies and talent development. They should expand access to information and other factors that drive economic and social progress, as part of their responsibility to the community.

Approach

Huawei is committed to supporting local communities in addition to pursuing business development. Leveraging our ICT expertise and experience, we initiate social contribution projects with governments, customers, and non-profit organizations. These include supporting ICT innovation and start-ups; facilitating local communities' green initiatives, and cultural, sports, and traditional events; enabling ICT talent education; offering support to local charity organizations; and supporting underprivileged groups.

Our social contribution activities fall into four main categories:



Note: For information on our efforts in supporting network stability, please see "4.2 Supporting Network Stability"

Contributing to Local Communities, Seeking Win-Win Development

A company receives the support and respect of the local community when it considers the impact of its operations on the community, and takes real action to solve local problems by supporting local culture, caring for underprivileged groups, and supporting education. Huawei fulfills our responsibility as a corporate citizen through our ongoing social contribution programs, and contributes to charitable activities by working with local organizations to support disaster recovery, healthcare, and poverty programs.

Together with our partners, we are committed to delivering universal ICT technology and ICT literacy. We help to train future ICT professionals, offer more opportunities for education, and bring more people into the information world. By establishing training centers and educational partnerships around the world, we encourage the development of local ICT professionals, enable knowledge transfer, and increase people's engagement in the digital society. We are committed to helping build ICT industries in countries where we work, to spur sustainable development for the economy, the environment, and society.

Seeds for the Future Program

In 2008, Huawei launched the Seeds for the Future program to nurture ICT professionals in the countries where we operate, facilitate knowledge transfer, and enhance understanding of and interest in the telecom industry. The program seeks to close the gap between theory and practice, help ICT professionals learn what is needed in the industry, and encourage countries to build national or regional digital communities. It is the flagship program in which we have invested the most heavily, and we will continue to invest globally over the long term.

Over the past seven years, the program has been implemented in 67 countries and regions across five continents, benefiting over 15,000 students from 150 universities. More than 1,700 university students from around the world have taken a study trip to the Huawei headquarters, including more than 800 visitors in 2015.



Program participants learning about ICT

Through this program, we share our ICT expertise, innovative technologies, and cross-cultural enterprise management experience with local communities. In doing so, we are able to drive knowledge transfer, build efficient education systems, nurture ICT professionals, and promote the development of local ICT industries.

Our efforts have been highly recognized by national governments, including the UK, Germany, France, the Netherlands, Malaysia, Thailand, Indonesia, Singapore, Nigeria, Russia, Sweden, Kenya, Ghana, and Bulgaria. Acknowledging that our generous knowledge sharing efforts are conducive to bridging the digital divide and driving local industry growth, these governments have expressed their willingness to support the program over the long term.



Program participants posing for a group photo

Every year, Huawei invites 10 students from each country to come to study at our HQ. We discuss future trends and show them how they can harness new opportunities. The name of the program represents our desire to nurture promising young professionals in every country where Huawei operates. No one can say for sure what the future information society will be like. Some take a negative view, but we at Huawei remain optimistic. We bring together young people of different races who speak different languages. In a few years, they will unleash their potential and contribute to global progress. Huawei is committed to doing its part to shape the future.



—Huawei CEO Ren Zhengfei

Promoting Health of Newborns in Ghana

Ghana is an underdeveloped country in West Africa, with an infant mortality rate of 5.23%, significantly higher than the global average. Geographical and historical factors have left the mountainous north of the country much less developed than the coastal south. In particular, there is a serious lack of medical infrastructure and medical professionals in the northern part of the country. Huawei and the MTN Ghana Foundation have worked together to improve healthcare for Ghanaians in the north, in particular to provide better care for ill newborns. Huawei and MTN donated a neonatal intensive care unit (NICU) to the Tamale Teaching Hospital (TTH), the north's largest hospital. The foundation constructed the unit and the beds, and Huawei contributed medical equipment.

On May 7, 2015, the MTN Ghana Foundation and Huawei handed over the new unit to TTH at its dedication ceremony. Ghana's Northern Regional Minister, Alhaji Mohammed Muniru, the TTH management of the hospital, and the UNICEF representative in Ghana all spoke at the ceremony.



Governor of the Northern Region unveiling the NICU plaque

The high-tech NICU has 40 beds, a resource center, a meeting room, a dispensary, and equipment including emergency room beds, incubators, anesthetic machines, and respirators. It will offer a high standard of care to ill newborns in northern Ghana, and help to reduce the neonatal mortality rate. It will also serve as a center for the training of medical students from the University for Development Studies.

The governor of the Northern Region said, "The government of Ghana has always been committed to helping local hospitals deliver high-quality medical services, and to offering an excellent business environment in which companies can operate. We encourage companies to give back to the Ghanaian community through their social contribution programs, and we hope that more companies will accept their social responsibilities as corporate citizens, as MTN and Huawei have always done, so that they can grow with Ghana." The CEO of TTH and the UNICEF representative in Ghana also thanked the MTN Ghana Foundation and Huawei for their generosity.



Newborn children being treated at the TTH NICU

Supporting Mexico's "Para sentirme mejor" Program for Three Years

In 2011, Huawei sponsored the Mexican Health Secretariat's "Para sentirme mejor" program, supporting the procurement of breast prostheses and exercise equipment. This program helps Mexican women recover their confidence after a mastectomy, and improve their quality of life. Huawei has sponsored the program for three years, and our contributions have been much appreciated by the Mexican government. The Health Secretariat awarded Huawei with a certificate in recognition of our contributions each year.



Health Secretariat presenting Huawei with a certificate in thanks for our contributions

In March 2015, Dr. Pablo Kuri Morales, undersecretary for disease prevention and health promotion, presented Huawei with a certificate to recognize the social contributions made by Huawei in Mexico.



Rogelio Rueda Sánchez (Secretary General of Government of the State of Colima) and Dr. Agustin Lara Esqueda (Secretary of Health for the State of Colima) expressing thanks to Huawei along with women who benefited from our donations

Bridging the Digital Divide

Huawei has always supported ICT education in local communities where we operate. We believe that knowledge of ICT technologies can generate opportunities for communities, and that communications technology has enormous potential to galvanize community development. We contribute to local communities by bridging the digital divide and expanding access to information globally via programs such as local ICT training centers, scholarships, and donations to educational institutions.

Building a Multimedia Classroom for a Primary School in Tanzania

In September 2015, we donated a multimedia classroom to Kakuni Primary School in Tanzania. The classroom included desktop computers, tablets, projectors, a speaker system, and other educational equipment, and will support the development of education in the country. Mizengo Pinda, Prime Minister of Tanzania, spoke about the importance of education at the donation ceremony. He described the advances made at Kakuni Primary School, and the circumstances of the donation. The Prime Minister thanked Huawei specifically for our contributions to the modernization of education in Tanzania.

At the donation ceremony, Mr. Pinda accepted the multimedia classroom donated by Huawei, and demonstrated the use of Huawei tablets in education in Tanzania. Switching on a tablet, he explained how this device allows teachers to create electronic teaching materials with audio, video, images, and text. This gives the students the chance to go over the materials as many times as they need, solves the problems of scarce, expensive textbooks, and gives the children early

exposure to electronic learning and the Internet. Huawei donated 100 tablets, which will meet the need for modern education in Kakuni Primary School.



Prime Minister of Tanzania speaking at the donation ceremony

Sustainable World

Educational Programs in Russia Boost Local ICT Education

Huawei believes that education is a key factor in improving a person's chances in life. Education is the driver of sustainable, fair development for any country. That is why our social contribution programs in Russia focus on education and knowledge transfer. Since 2012, we have carried out a series of initiatives, including HAINA, Seeds for the Future, communications quizzes, and scholarships, to help expand ICT education in Russia.

1. On September 25, 2015, as part of Moscow's innovative Digital October, Huawei hosted the final of our "Honor Cup" ICT competition and Education Day event. In attendance at the event were representatives of the Russian Duma, the Ministry of Education and Science, Moscow Municipal Government, educational associations, and the presidents of Moscow University, Higher School of Economics, and other major Russian academies; 250 students and teachers from 21 different cities; and nearly 20 media outlets. Vadim Dengin, first deputy chairman of the Duma Committee on Information Policy, said in his address,

Because of Huawei, the smartest people have been brought together here today. Huawei is a leading technology company, and is setting the direction for the industry. More importantly, it is supporting talent development around the world. Their educational programs have a direct impact on the nation's economic and social development, and on people's living standards. I have proposed the formation of an ICT talent development project, and will personally be involved in its work.



Russian educators discussing effective collaboration between educational institutions, the government, and companies

2. Huawei and Russia Business Consulting jointly organized a forum on effective collaboration between educational institutions, the government, and companies. College presidents from Moscow, St. Petersburg, and Tomsk engaged with government officials and representatives from companies on the best ways in which they could work together. Pavel Lanchikov, general director of the Huawei Moscow Training Center, gave a comprehensive overview of Huawei's charitable education program, which was very well-received by both the educators and government representatives.

3. Huawei signed HAINA agreements with Russia's most renowned institutions: Saint-Petersburg Electrotechnical University (LETI) and Saint Petersburg National Research University of Information Technologies, Mechanics and Optics (ITMO). The two universities will be provided with Huawei-equipped labs and HAINAs, and Huawei will develop curricula in collaboration with faculty, train lecturers free of charge, and give students opportunities to learn about the most advanced ICT technologies. Huawei is expanding our HAINA program to more universities to improve students' ICT skills.

Huawei's Russia Research Center signed a research & development partnership agreement with Moscow State University. The combination of Huawei's global R&D platform with renowned educational and research institutions creates a wonderful synergy between businesses, academia, and research institutions that will drive joint innovation and co-creation and move the ICT industry forward.



Two of the student competition winners with Huawei representatives



Students answering questions in the competition's final round

Promoting Environmental Protection

Huawei applies ICT technologies and solutions to improve industry efficiency, cut carbon emissions, and reduce negative environment impacts. At the same time, we proactively work with local communities and partners to roll out green initiatives to promote environmental protection and sustainability.

Supporting Environmental Protection in Costa Rica

To celebrate the 100th National Tree Day in 2015, Huawei's Costa Rica Representative Office and the Ministry of Education jointly launched the *Cultural Eco* green project. As part of this program, we deployed reverse vending machines of waste drinking cups at eight education centers in different cities. The program was well received by the public as it helped young Costa Ricans improve their environmental awareness and influence their families and friends, thus inspiring everyone to contribute to environmental protection.

The opening ceremony of the program was held in a century-old public university in the capital city of San José. Three reverse vending machines were displayed at the event. The Minister of Education demonstrated how to use the

machines to students, and posted pictures from the event on her personal Facebook page.

When addressing participants, the Minister of Education emphasized the importance of environmental protection to the future of Costa Rica, and highlighted how an enhanced environmental awareness among young people could positively influence their families and environmental protection. She also acknowledged and thanked Huawei for our contributions to local society, saying, "I'd like to thank Huawei for supporting our country's ICT industry and protecting our environment." Huawei's environmental protection and sustainability concepts have also received wide acclaim from Costa Rican locals.



Students putting bottles back into the reverse vending machines



The Costa Rican Minister of Education with students at the event

Appendix I: 2016 Sustainability Goals

No.	Strategy	2016 Goals and Initiatives
1	Bridging the Digital Divide	Continuously pilot the Digital Divide Flagship Program
2	Supporting Stable and Secure Network Operations and Protecting User Privacy	Implement an end-to-end cyber security and user privacy protection system that covers design, operations, awareness, and capabilities
3		Successfully ensure network availability during all major events and natural disasters worldwide
4	Promoting Environmental Protection	Implement product eco-design to promote the circular economy. Optimize design relating to product take-back, recycling, packaging, and weight reduction, and develop design guidelines
5		Launch energy conservation projects to reduce the energy use of manufacturing, laboratories, and data centers. Discuss and define Huawei's carbon emissions reduction goal for the next five years
6		Ensure the green building design solution for the Huawei Global Compliance and Testing Center can become LEED (US) certified
7		Expand the Supplier Energy Conservation and Emissions Reduction Program to cover all strategic suppliers over the next three to five years
8		Expand the Global Green Cycle Program to cover 31 countries and regions and deploy 700 recycling stations worldwide
9	Seeking Win-Win Development	Conduct audits to review the sustainability performance of new suppliers and medium- and high-priority suppliers, and follow up on their improvement progress
10		Roll out social contribution programs for community support worldwide. Effectively deliver the Seeds for the Future Program to expand its influence
11		Strengthen communication with customers, governments, the media, and other key stakeholders to increase their awareness of Huawei's sustainability performance
12		Optimize the manufacturing safety management system based on DuPont's standards to enhance security capabilities. Develop leadership in manufacturing safety
13	Management System	Optimize the corporate sustainability strategy and integrate it further into the business plans of departments. Step up efforts to develop leadership in sustainability, create a framework for a sustainability-first culture, and roll out programs to strengthen the culture
14		Release regulations on building the sustainability management system and sustainability standards, to ensure sustainability requirements are incorporated into business activities and reinforce the sustainability management systems for different business domains

Appendix II: GRI Index

STANDARD DISCLOSURES FIRST PART: GENERAL STANDARD DISCLOSURES

1. STRATEGY AND ANALYSIS

Profile Disclosure	Disclosure	Page
G4-1	Provide a statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability.	3-5
G4-2	Provide a description of key impacts, risks, and opportunities.	3-5, 17

2. ORGANIZATIONAL PROFILE

Profile Disclosure	Disclosure	Page
G4-3	Report the name of the organization.	12
G4-4	Report the primary brands, products, and services.	12
G4-5	Report the location of the organization's headquarters.	The back cover
G4-6	Report the number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	12
G4-7	Report the nature of ownership and legal form.	15
G4-8	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	14
G4-9	Report the scale of the organization.	14
G4-10	Report the total number of employees by employment contract and gender.	30
G4-11	Report the percentage of total employees covered by collective bargaining agreements.	34
G4-12	Describe the organization's supply chain.	47-53
G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	No significant changes
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization.	16-17
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	25
G4-16	List memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization: <ul style="list-style-type: none"> • Holds a position on the governance body • Participates in projects or committees • Provides substantive funding beyond routine membership dues • Views membership as strategic This refers primarily to memberships maintained at the organizational level.	25

3. IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES

Profile Disclosure	Disclosure	Page
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents. b. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	14
G4-18	a. Explain the process for defining the report content and the Aspect Boundaries. b. Explain how the organization has implemented the Reporting Principles for Defining Report Content.	23

G4-19	List all the material Aspects identified in the process for defining report content.	23
G4-20	For each material Aspect, report the Aspect Boundary within the organization.	23
G4-21	For each material Aspect, report the Aspect Boundary outside the organization.	23
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	/
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	No significant changes

4. STAKEHOLDER ENGAGEMENT

Profile Disclosure	Disclosure	Page
G4-24	Provide a list of stakeholder groups engaged by the organization.	22
G4-25	Report the basis for identification and selection of stakeholders with whom to engage.	22
G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	22
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	22

5. REPORT PROFILE

Profile Disclosure	Disclosure	Page
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	Inside the front cover
G4-29	Date of most recent previous report (if any).	Inside the front cover
G4-30	Reporting cycle (such as annual, biennial).	Inside the front cover
G4-31	Provide the contact point for questions regarding the report or its contents.	Inside the front cover
G4-32	Report the 'in accordance' option the organization has chosen.	Inside the front cover
G4-33	Report the organization's policy and current practice with regard to seeking external assurance for the report.	104-105

6. GOVERNANCE

Profile Disclosure	Disclosure	Page
G4-34	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	15,18
G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.	15,18
G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body.	18
G4-37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body.	22-23

G4-38	Report the composition of the highest governance body and its committees by: <ul style="list-style-type: none"> • Executive or non-executive • Independence • Tenure on the governance body • Number of each individual's other significant positions and commitments, and the nature of the commitments • Gender • Membership of under-represented social groups • Competences relating to economic, environmental and social impacts • Stakeholder representation 	15
G4-39	Report whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement).	15,18
G4-40	Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members.	15,18
G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders.	15,18
G4-42	Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts.	18
G4-43	Report the measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics.	18
G4-44	<ol style="list-style-type: none"> Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment. Report actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics, including, as a minimum, changes in membership and organizational practice. 	19
G4-45	<ol style="list-style-type: none"> Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes. Report whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities. 	17
G4-46	Report the highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics.	17
G4-47	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities.	17
G4-48	Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered.	18
G4-49	Report the process for communicating critical concerns to the highest governance body.	/
G4-50	Report the nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them.	/

G4-51	<p>a. Report the remuneration policies for the highest governance body and senior executives for the below types of remuneration</p> <p>b. Report how performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives.</p>	/
G4-52	Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the organization.	32
G4-53	Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable.	/
G4-54	Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country.	/
G4-55	Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country.	/

7. ETHICS AND INTEGRITY

Profile Disclosure	Disclosure	Page
G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	28-29
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines.	29
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	29

STANDARD DISCLOSURES SECOND PART: SPECIFIC STANDARD DISCLOSURES DISCLOSURES ON MANAGEMENT APPROACH

G3.1 DMAs	Disclosure	Page
G4-DMA	Generic Disclosures on Management Approach	23

Indicator	Economic	Page
G4-EC1	Direct economic value generated and distributed	14
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	17
G4-EC3	Coverage of the organization's defined benefit plan obligations	32
G4-EC4	Financial assistance received from government	/
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	32
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	31
G4-EC7	Development and impact of infrastructure investments and services supported	/
G4-EC8	Significant indirect economic impacts, including the extent of impacts	88-93
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	50

Indicator	Environmental	Page
G4-EN1	Materials used by weight or volume	/
G4-EN2	Percentage of materials used that are recycled input materials	67-69
G4-EN3	Energy consumption within the organization	41
G4-EN4	Energy consumption outside of the organization	41
G4-EN5	Energy intensity	41
G4-EN6	Reduction of energy consumption	41-42
G4-EN7	Reductions in energy requirements of products and services	60-62
G4-EN8	Total water withdrawal by source	45
G4-EN9	Water sources significantly affected by withdrawal of water	45
G4-EN10	Percentage and total volume of water recycled and reused	45
G4-EN11	Generic Disclosures on Management Approach	/
G4-EN12	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	64
G4-EN13	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	/
G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	/
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	43
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	43
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	43
G4-EN18	Greenhouse gas (GHG) emissions intensity	44
G4-EN19	Reduction of greenhouse gas (GHG) emissions	41-44
G4-EN20	Emissions of ozone-depleting substances (ODS)	/
G4-EN21	NO _x , SO _x , and other significant air emissions	/
G4-EN22	Total water discharge by quality and destination	45-46
G4-EN23	Total weight of waste by type and disposal method	46
G4-EN24	Total number and volume of significant spills	No significant spills
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	46
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	/
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	60-69
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	66
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	No fines
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	44
G4-EN31	Total environmental protection expenditures and investments by type	/
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	48
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	52
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	/

Indicator	Labor Practices And Decent Work	Page
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	30
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	31-32
G4-LA3	Return to work and retention rates after parental leave, by gender	/
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	/
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	34
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	35-40
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	35-40
G4-LA8	Health and safety topics covered in formal agreements with trade unions	34
G4-LA9	Average hours of training per year per employee by gender, and by employee category	31
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	31
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	31
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	31
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	32
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	48
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	49
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	/
Indicator	Human Rights	Page
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	/
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	31
G4-HR3	Total number of incidents of discrimination and corrective actions taken	34
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	49
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	49
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	49
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	100%
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	No related incidents

G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	/
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	48
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	49-50
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	/

Indicator	Society	Page
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	88-93
G4-SO2	Operations with significant actual and potential negative impacts on local communities	/
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	29
G4-SO4	Communication and training on anti-corruption policies and procedures	29
G4-SO5	Confirmed incidents of corruption and actions taken	29
G4-SO6	Total value of political contributions by country and recipient/beneficiary	No related contributions
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	/
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	No related fines
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	48
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	49-50
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	/

Indicator	Product Responsibility	Page
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	70-71
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	/
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	/
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	No incidents of non-compliance
G4-PR5	Results of surveys measuring customer satisfaction	22
G4-PR6	Sale of banned or disputed products	/
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	No incidents of non-compliance
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	56-57
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	No fines

Appendix III: Terms and Abbreviations

Abbreviation	Full Name
3G	The Third Generation Mobile Communication Technology
4G	The Fourth Generation Mobile Communication Technology
5G	The Fifth Generation Mobile Communication Technology
APP	Application
BCG	Business Conduct Guideline
CDP	Carbon Disclosure Project
CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
CSD	Corporate Sustainable Development
CAGR	Compounded Annual Growth Rate
CNAS	China National Accreditation Service for Conformity Assessment
EHS	Environment, Health and Safety
EICC	Electronic Industry Code of Conduct
EMT	Executive Management Team
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GeSI	Global e-Sustainability Initiative
GRI	Global Reporting Initiative
GSMA	Global System for Mobile Communications Association
ICT	Information and Communications Technology
IEC	International Electrotechnical Commission
IPC	Association Connecting Electronics Industries
ISO	International Standardization Organizations
ITU	International Telecommunication Union

Abbreviation	Full Name
JAC	Joint Audit Cooperation
LCA	Life Cycle Assessment
LEED	Leadership in Energy and Environmental Design
LTE	Long Term Evolution
LED	Light Emitting Diode
NGO	Non-government organization
NFV	Network Functions Virtualization
OBD	On-Board Diagnostic
OECD	Organization for Economic Co-operation and Development
PCB	Printed Circuit Board
PUE	Power Usage Effectiveness
SDN	Software-Defined Networking
TUP	Time-based Unit Plan
UNGC	United Nations Global Compact
UPS	Uninterruptible Power Supply

Appendix IV: Verification Statement



Independent Assurance Statement

Introduction:

TÜV Rheinland (Guangdong) Ltd., member of TÜV Rheinland Group, Germany (TÜV, We) has been entrusted by the management of Huawei Investment & Holding Co., Ltd. (HUAWEI, the Company) to conduct independent assurance of HUAWEI Corporate Sustainability Report 2015 (the Report). All contractual contents for this assurance engagement rest entirely within the responsibility of HUAWEI. Our task was to give a fair and adequate judgment on the HUAWEI Report 2015.

The intended users of this assurance statement are stakeholders having relevance to the HUAWEI overall Sustainability Performance and impacts of its business activities during 2015 (January 2015 ~ December 2015). TÜV Rheinland is a global service provider of CSR & Sustainability Services in over 65 countries, having qualified professionals in the field of Corporate Sustainability Assurance, Environment, Social and Stakeholder Engagement. We have maintained complete impartiality and independence during the assurance engagement and were not involved in the preparation of report contents.

Assurance Standard:

The Independent Assurance was carried out in accordance with AccountAbility, U.K Standard AA 1000 AS (2008) and related standards AA 1000 APS (2008), AA 1000 SES (2015), Principles of Inclusivity, Materiality & Responsiveness, Global Reporting Initiative (GRI), 'In accordance'-Core reporting guidelines as per G-4.0

Scope & Type of Assurance:

Our Assurance engagement covers the following:

- HUAWEI Corporate Sustainability performance as described in the report 2015 in accordance with GRI reporting guidelines and performance indicators and according disclosure on management approach (DMAs) from Economic, Environment & Social category, also defined in Reporting boundaries.
- Evaluation of disclosed information in the report as per the Assurance Standards.
- Type-1, Moderate as per AA 1000 AS (2008)

Limitation: The assurance engagement was carried out at HUAWEI Headquarter at Bantian Longgang, Shenzhen and site visits to major manufacturing unit located at Dongguan within P. R. China (Songshan Lake Factory). The consultations with external stakeholder were not carried out. We have not observed any significant situations to limit our assurance activity. The verification is carried out based on the data and information provided by HUAWEI, assuming they are complete and true. We did not verify the reported financial data as same is verified by another third party in annual report.

Assurance Methodology:

TÜV has challenged the report contents and assess the process undertaken by HUAWEI from source to aggregate in disclosure of information/data related to Sustainability performance. Our judgment is based on the objective review of reported information as per criteria defined under Assurance standards.

Analytical methods and the performance of interviews as well as verification of data, done as random sampling, to verify and validate the correctness of reported data and contents in light of contractual agreement and the factual HUAWEI Corporate Sustainable Development strategy (CSD) as mentioned in the report. Our work included consultation with over 50 HUAWEI representatives including senior management and relevant employees. The approach deemed to be appropriate for the purpose of assurance of the report since all data therein could be verified through original proofs, verified database entries.

The Assurance was performed by our multidisciplinary team of experienced professionals in the field of Corporate Sustainability, Environment, Social and Stakeholder Engagement. We are of the opinion that our work offers a sufficient and substantiated basis to enable us to come to a conclusion mentioned below and based on the content of our contract.

Positive Observation:

We would like to mention some of the positive aspects observed during HUAWEI assurance engagement as below:

- HUAWEI integrated and optimized the Sustainable Development Management System (CSD), conducted a more comprehensive and strict assessment to review the maturity of sustainability management. The assessment covered eight dimensions: strategy and policy; risk management; KPIs and priorities; organization and staff; baseline; process integration; monitoring and reporting; and stakeholder communication.
- HUAWEI launched project achievement: Digital Enablement: Bridging the Digital Divide to Connect People and Society. Through a series of workshops focused on new business models that could bridge the digital divide and create digital inclusion, HUAWEI systematically described the challenges and solutions to Bridging the Digital Divide.
- HUAWEI enhanced cyber security and privacy protection of users, established and implemented an end-to-end and trusted global cyber security assurance system, and introduced the industry recognized Privacy Impact Assessment (PIA) methodology to assess privacy risks of business involving personal data.

Adherence to AA 1000 principles:

Inclusivity: Through a variety of stakeholders' engagement activities, including organization meeting, releasing study report and participating workgroups and pilot projects, HUAWEI actively understood stakeholders' expectations and existing issues, and responded timely. For example, HUAWEI and CSR Europe co-hosted a sustainability conference themed The Future of Supply Chains: From Compliance to Innovation.

Materiality:

HUAWEI identified the material issues related to sustainable development viz. economic, environment & social performance as an outcome of its stakeholder engagement and business priorities and provide balance information in the report. The Corporate Sustainable Development (CSD) strategy is aligned to address identified material issues.

Responsiveness:

HUAWEI responded to its stakeholders against identified material issues critical to sustainable development through disclosure made in report 2015, including Corporate Sustainable Development strategy, management system and its essential, 2015 sustainability object progress, and stakeholders' engagement.

Conclusion:

In conclusion, we can mention that no instances or information came to our attention that would be to the contrary of the statement made below:

- HUAWEI Corporate Sustainability Report 2015 meets the requirement of Type-1, Moderate Assurance according to AA1000AS (2008) and Global Reporting Initiative (GRI) , 'In accordance'-Core reporting guidelines as per G-4.0
- The Report includes statements and claims that reflects HUAWEI achievements and challenges supported by documentary evidences and internal records
- The performance data we found in the report are collected, stored and analyzed in a systematic and professional manner and were plausible.
- TÜV Rheinland shall not bear any liability or responsibility to a third party for perception and decision about HUAWEI based on this Assurance Statement.



For TÜV Rheinland Group

A handwritten signature in black ink, appearing to read 'Daniel Pan'.

Daniel Pan

Lead Verifier

Guangzhou, 6th May 2016

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