Huawei Consumer Business
Sustainability Progress Report

(2011-2020)

HUAWEI

Highlights

Information Accessibility
Everyone should share equally in the convenience and power of technology

15
15 accessibility features of Huawei smartphones, 100% available to everyone with a Huawei smartphone.

10M
10 million people use our accessibility services each month, enjoying a convenient digital life.

8.87M
The Simple Mode feature on Huawei phones helps to make digital technology accessible to 8.87 million older people every month.

Education and Health
Support education and assist in health

14,000+
HUAWEI EduCenter has now launched more than 14,000 free courses.

10,000+
Huawei has invested US$ 1 billion in the Shining-Star Program, rewarding over 10,000 innovative applications.

1.8M
Over 1.8 million users have downloaded and registered the Heart Health Research APP from the Huawei AppGallery.

Environmental Protection
Protecting the earth's resources and creating a better future

17%
We have reduced the proportion of plastics in packaging materials for our P Series flagship models by 17%, eliminating 17,500kg[1] of plastics for every ten million phones.

68%
The packaging utilization rate of Mate flagship phones increased 68%[2], making use of every inch of space.

55g
We have reduced the packaging weight of Mate series flagship models by 55g[3], and the paper usage is reduced by about 550 tons for every ten million units, equivalent to 9,350 trees.

3,000+

We maintain over 3,000 service centers around the world, providing convenient customer services.

500,000

Nearly 500 thousand used phones have found new owners since 2015 through our trade-in program.

5,000+

We monitor the amount of waste we generated and properly dispose of it. Since 2017, we have collected and processed over 5,000 tons of waste through Huawei recycling system.

Corporate Responsibility
With a consumer-centered mindset, build a harmonious ecological chain

2.19M

We reduced the unlocking time for our latest flagship phone model by 0.12 seconds[④], saving our global users 2.19 million hours every year.

100%

We conducted environment, health and safety (EHS) self-assessment or internal audit across all our stores, and service centers, providing consumers with a safe experience environment.

100%

All suppliers meet the requirements of the QC 080000 Hazardous Substance Process Management (HSPM) system.

80,000

Huawei Consumer Business Group (CBG) currently provides more than 80,000 direct jobs, serving the local economy and society.

1.34M

Huawei CBG created 1.34 million job opportunities among first-tier suppliers alone.

Our common future is to allow everyone to equally share the dividends brought about by technological development and protect the earth where we live. Huawei consumer business has seen solid development over the past ten years. In this period, we have kept our environmental and social commitments firmly in mind while ensuring an outstanding user experience. We will work with our partners to build a more inclusive ecosystem through continuous innovation and cooperation, and promote the achievement of the strategic sustainable development goals.

INFORMATION ACCESSIBILITY

Everyone should share equally in the convenience and power of technology. This is the significance of technological innovation.

Technology leaves no one behind.

We support education and care about your health.

Technology empowers you to change.

EDUCATION AND HEALTH

ENVIRONMENT PROTECTION

Reduce the demand for resources from nature and minimize the negative impact on the environment.

Technology is for a better planet.

With a consumer-centered mindset, build a harmonious ecological chain.

Technology repays trust with responsibility.

CORPORATE RESPONSIBILITY

Contents

CEO Letter

Richard Yu
CEO, Huawei Consumer Business Group

Over the past 10 years, thanks to the trust and support of consumers, Huawei Consumer Business group has made unprecedented achievements. The new business record means not only a new starting point, but also more responsibilities to us.

The global telecommunications industry is growing at breakneck speed, digital transformation is surging, and the era of full stack, 5G and AI is coming. New abilities enable us to address both growth and sustainability. We continue to keep our mission in mind and have a clear and broad perspective of the social responsibilities we are assuming, while reflecting on our relationships with consumers, society, and nature.

Our product upgrades over the past ten years align with our progress in sustainability from initial exploration to systematic practice.

Products and Consumers: Products for everyone in an inclusive digital world

We believe that everyone is entitled to benefit from digital convenience and have worked from the start to design products that are accessible for everyone. Through user research, analysis, and cooperative testing, we improved the accessibility experience of Huawei phones from the system level. In 2018, we launched the StorySign smartphone APP with our partners, using AI technology to create a new world of books for deaf children. In 2019, we collaborated with developers to develop more useful applications, further extending technologies into our ecosystem platform. We have learned that it takes attention and engagement from more stakeholders to advance information accessibility.

Products and Nature: Balancing product competitiveness and effective resource utilization

We committed that our growth and development cannot come at the expense of the environment. We have reduced the usage of plastic packaging materials and improved our products' energy efficiency , while maintained longer battery life. We have enhanced researches into durability and reparability, reducing resource demand and consumption. We also continue to expand the scope of our trade-in program and have established a global recycling system to prevent pollution from electronic waste.

Products and Society: Exploration of technology potential for a shared better future

Products and ecosystems allow us to connect closely with our developers, partners, supply chains, and communities. We established the Huawei Developer Community to enhance developers' capabilities. We take local procurement and suppliers approach to build a prosperous and harmonious industry ecosystem with our industry chain partners. We responded to the COVID-19 pandemic in 2020 with new product and service ideas. Speed, convenience, and effective communication have prepared us to face future challenges.

Despite enormous challenges, we'll continue to make breakthroughs on the path towards sustainable development, resolving problems through innovation. "Information accessibility" benefits more people, "education and health" support to create shared values, "environmental protection" helps us to coexist with nature, and "corporate responsibility" is the foundation of our ethical code.

This report is a comprehensive reflection on initiatives we have done, a clear presentation of our current efforts, and a new positioning for the future. It summarises our consumer business's sustainability achievements and offers a future roadmap. For some tasks, current conditions may not be fully ready, but we have prepared for the future. Anything is possible with sheer determination and sufficient investment. We are already and will always be working hard for a sustainable future.

INFORMATION ACCESSIBILITY

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15 accessibility features of Huawei smartphones, 100% available to everyone with a Huawei smartphone

10M

10 million people use our accessibility services each month, enjoying a convenient digital life

8.87M

The Simple Mode feature on Huawei phones helps to make digital technology accessible to 8.87 million older people every month

Technology leaves no one behind

EMUI- Everyone enjoy technology equally

EMUI 5.1

A comprehensive optimized accessibility experience

- In 2017, after 3,600 hours of development, 7,000 joint tests, and 200 repeated adjustments, as well as user research, analysis and cooperative testing, we optimized the Huawei mobile phone user experience from the system level, giving users the best accessibility user experience on an Android system at that time.

- We developed and issued the internal *EMUI Information Accessibility Specifications*. All new system APPs must follow this specification.

EMUI 9.0

Standardization of accessibility design

- Together with specialized institutions such as the China Disabled Persons' Federation, China Association of the Blind, and China Association of Persons with Hearing Disabilities as well as technology companies, we jointly participated in formulating China's first mobile accessibility standard, led by the Ministry of Industry and Information Technology of China: The *Technical Requirements for Accessible Mobile Communication Terminal*. As a major technology contributor, Huawei has provided technical solutions and product development support in terms of interaction, display, and communications services for formulation of the standard.

- We have actively improved our accessibility functions in accordance with the *Technical Requirements for Accessible Mobile Communication Terminal*. Mate 20 was Huawei's first phone to be certified for the Requirements through China Telecommunication Technology Labs.

EMUI 10.0

MeeTime helps communicate with visible language

- Our high-definition MeeTime APP offers users high-quality video communications. MeeTime connects users with families and friends anytime and anywhere with high quality video calls, even in low-light or poor network conditions.

- We partnered with a third-party institution to develop next-generation Screenreader feature, further enhancing its response time, applicability, and convenience.

EMUI 10.1

Sound Booster transmits clearer sound

- We added the Screen Sharing feature, allowing users to instantly share their phone screens with each other in real time, helping them to problem solve together and share moments of fun.

- Our new Sound Booster function uses a self-developed noise suppression algorithm to minimize acoustic interference, enhancing clear communication in multiple scenarios.

Information accessibility means allowing disabled people to study, work, and live normally, and integrate into society on an equal basis using existing information technology.

Accessible Technology for All

15

accessibility features, 100% available to everyone with a Huawei smartphone

10M

10 million monthly active users of EMUI accessibility features, facilitating digital life

Visibility Enhancements

Every day, we see a different world, hear different sounds, and use mobile phones to chat online, browse the news, and go shopping. Many of us have come to take such things for granted but those with visual impairments do not have that luxury.

According to the *2019 World Report on Vision* published by the World Health Organization, 2.2 billion people in the world live with visual impairment or blindness. Assistive aids such as braille writing and smartphones regularly help blind or severely visually impaired people become more independent. A few simple lines of code can bring significant changes to daily life for visually impaired people.

We began with clear objectives for our work: focus on practicality and pay attention to detail, resolve urgent problems, and improve functions to meet the needs of people with disabilities. We continuously strive to optimize our products for this community.
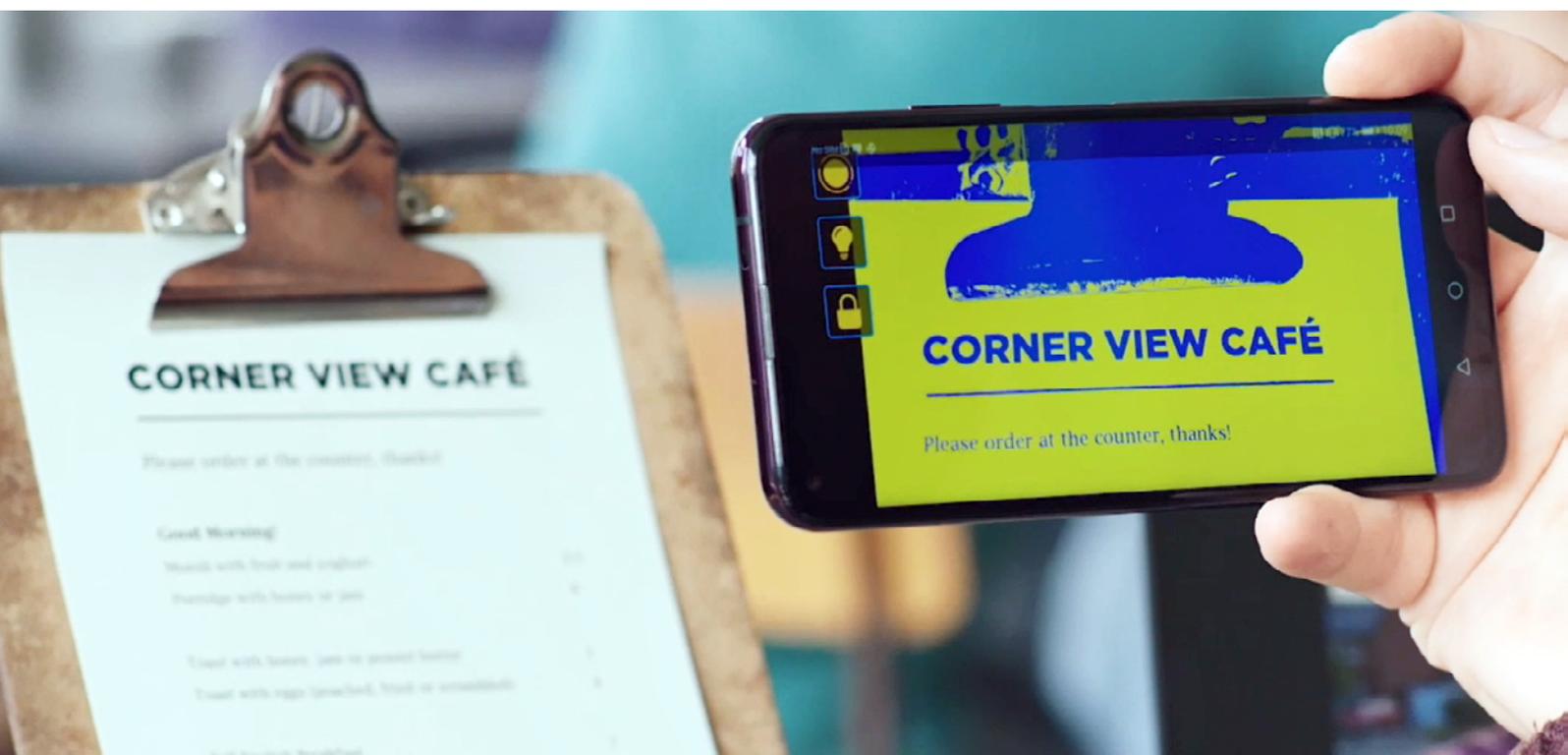
Screenreader/Talkback Experience the world through touch and sound

The eyes can skim ten lines at a time, but the efficiency of hearing is much less. In order to get information efficiently through the ears, the visually impaired have extremely agile sound collection and transformation capabilities. Accurate and rich text reading is necessary for information transmission.

In 2017, we worked with the Shenzhen Accessibility Research Association on information accessibility improvements to EMUI 5.1, both meeting diverse user experience requirements and driving phone manufacturers to pay attention to technological humanities. Through user research, analysis, and cooperative testing, we optimized the accessibility experience of Huawei phones from the system level. From this moment on, Huawei took on the mission

to develop information accessibility and integrate cutting-edge technology with humanistic design to create a better accessibility experience so that those living with a disability can easily use our phones.

Sightless operations depend on accurate audio browsing controls, which in turn depend on technical factors including scope, speech rate, and playback order. To optimize the auxiliary function, Huawei has dedicated 3,600 hours to conducting 7,000 joint tests. We invited visually impaired engineers from the Shenzhen Accessibility Research Association and a number of visually impaired users to participate in the research. Their feedback helped us to refine our accessibility mode.

Details make or break the Screenreader experience, and small changes can create large accessibility improvements. In 2019, we launched EMUI 10.0, which includes a Huawei Mobile Services (HMS)-based Screenreader function developed in cooperation with third parties. We improved our response speed, voice library support, software support, and Screenreader capability, along with our gesture tracking.

Small changes can create large accessibility improvements

We offer all users high-quality, smart, and adaptable products. We also offer inclusiveness and convenience for special groups. We gear every functional improvement to create more digital convenience for everyone and feel the wonderful moments of life.

Voice function

Voice wakeup, voice control of incoming calls, and phone search release people's hands by replacing buttons with voice interactions.

Color enhancement

This feature enhances display colors, making color identification easier for color-blind or color vision-deficient people.

Air gestures

The number buttons on the dial pad support air gestures, offering accessible input for faster dialing and convenient use.

Pronunciation recognition

EMUI supports screen reading and can explain homophones in detail. For example, it prompts the specific gender for "ta", the common Chinese pronunciation for "he", "she" and "it".

PocketVision:
# a clearer world for the visually impaired

There are many visually impaired people around us - numbering 8 million in China alone, and the world they see can be quite different from the colorful one many of us are used to. Visually impaired people usually require visual aids for reading even for studying and working. However, such devices are often incredibly expensive, and ordinary mobile visual assistive apps cannot work well in remote areas with poor network connections.

In response to this issue, Huawei jointly developed the PocketVision visual aid APP with Eyecoming in 2019. The APP is empowered by the Huawei Kirin Chipset, which offers incredible AI computing power, as well as the HUAWEI HiAI PocketVision open platform, which provides text recognition and text-to-speech capabilities. PocketVision users can choose from six reading modes and use the text broadcasting function. The APP can quickly identify, magnify, and broadcast text even without a network connection. It offers both audio and visual assistance, allowing the visually impaired to see text more clearly. The launch of this APP has brought traditional high-end electronic visual aids to thousands of visually impaired families for a lower price.

The classroom version of the APP, currently in development, applies the device's full zoom capability to larger classroom scenarios. The Huawei P30 Pro's 5x zoom function clearly captures long-distance blackboard lectures, helping visually impaired students to see farther and integrate themselves into the classroom without obstacles.

We continue to improve accessibility, moving from clear vision to long-distance vision, from expensive to affordable, and from special-purpose to general-purpose. We believe that as we continue along the road to accessibility, things will continue to get better.
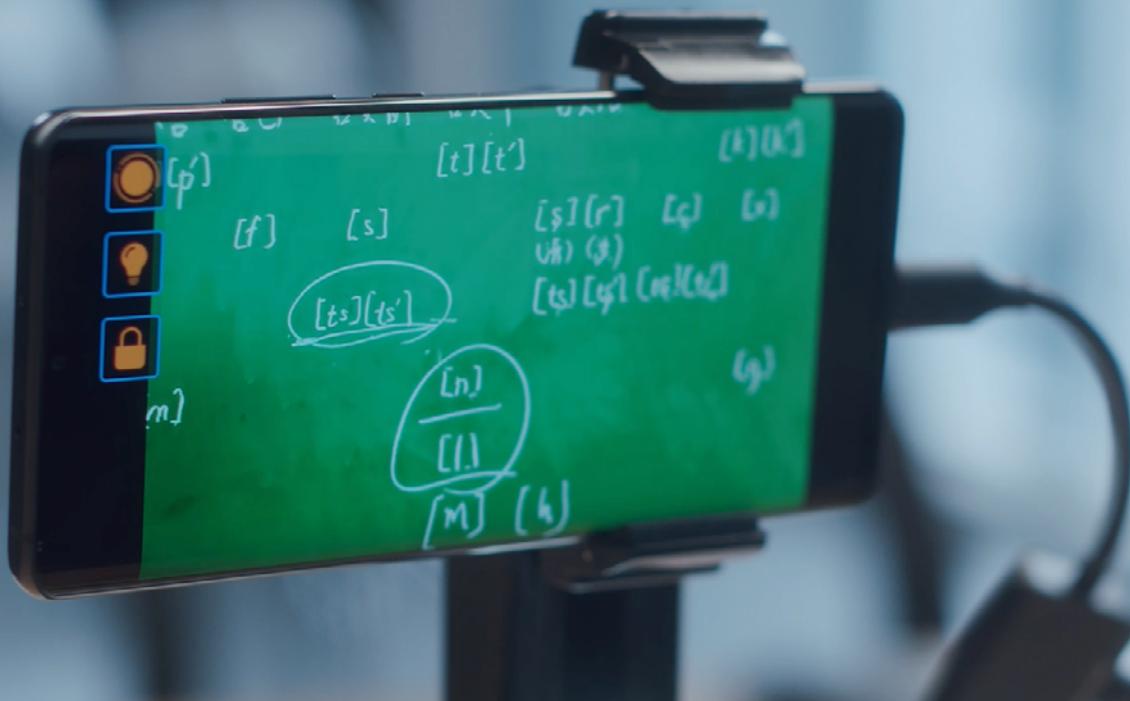
Hearing Enhancements

Spoken language is the main way people communicate, and linguistic communication and exchange of sentiment information are some of the most important traditional functions of mobile phones. 2018 World Health Organization data on the official website reveals that approximately 460 million people in the world, which account for 5% of the world's population, have hearing disabilities, including about 34 million children. Unable to communicate normally with others by hearing spoken language, they feel isolated. The basic ways to resolve the difficulties of the hearing-impaired using phones are to amplify voices so that both the speaker and listener can benefit from the conversation, and to use sign language interaction in the place of voice to send and receive information.

We worked on innovative solutions to benefit all users as part of our effort to help hearing and visually impaired people using our phones, rather than adding a special accessibility mode to the phone's design. In 2019, we introduced the MeeTime APP as part of EMUI 10.0, supporting smooth connections and calls on any Huawei phone, tablet, or smart screen. MeeTime connects families and friends anytime and anywhere with high-quality video calls, even in low-light or poor network conditions. The high-quality video can also help sign language users communicate easily and perceive voices and emotions. Chat quality is not just about the visual environment, but also about the sound.

Sound Booster – hear clearly, even not close by

The hard of hearing highly appreciate hearing clear sound. In 2020 we launched a wireless sound transmission function in EMUI 10.1 that can transmit external sound in real time from the phone to Bluetooth headphones or speakers, turning the phone into a microphone. This method facilitates both wireless listening and amplification, and the sound amplification from Bluetooth headphones or speakers transmits sound more clearly.

This function not only resolves troubles for the speaker but also blocks noise for the listener. The EMUI 10.1 wireless sound transmission function and FreeBuds 3 Bluetooth headphones can help listeners filter out sharp background noise. Amplifying speech on Bluetooth headphones can help the hearing-impaired hear speech in real time and freely participate in the conversation.

The wireless sound transmission function can make listening and conversation smoother and more relaxed, whether in a noisy restaurant or a compact lecture hall. It also has a role in quiet environments. For example, a mother may use a Bluetooth headset to amplify the sounds of her baby quietly sleeping so that she can be immediately aware of any changes. Wireless sound transmission also has rich usage scenarios, providing professionals such as teachers and tour guides a new way to conveniently amplify sound.

In order to resolve the problem of high-pitched feedback noise when traditional microphones and speakers are placed too close, we developed a noise suppression algorithm to reduce the occurrence of such noise, resolving a dilemma with traditional sound amplification and pickup so that sound can be more clearly transmitted and heard.

StorySign: A sign language reading APP we invented for children's reading

Reading out loud is not only an important skill that young learners must master, but also an important way for them to study characters. Most children learn to read by listening to explanations by teachers and parents. However, innate hearing loss or impairment creates obstacles in reading and literacy. In most cases, the parents of hearing-impaired children are not proficient in sign language, and there is a long-standing shortage of sign language teachers. These factors hamper the cognitive development of hearing-impaired children. Although breakthroughs in digital technology have allowed for online teaching, existing digital education resources still focus mainly on mainstream audio instruction, and the digital instruction resources and methods for deaf children are still limited.

In 2018, we launched our StorySign APP in cooperation with the European Union of the Deaf and the British Deaf Association, using AI technology to help hearing-impaired children experience the world of literature. When StorySign

scans a child's favorite book, a cute cartoon character jumps out and translates the text vividly into sign language, enabling hearing-impaired children to experience the joy of reading just like other children.

By 2019, StorySign supported 14 sign languages and 69 children's books in seven languages including English, French, German, Italian and Spanish, helping more hearing-impaired children to read. In order to help more hearing-impaired children and their families, StorySign was also launched on iOS in 2019.

StorySign transforms literacy education for families with hearing-impaired children. Through StorySign, hearing-impaired children and their parents can experience the joy of family reading time.

> "
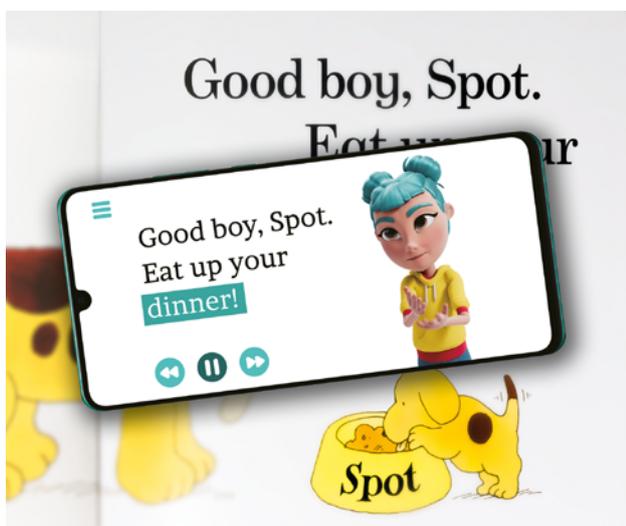> StorySign is really important because there isn't enough out there for deaf children. With StorySign, we've got something. We've got the technology, and it links with traditional books so it's encouraging deaf children to sign and read. And that's important.
> "
>
> - Mark Wheatley, Executive Director, European Union of the Deaf.

▶ Click to watch the video

12000

12,000 families have downloaded and used StorySign

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Information
Accessibility   Education and
Health   Environmental
Protection   Corporate
Responsibility

Technology for All Ages

8.87M

About 8.87 million older people use the Simple Mode on Huawei phones each month

Making it easy for the older people to also experience digital life

The internet and information technology have given the older people the opportunity to use targeted smart products and enjoy high-quality services more efficiently. Prompt monitoring of their health through smart bracelets and digitization of their lifestyle information improves society's ability to provide quality services to the older people. Real life, however, is still far from this ideal. Nevertheless, a lack of technology skills among older people means that they often miss digital trends.

We have always believed that age should not prevent people from enjoying digital life. Information technology should include benefits for older people rather than exclusively targeting younger users. We must eliminate the obstacles that prevent the older people from entering the information society for the sake of older people in the future.

Simple Mode: a "first digital experience" for the older people

Many older people's digital experience begins with a phone. Due to their unfamiliarity with digital technology, though, they may see it as only a way to make phone calls, leaving them unable to use other digital services. They may even reject digital technology. A good first digital experience is therefore important to stimulate their learning abilities and motivation. A simple and easy-to-use mobile phone may be the key to helping them enter the digital world.

For this reason, in EMUI 8.1, we first published a print version of the *Parent's Mobile Phone Instructions* with pictures and large characters, which has been well received and spread by elderly users; in EMUI 9.0, we updated the Simple Mode from information card version to desktop version to help older people adapt to using phones, so that they can comfortably complete their "first digital experience" with peace of mind, ensuring the sustainability of their digital life.

Simple Mode

"Zoom in" solves 50% of problems for older users

Problems
Poor vision and hearing due to age, inability to see text and images on the screen, and inability to hear phone sounds.

Solution
Simple Mode enlarges text and buttons for clarity and increases the volume so users need not set text size and volume manually. Users can also quickly access the Select to Speak/TalkBack function and have content relayed via a voice interface.

For the older people, less is more

Problems
Some older people have limited ability to accept new things, and complicated functions and operations may marginalize them.

Solution
Simplification is an important way to reduce barriers to mobile phone use among the older people. The direct operations make it easier for the older people to get a sense of accomplishment during use.

Thinking ahead for a more comfortable experience

Problems
The older people have unique life needs and habits. They are naturally unfamiliar with the digital operations that are a fact of life for young people.

Solution
In line with the habits of most older people, the input method is preset to handwriting allowing them to experience the fun and convenience mobile phones bring to life.
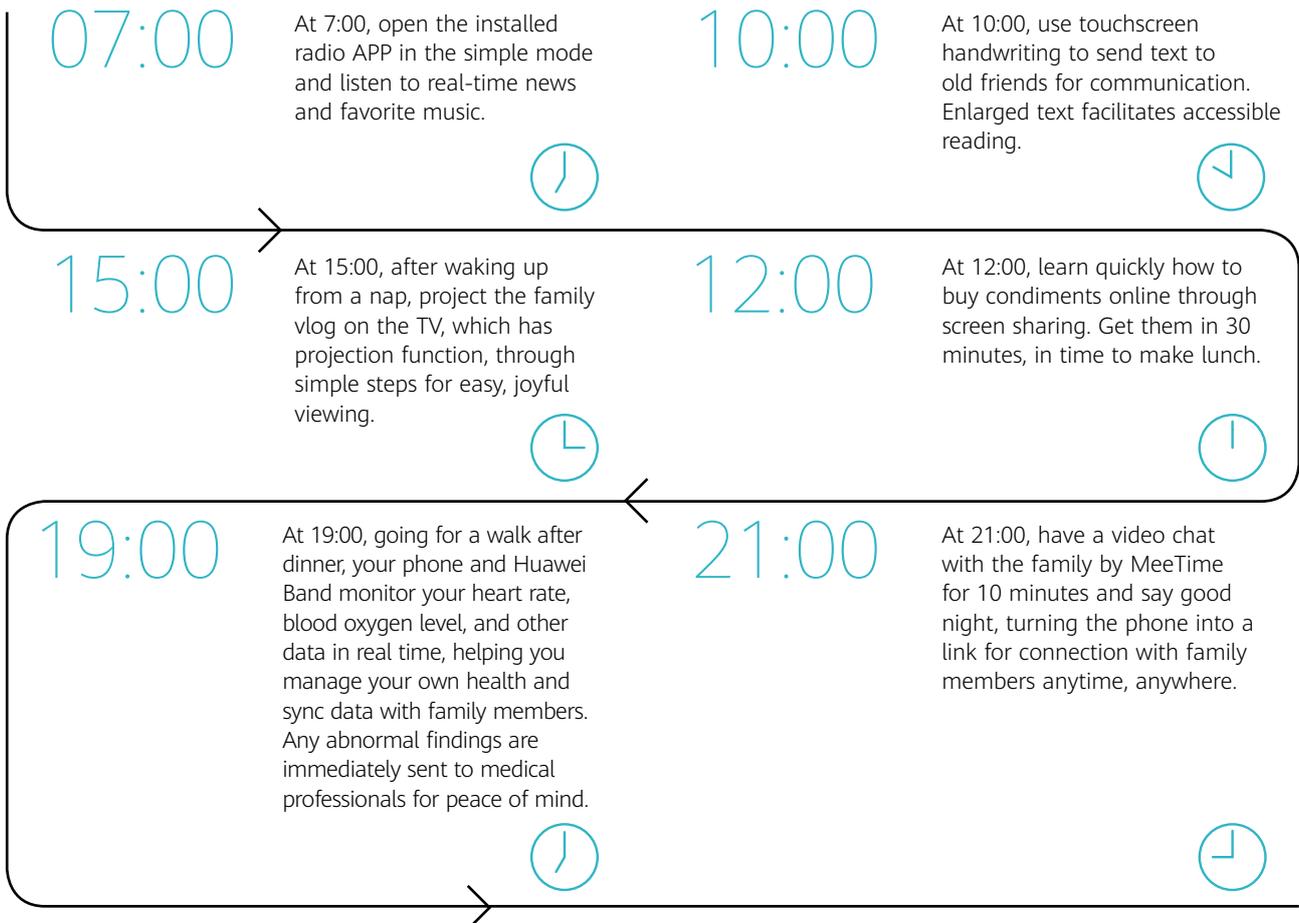
Companion guide: advancing step by step towards a digital life

In today's rapidly digitalizing society, the younger generation has more chances to teach older people about digital technologies. Children may be the most direct teachers to help the elderly use their phones and learn about digitalization.

The younger generation help older people choose a phone to buy and then spend time showing them how to use it lasting a couple of hours. Most elderly people have a smattering of knowledge but may have no idea how to ask questions during this crash course. Real-time and skillful instruction is crucial.

We added Screen Sharing and Graffiti Tagging features to the MeeTime in EMUI 10.1. Users experiencing problems using the phone can share their screen with one button, allowing them to clearly express the problem and letting their children see their screen and use their own screens to demonstrate. This function enables elderly users to learn in real time, anywhere. Starting by overcoming a single problem, or learning a single function, it helps them use information tools and services to meet their own needs, giving them a sense of accomplishment, one step at a time.

Entering the digital era with a phone

07:00 — At 7:00, open the installed radio APP in the simple mode and listen to real-time news and favorite music.

10:00 — At 10:00, use touchscreen handwriting to send text to old friends for communication. Enlarged text facilitates accessible reading.

15:00 — At 15:00, after waking up from a nap, project the family vlog on the TV, which has projection function, through simple steps for easy, joyful viewing.

12:00 — At 12:00, learn quickly how to buy condiments online through screen sharing. Get them in 30 minutes, in time to make lunch.

19:00 — At 19:00, going for a walk after dinner, your phone and Huawei Band monitor your heart rate, blood oxygen level, and other data in real time, helping you manage your own health and sync data with family members. Any abnormal findings are immediately sent to medical professionals for peace of mind.

21:00 — At 21:00, have a video chat with the family by MeeTime for 10 minutes and say good night, turning the phone into a link for connection with family members anytime, anywhere.

Digital Balance for Kids

With the widespread use of smart electronics, users are becoming younger and younger. Smart products, particularly smartphones and tablets, can provide rich resources, flexible tools, and diverse courses, creating learning experiences using all-new study and interaction methods, nurturing their creativity. Some risks still remain, though. Parents may lose control over their children's time management, or poor posture could affect spinal and ocular health. Children might also see inappropriate content on improperly managed devices.

Forcibly depriving children of smart electronics won't sustainably solve these problems. Effective methods are required to supervise, guide, and nurture children to use devices in a healthy manner so that they can truly experience the miracle of technology.

We added a Digital Balance feature to help children use phones healthier. In 2015, we added a "student mode" function, making Huawei the first phone brand to help children use APPs and manage their phone usage time reasonably. In 2019, we upgraded student mode to "Digital Balance". When "My child" mode is selected as the user, all functions are extended specifically for children, helping them control phone usage time and manage content for reading, and reminding them of bad posture. Parents can also manage phones and other devices remotely.

In addition to functionality that ensures the healthy use of phones, full understanding and communication between parents and children are also crucial.
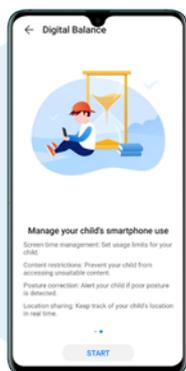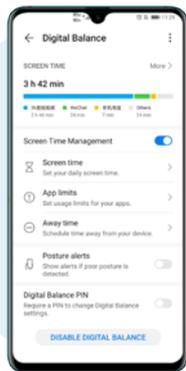
Balanced phone usage for kids:

Our phones support agreed limits on usage time with the children, particularly daily limits on game time. Parents can set these limits on the device, allowing for play while preventing harmful addictions.

Reading content selection:

We divide APPs on the Huawei AppGallery by age range for comprehensive management of children's APPs and phone function restrictions. This creates a healthy content management system and isolates inappropriate information.

Bad posture alerts:

The phone uses light, distance and gravity sensors to remind users when the screen gets too close to their faces, or if the user is walking, protecting children's eyesight and posture.

Peace of mind at a distance:

The Parent Assistant function allows parents to monitor children's phone use at any time, helping children reasonably manage their time and cultivating good habits. The phone can also share the children's location to learn about their safety at any time for remote guarding.

Technological Popularization Starts with the User

Good product features come from real user experiences

The real difficulty for developers is understanding special users' needs and habits. For instance, we were initially shocked to find that people with disabilities can enter text at up to five times the speed of those without disabilities. In many cases, we may have implemented 99 steps, but that remaining one problem may prevent the disabled from using the entire function. Because of this, we don't rush to complete accessibility functions, but rather focus on the underlying functions used most by those with disabilities. Problems may be complicated by different scenarios. Only by constantly optimizing functions can we improve accessibility.

In order to truly understand the needs of those with disabilities, our accessibility team tests with experts and everyday users. In 2017, we established a testing strategy

in collaboration with the Shenzhen Accessibility Research Institute, using their accessibility engineers' many years of experience to help our team repeatedly test the accessibility experience of each update. Starting in EMUI 5.1, the Institute has provided us with professional and systematic accessibility solutions including full user research, testing, and consulting for each EMUI version update.

In 2019, in cooperation with the Institute, we held an intelligent assisted living event at the Huawei global flagship store to meet visually impaired people and demonstrate accessible EMUI functions such as Screenreader. These in-person experiences reveal problems through direct users feedback, helping us improve our products. The final function should be decided by those who use them.

Creating industry standards to make accessibility the norm

Industry standards often come after technological development. In the early stages of a new technology, everyone is exploring and advancing. In 2017, we created and released the internal *EMUI Information Accessibility Specifications*, which all our new system APPs must follow, taking the important step towards an information accessibility standard.

In May 2018, we responded to an invitation by the Chinese Ministry of Industry and Information Technology, to work with other partners on China's first information accessibility report. In October, *the Technical Requirements for Accessible Mobile Communication Terminal* were released. We have actively improved our accessibility functions in accordance with the *Requirements*. Mate 20 was Huawei's first phone to be certified for the Requirements through CTTL.

We hope that accessibility technology support can become an industry standard, forming a complete development ecosystem that encompasses new technologies and accessible development methods. We will publish detailed and complete technical information for the ecosystem so that more developers can participate in it and contribute to accessibility.

When something that was originally a matter of course like information accessibility becomes the norm, it often brings innovative solutions for the benefit of all. We not only promote this cause but also benefit from it.

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Information
Accessibility

**Education and
Health**

Environmental
Protection

Corporate
Responsibility

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EDUCATION AND HEALTH

Technology empowers
you to change

10,000+

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the Shining-Star Program, which has inspired
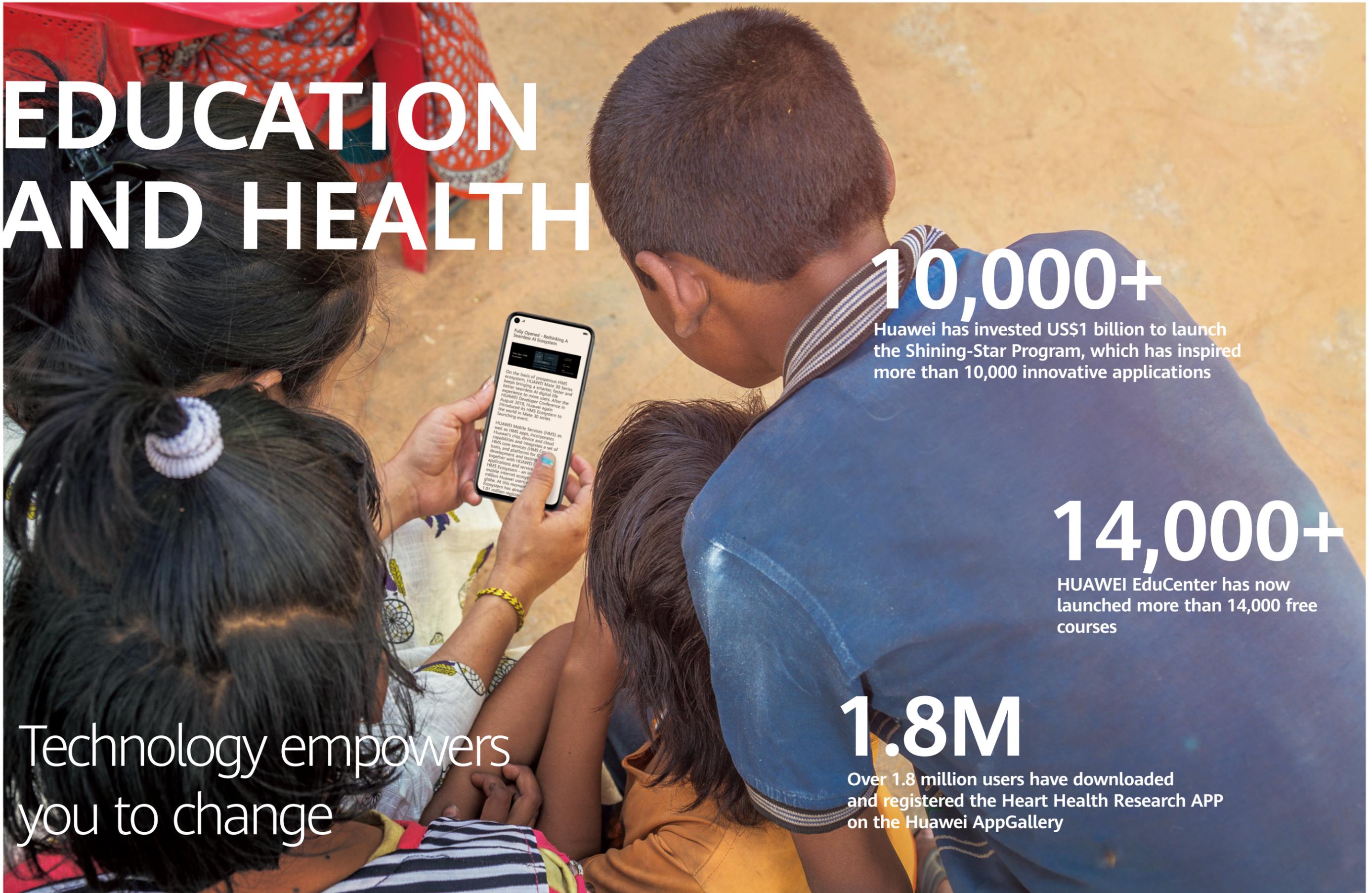more than 10,000 innovative applications

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Education: Inspiring Imagination and Creativity

Education Resources at Your Fingertips

With the development of information technology, learning can occur anytime, anywhere. Huawei has created an integrated online learning environment so that content can directly reach those in need. Making education independent of time and location and offering it via a range of channels increases flexibility and accessibility.

Building a digital education platform

We have worked with education partners in China and abroad to aggregate high-quality basic, language, and vocational education materials targeting all age groups. We have also connected with parents to create a comprehensive learning service platform, improving the user experience throughout all smart learning services.

In addition, the HUAWEI EduCenter also provides smart services such as smart assessment, smart recommendation, and free trial lessons to build a student-centered smart education service platform for the entire learning cycle.

14,000+

HUAWEI EduCenter has now launched more than 14,000 free courses

Reforming learning tools
Parents rest assured that students learn independently

As the demand for online education gradually expands, HUAWEI EduCenter has innovated to create an immersive learning desktop, set up parental auxiliary functions, and help parents manage their children's learning time and available applications through time management, application management and other designs, so that children can concentrate without being affected. In addition, the design of the parent's auxiliary password can also prevent children from modifying the parent's auxiliary settings or withdrawing from the HUAWEI EduCenter in the process of independent learning, thereby helping the parent group to reduce the pressure of tutoring their children.

The HUAWEI MatePad's EduCenter offers parent assistance functions to help parents help and supervise younger students. They can arrange children's study times by setting times of the day, usage time limits, and rest reminders to help with time management. They can manage the APPs displayed on the EduCenter desktop so that children can avoid distraction from non-study APPs during the study process. They can also lock the Huawei AppGallery to prevent children from downloading unnecessary APPs. In advanced settings, parents can set an auxiliary parent password to prevent children from modifying their auxiliary settings or from exiting the EduCenter during the study process, turning the MatePad into a custom study space.

The Huawei MatePad for education comes equipped with innovative functions such as screen splitting, parallel screens, and multi-screen collaboration. These emphasize the advantages of the large screen for studying, improving efficiency and creating an innovative smart experience. The MatePad for education has improved the camera for online teaching with "user follow-up" technology and includes an eye protection function.

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Information
Accessibility

**Education and
Health**

Environmental
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Responsibility

Education Without Barriers

Uneven resource distribution is an obstacle to educational equality. We use technology to bring educational resources to people in remote and impoverished areas.

25,000

Since its launched in October 2019, DigiTruck has covered 6 counties in Kenya, providing a total of 25,000 training hours for more than 1,500 beneficiaries

DigiTruck: Class is open anywhere, providing learning resources for remote areas

A recent World Bank report estimates that 230 million jobs in sub-Saharan Africa will require digital skills by 2030, as the global digital economy continues to develop rapidly. This sits in stark contrast to the widespread lack of education in the region. More than half of the children in the world who are not in school live in sub-Saharan Africa. Such a large gap makes it difficult for them to access digital technology and understand the economic value of digital skills, much less to learn and apply digital skills.

In 2019, Huawei partnered with several organizations to set up the DigiTruck mobile digital classroom, which hepls Kenyans in remote rural areas improve their digital skills. The DigiTruck is the latest program under our TECH4ALL initiative that supports access to high-quality education, bringing future-oriented educational opportunities to remote rural areas. We developed the project in partnership with the Belgian nonprofit organization Close the Gap, the UNESCO Regional Office for Eastern Africa, GSMA, Computers For Schools Kenya (CFSK), and the Kenyan telecom carrier Safaricom.

Huawei's DigiTruck is a shipping container that has been converted into a mobile digital classroom. The 12 meter classroom is equipped with smart devices like laptops, LED screens, virtual reality (VR) headsets, smartphones, and routers. The entire truck is solar-powered, so classes can be held in remote areas that lack a power supply. It usually stays in one place for a month, providing free learning resources and online classes, supporting rural teacher training, helping young people find jobs, and providing students with the opportunity to visit world heritage sites online.

In 2019, Huawei signed a memorandum of cooperation with UNESCO East Africa, aimed at improving digital skills and AI capabilities for the benefit of Africa through online education. Both parties will cooperate on the Huawei DigiTruck, regional forums and events, and digital skills research, helping improve East African countries' AI and digital technology capabilities to help meet the UN's Sustainable Development Goals (SDGs) sooner.

"
We believe DigiTruck can cover remote communities that have not yet benefitted from digital technology, bringing high-quality training to these areas, helping Kenya's digital economy achieve balanced development.
"

- Olivier Vanden Eynde, founder and Executive Director, Close the Gap

Broadening the possibilities of learning

Jamaliah Binti Mohd Yasin is an elderly Malaysian woman who was diagnosed with B1 visual impairment 30 years ago. She can only see weak light. Even so, she still loves travelling and learning about the world. In 2018, at the suggestion of a Huawei salesperson, she participated in the AI as the Eyes photography workshop organized by Huawei and + Community together with the Malaysian Association for the Blind (MAB), in which famous Malaysian photographers taught photography to visually impaired students. The instructors taught students to experience structure and texture by using their hands instead of their eyes, touching surrounding plants and flowers to re-imagine the world around them and then using the lens to capture these impressions. Within three months, 20 exploration courses and hundreds of photography field trips enabled visually impaired students to master basic photography skills while making new friends.

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Ability With Support

Personal development requires platform support. We have established the Huawei Developers Alliance to develop an innovative ecosystem for the enablement of technical personnel. Relying on its channel advantages, global platform services, and industry chain resources, the Alliance helps developers innovate in areas from development to testing, promotion, and monetization.

The Alliance has now deployed in over 170 countries and regions around the world, fully supporting developer operations through six large regional centers, four sites, and 15 data centers.

Huawei Developer Day – offline salon

A platform for in-depth exchange among developers, bringing them the latest industry news, trends, and practices through discussions, analysis of hot technologies and case sharing by industry leaders.

DIGIX GLOBAL AI CHALLENGE – online competition

An innovative application competition platform encouraging development based on cutting-edge open capabilities and services. It offers technical support, innovative applications, promotion, and global resource support.

Developer interaction – community operation

A space for developers' information dissemination, development exchanges, and technical sharing. Developers can share their experiences and get news and operational information on the community platform.

1 Billion Shining-Star Program – ecosystem support

Encouraging developers to innovate in AR/VR, AI, and IoT, and providing resources and capital for practitioner training, development support, and marketing assistance.

10,000

- Implemented in 46 cities including Paris, Warsaw, Kuala Lumpur, and Lisbon.

- Met with over 10,000 developers as of 2019 and delivered 144 keynote speeches covering 22 Huawei capabilities.

2,600

- Launched six competitions producing over 2,600 innovations as of 2019 and provided RMB 2.96 million in bonuses.

- In 2020, we created a special innovation bonus of US$ 1 million.

180

- Over 180 developers discussions as of 2020.

300

- As of June 2020, 22 phases of the Shining-Star Program have been voted on and corresponding incentive resources have been issued to over 300 partners and developers.

The Shining-Star Program powers the HMS ecosystem, helping application innovation around the world

Huawei announced the Shining-Star Program in November 2017 to support developers in building an innovative ecosystem platform. It offers incentives in areas including

AI, AR, and rapid services to support joint technological and business innovation, responding to the needs of global smartphone users and supporting practical innovation.

Shining–Star · Navigation Project

In August 2019, we upgraded the Shining-Star Program to offer developer incentives worth US$ 1 billion.

In July 2020, Huawei Terminal Cloud Services launched the Shining-Star · Navigation Project, accompanying the comprehensive upgrade of HMS Core's open capabilities.

Shining–Star · Campus Innovation Incentives

Shining-Star · Campus Innovation Incentives offer comprehensive and continuous technical support and resources for student developers including personal certification, Shining-Star incentives, and technical guidance.

HUAWEI HMS APP Innovation Contest, developing a technological future together with developers

The Huawei HMS APP Innovation Contest encourages innovation among global application developers. In July 2020, Huawei set up a special US$ 1 million innovation prize for the contest, encouraging developers to bring new digital experiences to users in over 170 countries. The competition is held in five separate regions around the world: China, Europe, Asia-Pacific, Middle East & Africa, and Latin America.

The HMS APP Innovation Contest also offers a special Most Social Value Prize, encouraging applications to create positive impacts in health, education, science, transport, economic development, environmental protection, philanthropy, and social resource allocation.

Technological Innovation Boosts Active Health⑤

Designed to Protect All-Day Health

It's only after seeing unsatisfactory data on our annual physicals that we start wondering why we didn't pay attention earlier. But no number is an accident. The body has warned us countless times, but we just may not understand the meaning of this signal. The "smart device + health service" model creates a health manager for anyone, meeting diverse, personalized health needs. The health function of Huawei products helps us monitor exercise data in real time, scientifically analyze the sleep process, and understand the state of blood oxygen so that health is no longer an invisible or intangible concept. The warm and considerate design constantly protects us so that we can live without worry.

We offer convenient remote care to monitor elderly family members' health. EMUI 10.1 added a My Family Health function so that users can add their parents' Huawei accounts to sync their health data. The Exercise Health APP monitors heart rate, blood oxygen, and sleep quality data 24 hours per day via Huawei smart wearables. It notifies family members of any abnormalities in the data so that they can check in with elderly relatives.

Pressure monitoring

Excessive stress can cause physical and mental discomfort and influence long-term health. Huawei wearables use TruRelax™ to analyze heart rate variability 24/7 for constant physical and mental health care. When combined with breathing exercises, this can relieve stress.

Health care

More than 60% of China's Internet users have vision problems due to blue light or radiation. Blue light causes dry eyes and vision loss, and can damage the retina and even cause blindness. Eye Comfort Mode was designed to reduce blue light radiation. In this mode, the screen automatically makes the light warmer and gentler, relieving eye fatigue and protecting vision.

Sleep tracking

Huawei wearables equipped with TruSleep™ 2.0 can monitor sleep quality throughout the night. Through heart rate and sleep respiration quality monitoring and big data analysis, we can identify six categories of typical sleep problems and provide over 200 improvement suggestions and personalized sleep services, helping users sleep soundly every night.

Body fat analysis

The Huawei Smart Scale includes the TruFit™ body composition analysis algorithm, jointly developed with the Hefei Materials Science Research Institute of the Chinese Academy of Sciences. It generates comprehensive body composition reports telling you where your fat is, offering guidance through comparison with data from the broader population.

| **Built for healthcare industry innovation**

In 2016, China gradually started promoting a "transition from treatment orientation to public health orientation" as an important strategy for overall health development, advocating that everyone have a healthy lifestyle and actively manage their health. In the mobile internet and digital age, telemedicine, data connection, and outpatient

health management are bringing digital health to more daily lives, bringing extended health services and education to the home for autonomous, timely, real-time, and interactive services. Through active health monitoring, people can enjoy a better life.

Centered on the user   **On your device**   **Driven by data**   **Powered by intelligence**

HUAWEI Research
Innovation with a focus on public health

Following the 2020 epidemic, awareness of health management has naturally increased. More and more smart mobile health technologies have been applied to health research. The Huawei Research innovation research platform,

working with industry partners, accelerated research into digital health innovation, aiming to provide convenient and active public health solutions at home.

Research on the real world

Huawei Research has opened research APP framework and capabilities of the multiple sensors on Huawei smart terminals, allowing research institutes to quickly recruit large numbers of participants to conveniently obtain high-value research data on the real world.

Research capabilities powered by AI

Huawei Research has opened research models and algorithm services in various fields to provide AI big data analysis capabilities, helping researchers work more efficiently and quickly incubate innovative applications and solutions.

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Exploring together with industry partners Research on active health management at home

As health services transforms from treatment orientation to health orientation, using Huawei Research, dozens of research institutes including 301 Hospital, Tongji Hospital of Tongji Medical College, Huazhong University of Science and Technology, Nanfang Hospital Southern Medical University, the International Peace Maternity & Child Health Hospital of the China Welfare Institute, and the Institute of Psychology, Chinese Academy of Sciences actively researched a variety of health areas including cardiovascular health, athletics, emotion, and women's health while maintaining consumer privacy protections. These efforts can help members of the public to lead a healthier life.

Heart health
Heart Health Research – 301 Hospital

The Huawei Health APP, paired with Huawei smart wearables, solves the difficulties of early arrythmia screening and the problem of difficult diagnosis, and predicts the risk of atrial fibrillation, helping users intervene early and actively manage their health.

Mental health
Institute of Psychology, Chinese Academy of Sciences – research on recognition of emotion

An emotion research APP, using Huawei smart wearables, has refined emotion recognition. The at-home emotion recognition and management solution helps users pay attention to emotion management, improving better mental health.

Women's health
International Peace Maternity & Child Health Hospital of the China Welfare Institute Research on menstrual health

Research on women's health through Huawei Research, combined with Huawei smart wearables and specialized equipment, has helped women predict and manage their menstrual cycles for long-term tracking and care for women's health.

Children's growth
Nanfang Hospital Southern Medical University - research on children's gaits

Huawei wearables are used to detect abnormal gaits in children, providing a closed-loop solution to podiatry screening, providing alerts and rehabilitation recommendations, and tracking children's gait abnormalities, helping identify podiatry hazards and intervene early so that children can grow up healthy.

Research partners .... **Hospitals** .... **Universities** .... **National research institutes**
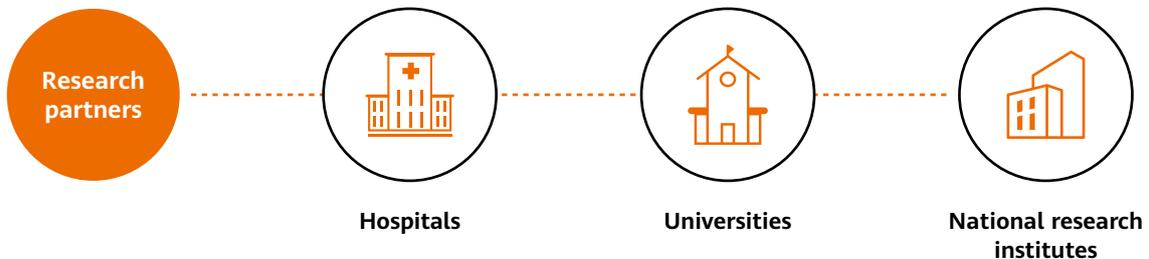
Heart Health Research Plan Starts from Active Prevention

1.8M

More than 1.8 million users have joined the heart health study, more than 4,200 cases of suspected atrial fibrillation have been screened out, and more than 2,400 users have been followed up for medical treatment. The diagnosis rate of atrial fibrillation is over 90% [6]

Patients with cardiovascular diseases are often unaware of prevention techniques, don't pay attention to diagnoses, and don't adhere to treatment. There is low public awareness of heart arrythmia. Most attacks are rapid and irregular, making timely detection difficult. These issues are major challenges for both self-awareness and screening and diagnosis by medical professionals. Frequent atrial fibrillation attacks can lead to changes in cardiac hemodynamics, causing thrombosis and leading to cardiovascular and cerebrovascular events such as strokes.

At present, with the advancement of technology, smart mobile health technology has developed a new way for arrhythmia screening, making it possible to conduct home-based, fast and long-term independent detection, helping patients to establish an active and healthy lifestyle and achieve early detection and early prevention. Together with 301 Hospital, we have transformed the heart health from passive treatment to self-active screening and carried out real-time detection of arrhythmia in large-scale populations. After downloading and installing the "Heart Health Research" APP on Huawei smartphones and synchronization with smart wearable devices, arrhythmia screening can be carried out anytime, anywhere, in real time. The 45 second fast detection and 24-hour smart monitoring can also be activated in parallel, which greatly improved the detection rate and provided patients with great convenience. Through the algorithm and technical analysis of the heart health research specialty, the device is able to give the test results and relevant guidance and suggestions in real time, so as to help patients to judge and understand the heart health status, and

help develop the awareness of active prevention.

In addition to arrhythmia screening, the research project also realizes the risk prediction of atrial fibrillation for atrial fibrillation patients, which helps atrial fibrillation patients to predict the risk of atrial fibrillation in advance, take intervention procedures and precautions timely. With the help of the research project, the prediction of atrial fibrillation has advanced from "knowing" the onset of atrial fibrillation to "predicting" the onset of atrial fibrillation, and patients could be alerted to atrial fibrillation in advance, self manage it from that point onwards and terminate the onset of atrial fibrillation effectively based on the guidance of online doctors from MAFA atrial fibrillation management platform. At the same time. the doctors from the MAFA cooperative hospitals have also provided online guidance to help patients to improve their lifestyle, terminate the risk of atrial fibrillation attack from "upstream", and realize the original intention of "treating without disease".
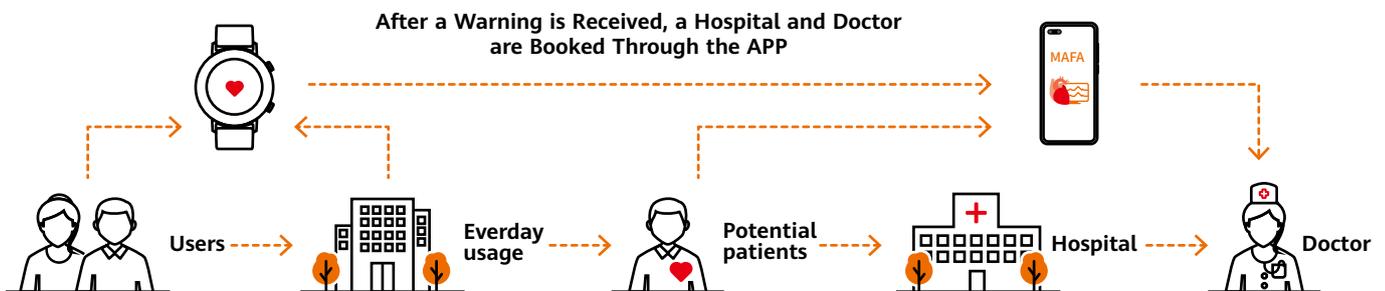
As of August 26, 2020, more than 1.8 million users have joined the heart health study, more than 4,200 cases of suspected atrial fibrillation have been screened out, and more than 2,400 users have been followed up for medical treatment. The diagnosis rate of atrial fibrillation is over 90%[6]. At present, for the high-risk population identified by the screening, they will be recommended to more than 82 cooperative hospitals nationwide for medical treatment depending on where they are geographically located. They have been provided with free priority appointment and clinical follow-up services and offered arrhythmia integrated management.

"

Based on Huawei's smart wearable device screening technology utilized in the Mobile Atrial Fibrillation Application and Integrated Management Research (MAFA project), the team carried out rigorous work such as modeling, optimization and in-hospital verification, and then completed a two-week real-time atrial fibrillation screening with smart devices in a "clinical environment", which confirmed that the accuracy of atrial fibrillation screening by smart devices exceeded 90%. In the current mass-scale atrial fibrillation screening in the MAFA project the performance of smart equipment based on PPG technology is stable, and the atrial fibrillation diagnosis rate is 94%. This technology reliably helps screen atrial fibrillation on a mass scale.

"

- Professor Guo Yutao, Chief Cardiologist, 301 Hospital

After a Warning is Received, a Hospital and Doctor are Booked Through the APP

MAFA

Users → Everday usage → Potential patients → Hospital → Doctor

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| Innovation for More People's Health

Innovations in medicine and health services can improve more people's health.

Early diagnosis and treatment for visual impairment in children

Congenital vision disorders are a challenge in pediatrics. According to data from the World Health Organization, 19 million children in the world suffer from visual impairment, of which 70%-80% of cases are preventable or treatable. Most vision disorders occur before the age of five, but only one third of these children receive early treatment. The main reason many children miss the optimal treatment window is a lack of knowledge and awareness among parents, so timely diagnosis is essential.

At present, pediatric visual disorders are mainly found by ophthalmologists observing reactions in children's eyes while using fingers or props to attract their attention. Professional ophthalmologists are scarce in many developing countries and lack sufficient resources and expertise to make accurate judgements. Developed countries, meanwhile, have strict referral systems, and ophthalmologists often have waiting lists of three to six months.

In response to the difficulties of seeing doctors and making diagnoses in pediatric ophthalmology, Huawei cooperated with the Spanish medical research institute IIS Aragon and the startup DIVE Medical in 2019 to jointly launch TrackAI, using Huawei smart APPs and AI technology to provide quick, accurate vision testing for children aged as young as six months.

The TrackAI complete inspection system consists of a Device for an Integral Visual Examination (DIVE), a Huawei P30 series phone, and a MateBook E screen. The patient looks at the visual stimuli displayed on the MateBook E screen, and the DIVE tracks and records their eyes' movement trajectory and response in real time, sending the data to the phone.

The data model running on the Huawei P30 diagnoses any visual defects. AI-assisted judgements make it easier for non-specialized pediatric ophthalmologists to interpret visual assessments and identify children with visual impairments.

TrackAI is currently training further AI algorithms in China, Spain, Vietnam, Mexico, and Russia, continuously optimizing its machine learning model to obtain more accurate results.

TrackAI has helped visually impaired children get early diagnosis and treatment, and Huawei is still working on further improvements.

"

We researchers need support from tech companies. Huawei helps DIVE bring technology to every corner of the world.

"

- Victoria Pueyo, joint founder, DIVE Medical

Pandemic Prevention and Control

In early 2020 a new pandemic swept the world, threatening not only public health, but society and the global economy. We used our technology and products to improve information sharing and news dissemination, enhancing medical efficiency and safety.

Accurate pandemic information

We maintained a Special Epidemic News section in our smart assistant for 100 days offering continuously updated information about the pandemic. It communicated the latest national statistics, dispelled rumors, and released accurate and useful official information in real time enabling users to better understand and respond to the health crisis.

Protection through connection

As the pandemic subsided, we used technology to resume life in an orderly way. Services like cloud-based offices, online education, and contactless shopping brought convenience to people's work, lives, and studies in these special times. We also used new technologies like 5G, big data, and AI to advance medical research in areas such as virus detection, remote consultation, vaccine R&D, and body temperature monitoring.

Convenient community services and inquiry tools

To help those in need, we cooperated with the third-party partners to launch infection tracing services and provide masks for the public. maintained contact information for free clinics, served fever clinic inquiries, and disseminated preventative health advice through the smart assistant on our devices.

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Huawei Consumer Business Sustainability Progress Report (2011-2020)   **36**

ENVIRONMENTAL PROTECTION

68%

The packaging utilization rate of Mate flagship phones increased 68%, making use of every inch of space

500,000

Nearly 500 thousand used phones have found new owners since 2015 through our trade-in service

540,000

We continued driving suppliers to complete carbon audits. In 2019, the carbon inventories of 25 suppliers to Huawei's consumer business showed that they reduced greenhouse gas emissions by over 540,000 tons.

Technology is for a better planet

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Resource Conservation Starts from Design

According to the *Global E-Waste Monitor 2020* published by the United Nations, the amount of e-waste produced globally in the past five years has increased by 21%, making it the fastest growing category of household waste worldwide. We are doing our utmost to uphold our pledge to the environment, and the most important of those efforts is our work to design more environmentally-friendly products.

50%

Energy consumption tests for typical applications show that the energy efficiency of Huawei products increased by 50% between 2015 and 2019

68%

We standardized the packaging design for the Mate flagship Series to use every inch of available space. It increased 68%

17%

We reduced the plastics used in our P Series flagship models by 17%. Every 10 million units use 17,500 kg[1] less plastic

100%

We replaced petroleum-based ink with 100% decomposable soybean-based printing ink in all product packaging

55 g

We have reduced the packaging weight of Mate series flagship models by 55g[3] , and the paper usage is reduced by about 550 tons per 10 million units, equivalent to 9,350 trees.

100%

100% of our suppliers meet the requirements of the QC 080000 System

The essentials of Huawei's environmental product design

Raw materials acquisition:

○ Selection of non-hazardous materials to reduce environmental impact after being discarded

○ Higher proportions of recyclable and recycled materials

○ Designs that reduce usage of raw materials while ensuring usage performance, reducing excessive raw materials use

Usage:

○ Life-extending product life

○ Modular, platform-based upgradable, and easy-to-maintain product design, improving product utilization

End of life cycle:

○ Design for easy disassembly, avoiding permanent connections. High-value modules must be disassembled without damage.

○ We actively develop solutions for dismantling and reusing scrapped products, and separate and reprocess reusable materials, improving the product recycling and parts reuse rates

○ We make different materials easy to separate

Product life cycle assessment (LCA):

Huawei uses the ISO14040 and ISO14044 life cycle methods to evaluate products' environmental impacts. LCA assessment helps us quantify the environmental impact of different product platforms and identify opportunities for environmental design improvement, including raw materials selection, process optimization, energy consumption, packaging, transport methods, and recycling strategies.

In order to make the environmental information of our products more transparent, Huawei has launched a consumer product environmental information reporting platform. We have posted public information for all of our main phones and tablets. Through these reports, consumers can clearly understand the full-cycle environmental impact of these products.

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Eco-friendly product certification

Environmental certification is the most direct way to demonstrate our success in protecting the environment. As of 2019, a total of 626 terminals and networking products of Huawei earned environmental certifications from organizations including the TÜV (Technischer Überwachungs-Verein / Technical Inspection Association) Rheinland, the TÜV SÜD, the China Quality Certification Centre (CQC), and the CEC (Beijing).

626

As of 2019, a total of 626 terminals and networking products of Huawei earned environmental certifications

CQC Environmental Rating Certification

As of 2019, 75 Huawei phones and tablets earned an A classification from the CQC, which is its highest environmental protection rating.

TÜV-WT Certification

As of 2019, six products including the Huawei Children's Watch 3X and Huawei Children's Watch 3S earned the TÜV Wearable Technology environmental certification, verifying the products as eco-friendly and guaranteeing factors including safety, performance, connectivity, and durability.

China Environmental Labelling certificate

As of 2019, six Huawei products including the MateBook E laptop computer earned the 10 Rings certification from the China Environmental Label because of their eco-performance, low levels of hazardous materials and environmental damage, and power saving characteristics.

The clearer footprint, the lighter traces

We emphasize energy efficiency within our innovative process. We ensure that our products provide greater functionality while using less power. We support this goal by analyzing the carbon footprint for all of our phones and tablets.

Overall carbon footprint report on major products
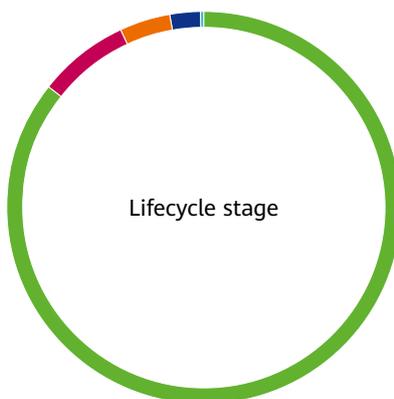
○ Huawei Mate 30 Pro 5G carbon footprint

Total greenhouse gas emissions: **85.1 kg CO$_2$e**

Lifecycle stage
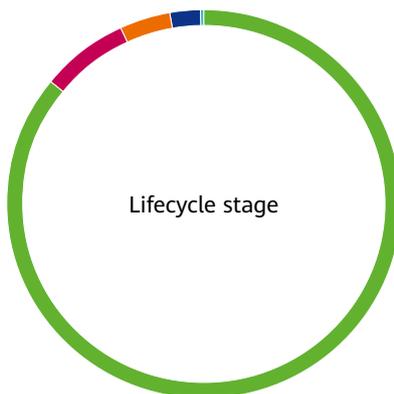
Raw materials and parts manufacturing: **83.69%**

Product shipment and retail: **7.12%**

Product use: **3.89%**

Product assembly: **2.49%**

End-of-life disposal: **0.11%**

○ Huawei P40 Pro carbon footprint

Total greenhouse gas emissions: **82.5 kg CO$_2$e**

Lifecycle stage

Raw materials and parts manufacturing: **85.73%**

Product shipment and retail: **7.35%**

Product use: **4.24%**

Product assembly: **2.57%**

End-of-life disposal: **0.11%**

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Systematic power efficiency management

System management

Smartphone power usage is influenced by system resource management. Based on behavioral prediction and component capabilities, Huawei's EMUI system distributes resources to achieve maximum efficiency and longevity. The latest Mate and P series have 30% longer battery life than their respective previous generations[7].
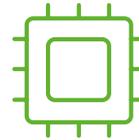
Faster graphical processing speeds

The revolutionary GPU Turbo technology eliminated the bottleneck between the EMUI operating system, the GPU, and the CPU. Not only does it improve graphics processing efficiency, it also reduces power usage, bypassing the seesaw balancing of performance and power requirements, while simultaneously improving user experience.

OpenArkCompiler

OpenArkCompiler allows recompiled apps to complete similar tasks using less power while increasing the phone's operating speed.
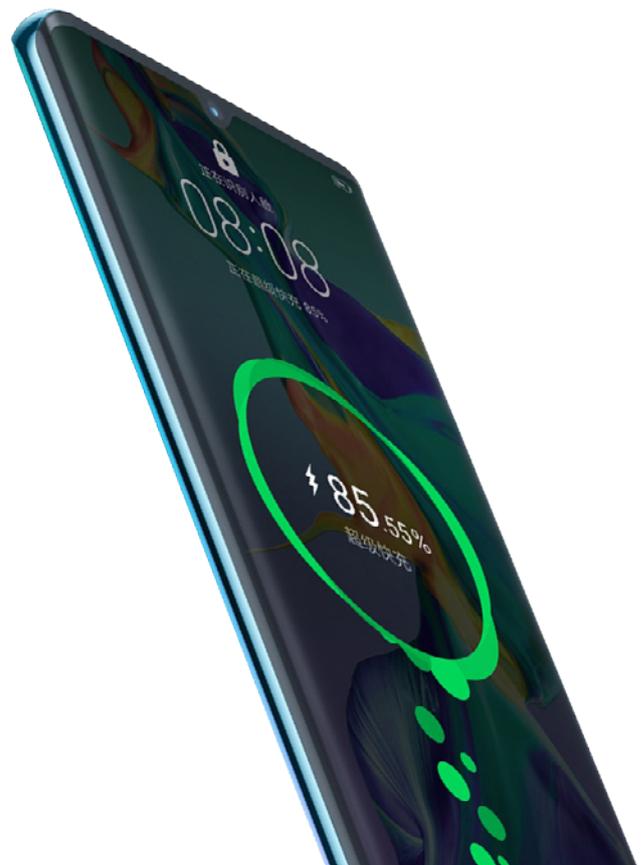
More environmentally-friendly materials, less resource exploitation

In the linear economy model, materials are gathered from natural resources and either buried in a landfill or burned at the end of the product's lifecycle. This consumes resources and takes a toll on the environment. Our goal is to explore and advance the circular economy model. We consider the use of renewable resources when designing new products. We see this as a starting point in the cycle. While providing eco-friendly products, we are also working to promote renewable materials on the demand side.

Choosing to use renewable materials

The measure we have taken to protect the environment and promote the circular economy are the use of high-quality eco-friendly renewable materials, which can contribute to the reduction of directly sourced minerals.

The production of e-products requires the use of dozens of different materials. It is simply not possible within the constraints of our current manufacturing chain to find high-quality renewable alternatives for each of them. We must work diligently with our suppliers to gain a deeper understanding of the current manufacturing chain for renewable materials while also cooperating with them to further promote and develop that manufacturing chain for renewables. This will allow us to incorporate more high-quality renewable materials into our manufacturing process.

Huawei's products use 10 types of renewable materials. We are working closely with our suppliers to explore even more potential applications of high-quality renewable materials within our products.

Recycled Materials: Materials recycled after consumption:

Recycled aluminum

Recycled aluminum comes from pretreating and re-forging waste aluminum products, which consumes just 3-5% of the energy used in primary electrolytic aluminum production.

Recycled Tin

Tin obtained through metallurgy of tin waste materials is referred to as recycled tin. Tin reserves have decreased each year, while market demand has grown rapidly. Using recycled tin supplements saves natural mineral sources and reduces power usage, cutting environmental pollution.

Recycled Gold

Chemically speaking, gold is an extremely stable element. Every bit of gold that has ever been mined will always exist as gold. The amount of gold recoverable from waste electronic products is up to 60-100 times greater than that mineable from ore. Reprocessing and reusing gold from e-waste is an important topic in the discussion of renewable resources.

Recycled Cobalt

The use of reprocessed and recycled cobalt is an important and effective method for attaining this material.

Recycled paper

paper primarily from wastepaper products.

Utilization ratio   50.6%

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Eco-friendly plastics

Plastics are one of the hardest materials to reuse in the e-goods production process. Because of this, it is important to choose plastics with the smallest environmental impact. Since 2013, we have used bio-based plastics widely in our phone production, massively reducing the negative environmental impact of manufacturing petroleum-based plastics. Over 30% of the bioplastics we choose to use come from castor oil, reducing carbon dioxide emissions by 62.6%. The use of bio-based plastics reduced our carbon-dioxide emissions by 612 tons during 2018.

Popular science: bio-based plastics

Bio-based plastics are made primarily from biological substances such as starch. The biomaterials that are combined to make bio-based plastics can come from various sources, like corn, sugar cane, and cellulose.

Bio-based plastics are made from plants, which capture carbon dioxide to perform photosynthesis. If composted, the carbon within bio-based plastics releases back into the atmosphere as carbon dioxide. This demonstrates how the material reduces carbon emissions during its lifetime. Bio-based plastics also reduce the reliance of the plastics industry on petrochemical goods and reduce the environmental pollution caused by manufacturing petrochemical products. This reduces the use of petroleum resources and protects the environment.

Small box, great environmental protection

Huawei wants its customers' appreciation for products to begin when they first touch the packaging. Our products' environmental responsibility is evident in our eco-friendly packaging design too. Product packaging is usually disposable. Because of this, with the one stipulation that packaging must first provide an adequate level of protection for the product, we strive to reduce the materials used when designing our packaging and to use reusable, eco-friendly materials in its production.

Lighter packaging

Using less material and designing lighter packaging are two core ideals in green packaging design. Decreasing the weight of packaging can reduce the paper materials used, lower the energy consumption and minimize the gas emissions required to ship the packaged products. We lighten our packaging using two strategies: maximizing our use of space inside the packaging and reducing the amount of unnecessary material.

68%

Designing packaging that uses every inch of available space, thereby reducing the amount of materials needed for packaging and lightening the weight of packaging. The packaging utilization ratio increase 68% [2]

87%

Reducing non-essential packaging materials. In 2020, through a special project, we reduced the number of pages in paper copies of our user manuals by 87%, saving 408 tons of paper per year, equivalent to 6,936 trees

55g

Since 2018, we have seen significant results in our efforts to lighten packaging. We reduced the total packaging weight by 55 [3] **grams saving 550 tons of paper (equivalent to 9,350 trees) for every 10 million units**

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More eco-friendly packaging materials

After reducing the weight of packaging, we must also make the packaging materials themselves eco-friendly.

Eco-friendly paper and ink

The most used material in our product packaging is paper. We tend to use recycled paper materials or fiber from Forest Stewardship Council (FSC) certified forests to preserve the forest ecosystem.

The printing ink on the packaging affects how it degrades. We have replaced petroleum-based ink with 100% biodegradable soy ink made from soybean oil in our product packaging.

Soy ink: Eco-friendly ink brings with it more vibrant printing colors

Soy ink is an industrial printing ink made using soybean oil, which is edible and entirely decomposable. Its production and use is safer and more eco-friendly compared to traditional petroleum-based inks. It is also beneficial when recycling wastepaper.

Healthy and eco-friendly:
Soy ink can reduce the production of carcinogens and VOCs, a major source of environmental pollutants.

Renewable resource:
Soybean oil, the main component in soy ink, is a renewable and biodegradable resource.

Vibrant colors:
Soy ink is characterized by its good fluidity and color ability. It also has a high transparency and vibrancy and does not fade easily.

Reduce the amount of plastic used in packaging

17%

Plastic is a common material used in traditional product packaging but it takes hundreds of years to completely degrade in the soil, putting undue stress on the environment. We are working hard to rid all our packaging of single used plastics and ensure all of it is made of biodegradable, eco-friendly paper.
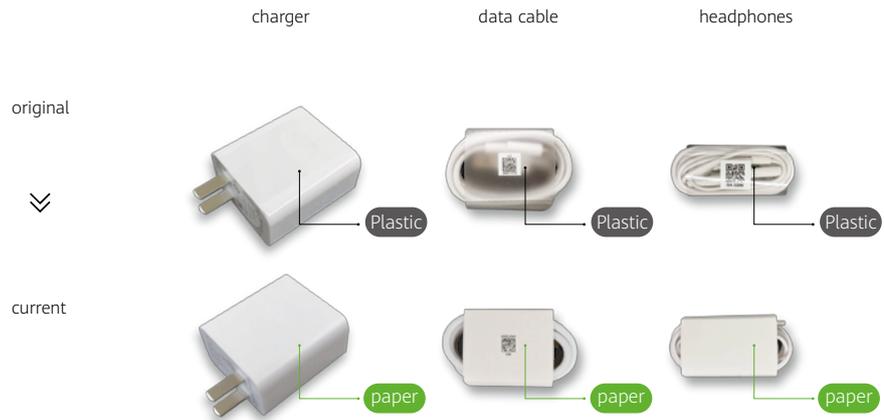
In the P series flagship phones, for instance, we changed plastic packaging to fiber insofar as was possible, reducing the proportion of plastic in our packaging by 17% from P30 to P40, allowing us to use 17,500 kg less plastic per 10 million P40 phones [1]

Packaging box

cover | product information booklet | phone holder | bottom half of the box & accessory container

Accessories

charger | data cable | headphones

original

current

Eco–friendly packaging of P40 series

Reducing logistical packaging materials

Products must also be protected by packaging materials during shipment and storage. We strive to reuse as many of these materials as possible while reducing their weight. This reduces carbon emissions during the shipping process.

Reusing transit shipment boxes: Reusing cardboard delivery boxes used in transit shipments would reduce annual carbon emissions by 1,094 tons based on 2019 shipment volume.

Lightening transit shipment boxes: We have redesigned the boxes used in transit shipments to be 10% lighter while ensuring that they still adequately protect products during shipment. This will reduce annual carbon dioxide emissions by 994 tons based on 2019 shipment volume.

Apart from the measures outlined above, we are also seeking to make our packaging more eco-friendly through innovative R&D. We have invented many new materials and techniques including robust corrugated cardboard boxes, high-density integrally formed EPP, light and rigid PVC trays, and thin beehive cardboard. Moreover, we have used all these advancements to ship our products around the world.

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Safe Chemical

We use safe materials during the production to ensure user health and safety, and to reduce environmental impact after product disposal. We have established and improved chemical management processes. Since 2009, we have strictly complied with the EU's Restriction of Hazardous Substances (RoHS) list of prohibited substances in all

devices, and continued to update our restriction list based on leading industry practices. We also set up a specialized environmental analysis and testing laboratory for rigorous and professional testing of the chemicals. We strive to ensure material safety, and provide safer and healthier products.

Based on QC 080000 and actual product conditions, we created the Huawei regulated substance management regulations, a hazardous substance management system to ensure health and safety and reduce environmental impact throughout the product life cycle. On December 26, 2018, we obtained the new QC 080000:2017 certificate from the

International Electrotechnical Commission (IEC), signifying a systematic, standardized, and transparent product environmental and end-to-end harmful substance quality management system. This has helped us build a competitive advantage in sustainable green products and consolidate compliance management and implementation.

Milestone of Restricted Substances Management

— **2009**

Prohibited all restricted materials listed in the RoHS in Huawei terminals.

— **2016**

Complied with laws and regulations such as RoHS and REACH. We also took a more active role in restricting the use of materials not mentioned in those sources but which are still extremely harmful to the environment.

— **2016**

Prohibited the use of BFRs, CFRs, PVC, PAEs, ATO, Beryllium, and Beryllium compounds in our phones, tablets, and wearable devices.

— **2018**

Established inter-departmental hazardous materials management, screenings. and optimization working groups.

— **2018**

Established a hazardous materials management system based on QC 08000 requirements.

— **2018**

Received the new version of the QC 080000:2017 certificate issued by the IEC.

— **2019**

Currently, 100% of our suppliers have adopted and implemented QC 080000.

Energy-Efficient Manufacturing

A significant portion of carbon emissions related to electronic products occur during the production and manufacturing processes. We motivate our suppliers to adopt energy-efficient industrial techniques in manufacturing, and to use clean, renewable energy sources in production activities.

540,000

We continued driving suppliers to complete carbon inventories. In 2019, the carbon inventories of 25 suppliers to Huawei's consumer business showed that they reduced greenhouse gas emissions by over 540,000 tons

Clean energy use in Huawei facilities

89,000

In 2019, Huawei facilities generated 13.57 million kWh of solar power. Since 2012, the use of solar power has reduced a total of 89,000 tons of carbon emission

In Huawei facilities, we promote the use of renewable energy by building photovoltaic stations, and integrate digital information technology with solar power to enhance the operation efficiency.

17,500   Huawei Dongguan Plant smart photovoltaic power station
– total capacity: 17,500kW

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1,800 Huawei Hangzhou Research Institute smart photovoltaic power station
– total capacity: 1,800 kW

50 Huawei Nanjing Research Institute smart photovoltaic power station
– total capacity: 50kW

| Energy-saving Process Upgrades

While expanding our use of clean energy, we have also continuously optimized our production processes, striving to reduce energy utilization during manufacturing. Through technical transformation programs such as facility energy saving and equipment energy saving, as well as on-site energy-saving management methods, Huawei achieved a total of 19.2 million kilowatt-hours of electricity during the manufacturing process in 2019 and reduced carbon dioxide emissions by 16,065 tons.

Digital management of energy consumption by manufacturing equipment

Due to the inconvenience of manual control, high-power devices often remain in operation even when not in production, which wastes energy. Huawei uses intelligent industrial energy management and smart power meters to monitor power usage and circuits and send alerts for any abnormality. When equipment is not in use and is consuming too much power, the digital management system automatically puts it into idle mode. This way, soldering equipment reduced its energy consumption by 25.6%, saving about 31,000 kWh per unit.

Besides our own production equipment, we also encourage our suppliers to build energy monitoring systems, complete energy audits, identify opportunities to reduce energy consumption, benchmark themselves against industry best practices, and formulate energy conservation and emissions reduction plans. In 2019, 35 suppliers participated in such projects, which included upgrades of air compressors, temperature controls, lighting systems, and production equipment and processes, as well as waste heat utilization, reducing carbon emissions by 80,144 tons in total.

Thermostat energy storage technology for cold energy reuse

Most energy consumption is related to temperature changes in equipment used during production. Effective heat utilization would greatly reduce energy consumption. In Huawei's liquid phase change energy plan, temperature cycling equipment stores excess coolant in an energy storage tank during the low-temperature stage, and shuts down all compressors during the high temperature stage. A circulating water pump is used to pump ice water into a liquid heat exchanger in the tank, cooling the device down, achieving temperature balance, and saving energy. This modification reduced energy usage in this equipment by up to 31.5%, saving approximately 52,000 kWh in each device.

In 2020, we will further expand our suppliers' energy conservation and emissions reduction projects, lead more suppliers to calculate their carbon emissions, formulate emissions reduction plans, and implement emissions reduction projects, driving sustainable development of the supply chain. By 2025, we plan to set emissions reduction targets for the top 100 suppliers.

80,144

In 2019, 35 suppliers participated in energy conservation and emissions reduction projects, achieving cumulative carbon emission reduction of 80,144 tons.

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Longer Product Usage Reduces Resource Consumption

One of the most effective ways to protect resources is to manufacture high-quality and durable products. We conduct strict durability tests on our phones before we sell them and extend their lifetime with system updates and convenient and affordable repair services. This helps to sustain the circular economy.

700+

Over 700 tests on whole devices and their components ensure normal function even under extreme circumstances

3,000+

We have 3,000 service centers worldwide offering convenient on-site phone repair services

20%

We reduced phone repair times by 20% compared to 2010, saving 140,000 hours for every million customers.

Huawei's flagship phones have always been durable, and quality on-site repair services have been provided

HUAWEI P7 > HUAWEI P40 HUAWEI Mate 8 > HUAWEI Mate 30

Durability	HUAWEI P7	HUAWEI P40	HUAWEI Mate 8	HUAWEI Mate 30
Water resistance		✓		✓
Dust resistance	✓	✓	✓	✓
Splash resistance	✓	✓	✓	✓
Repairable components at a service center				
Screen	✓	✓	✓	✓
Battery	✓	✓	✓	✓
Speaker	✓	✓	✓	✓
Touch response	✓	✓	✓	✓
Rear-facing camera	✓	✓	✓	✓
Front-facing camera	✓	✓	✓	✓
SIM card slot	✓	✓	✓	✓

| Durability Increases Product Lifetime

We ensure our products' long-term durability with a range of comprehensive reliability tests before sending them to retail. We guarantee the reliability of hardware that passes these tests.

We devote considerable energy to extending our products' lifetime during the design phase. We choose durable materials to support the manufacturing of reliable hardware. Worldwide, we own numerous professional-grade reliability testing laboratories that adhere to strict international standards. Their extensive reliability and durability tests ensure that each product will withstand and adapt to the kinds of drops, impacts, and changes in temperature and moisture they might encounter during everyday use.


Dropping

You risk accidentally dropping your phone whenever you walk, run, or grab your phone from the nightstand. We subject our phones to dozens of drops in the lab to simulate falling from a common height onto a hard surface. To pass those tests, phones must finish with their screens intact and function normally. We also conduct hundreds of rolling tests during which phones tumble freely in a rotating cylinder. This lets us quickly determine and address a phone's weak points.


Scratching

Phones naturally pick up surface scratches over time. We enhance our phones' resistance to scratches through paint scratch testing, artificial sweat friction testing, alcohol friction testing, and tape-peeling tests. When your phone rubs against other things inside your bag, you need not worry.
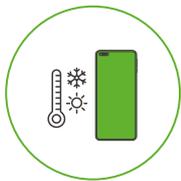

Extreme temperature variation

Environmental factors cause about 52% of operational failures in electronics. Of those, 40% are caused by temperature. Our laboratories test mechanical and electrical performance during repeated fluctuations between high and low temperatures that are typical during shipment and storage.
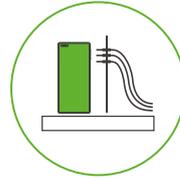
Button testing

The next time you press the volume button and it functions properly, you should thank those responsible for button-press testing. We test the lifetime of the buttons on each phone by subjecting each model to up to one million button presses.
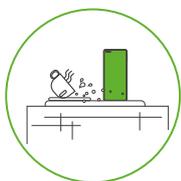
Splashing

Many of our flagship models have a water and splash resistance rating of IP68, enabling them to withstand a sudden downpour or accidental splashes and spills.

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The longer you use it, the more you save. We strive to provide a long-lasting and smooth system experience and continuous system upgrades to enhance product durability.

Huawei's OS, EMUI 10.1, comes with a deterministic latency engine. It improves local data management through measures including reduced file fragmentation, guaranteeing peak performance. We offer consistent updates and security patches to EMUI OS to increase the phone's lifespan, giving customers even greater value from their purchase. It increases resource efficiency by reducing the required frequency of phone upgrades.

Convenient Maintenance Reduces Waste

Access to reliable and affordable repair services increases the lifespan of each product and reduces overall resource usage. We have established a more convenient repair network, more reliable repair methods, and more affordable repair plans.

A more convenient repair network

Our repair service network spans the globe, so no matter where you are, you can find a repair center nearby. We also offer at-home service and mail-in service options. Devices bought through official channels in mainland China can be sent and received by mail free of charge, offering mail-in repair services with no shipping fees.

China

1,950 centers

Outside of China

1,080 centers

Huawei has 3,030 repair centers worldwide throughout 100 countries and territories, offering convenient, easily accessible repair services. We are always expanding our repair service network.

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More reliable repair methods

We employ a highly skilled team of professional repair technicians to quickly identify and address any issues with our phones, extending the lifespan of our products. Our user guide also walks customers through simple and direct solutions to small everyday usage issues. We provide compliant, openly available user guidance and warranties for each of our devices.

Unreliable repair work can scratch screens and damage or waste components. Our repair centers prevent this with a platform that automatically disassembles Huawei phones, guaranteeing the accuracy of disassembly and reducing the waste of raw materials. This makes repair work safer and more eco-friendly.
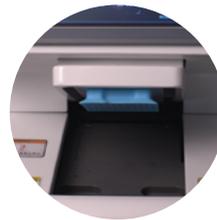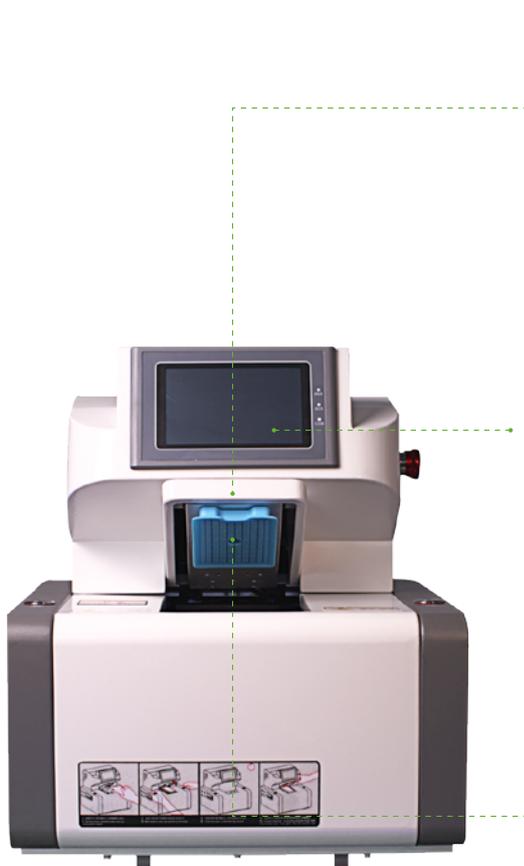
Non-damaging soft materials helps carefree disassembly.

The suction plate uses non-damaging soft materials and generates a high degree of suction. It also has a high degree of thermal stability. These all protect the phone's exterior during disassembly.

Smart temperature control ensures safe heating.

The smart dual-temperature control system monitors and controls temperature changes within the work area to maintain a stable temperature. It automatically shuts down operation to protect the device in response to temperature anomalies.

Smart disassembly achieves high quality and high efficiency.

The machine automatically disassembles phones within several minutes, ensuring fast, high-quality repairs.

More affordable repair plans

Our affordable repair service makes it much more likely that customers will repair their devices, reducing the rate of replacements and maximizing resource efficiency.

We continue to offer our flat rate battery replacement program, which covers 110 different models, and is supported in over 1300 service centers and online marketplaces. Every month, this program provides over 200,000 customers with a high-quality, convenient, carefree battery replacement service. In 2019, this service revitalized hundreds of thousands of phones every single month.

We also offer a discounted flat rate for repairs that guarantees a top quality service while maximising product usage and reducing the cost of repairs. This gives our customers access to low-cost, high-value repair services.

In 2020, we conducted another promotional program for Chinese phone models called "special discount boards". This means, if the motherboard experienced issues not covered by the warranty, customers have access to original Huawei motherboards at discounts of up to 50% without replacing the entire phone. We also established a system for the circulation of non-warranty older screens, which we also promote in many other countries, drastically increasing the circulation of resources and reducing resource consumption.

200,000+

Every month, this program provides over 200,000 customers with a high-quality, convenient and carefree battery replacement service.

Recycling and Reuse

Huawei is committed to recycling, and we consider your electronic waste to be our treasure.

We recycle, scrap, and dismantle parts before extracting their resources in order to maximize recycling and reuse of e-waste. All you need to do is to leave your old phone to us.

500,000

Nearly 500 thousand used phones have found new owners since 2015 through our trade-in service

5,000+

We monitor the amount of waste we generate and properly dispose of it. Since 2017, we have collected and processed over 5,000 tons of waste through Huawei recycling system

143,000

We introduced special screens and motherboards in the maintenance process, and accumulated over 143,000 reusable parts, so that the replaced parts can also be returned
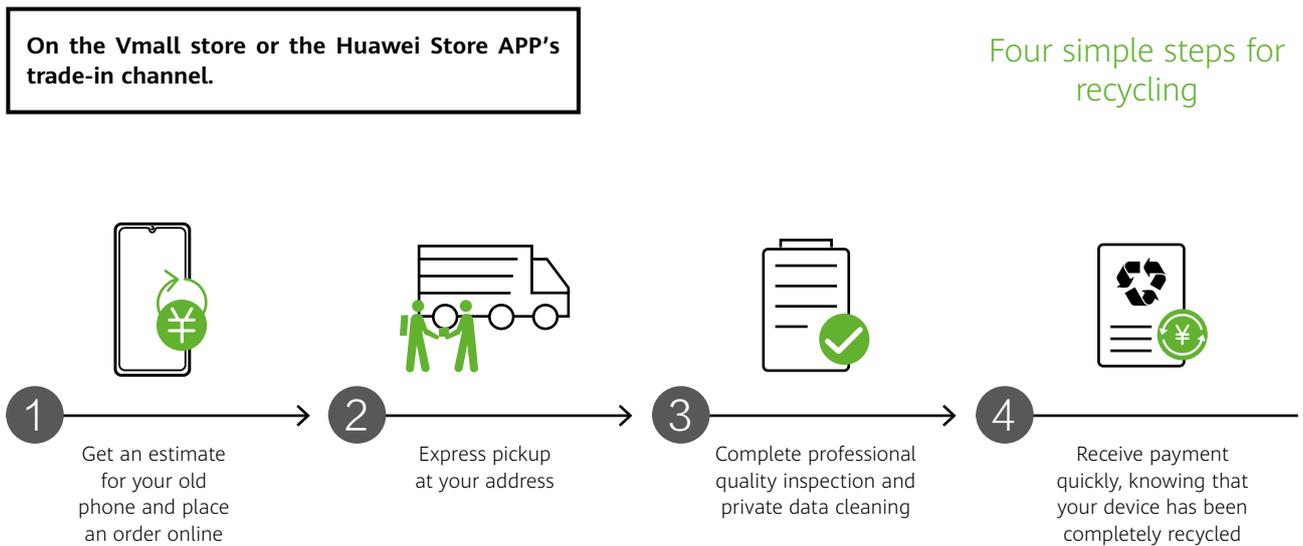
HUAWEI Trade-In

Reusing old devices extracts additional value from them and reduces their impact on the environment. Old devices that still worked were given necessary repairs and then sold by our partners through official channels in second-hand markets. Old devices that no longer functioned were given to accredited eco-friendly businesses to be recycled and disassembled, avoiding environmental pollution caused by e-waste.

For many years, we have continued to expand the implementation and scope of our trade-in program. Currently, the program allows customers to trade in old devices from 50 different brands, including Huawei.

In 2020, we introduced a new one-stop online trade-in program in China. This means customers can get a new device at the same time they trade in their old one, making recycling faster and data migration more convenient. By recycling old devices, they can also get vouchers to buy new ones. Since 2015, through our trade-in program, we have found new owners for nearly half a million devices. Learn more about HUAWEI trade-in.

On the Vmall store or the Huawei Store APP's trade-in channel.

Four simple steps for recycling

1 Get an estimate for your old phone and place an order online

2 Express pickup at your address

3 Complete professional quality inspection and private data cleaning

4 Receive payment quickly, knowing that your device has been completely recycled

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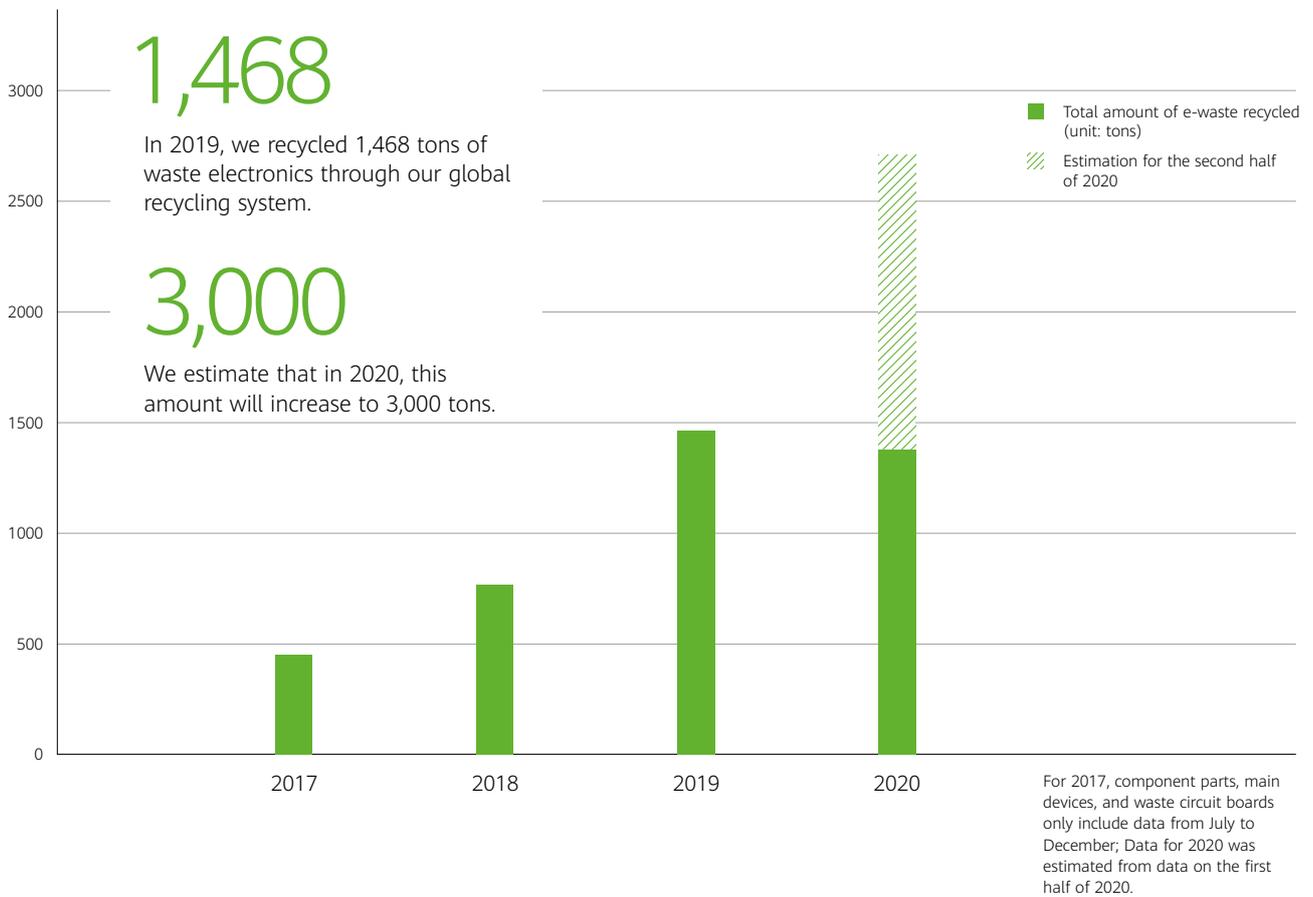
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Global Recycling System

At Huawei, we are always working to improve our global recycling system. By the end of 2019, it it was comprised of 1,300 recycling centers in 48 different countries and regions. These centers process devices including phones, tablets, laptops, wireless routers, satellite boxes, and satellite box components, using compliant and environmentally sensitive methods. In our newest Huawei Service Centers, we have also updated the design of the recycling containers to be more standardized and professional.

Since 2017, we have collected and processed over 5,000 tons of waste through Huawei recycling system.

1,468

In 2019, we recycled 1,468 tons of waste electronics through our global recycling system.

3,000

We estimate that in 2020, this amount will increase to 3,000 tons.

■ Total amount of e-waste recycled (unit: tons)

▨ Estimation for the second half of 2020

For 2017, component parts, main devices, and waste circuit boards only include data from July to December; Data for 2020 was estimated from data on the first half of 2020.
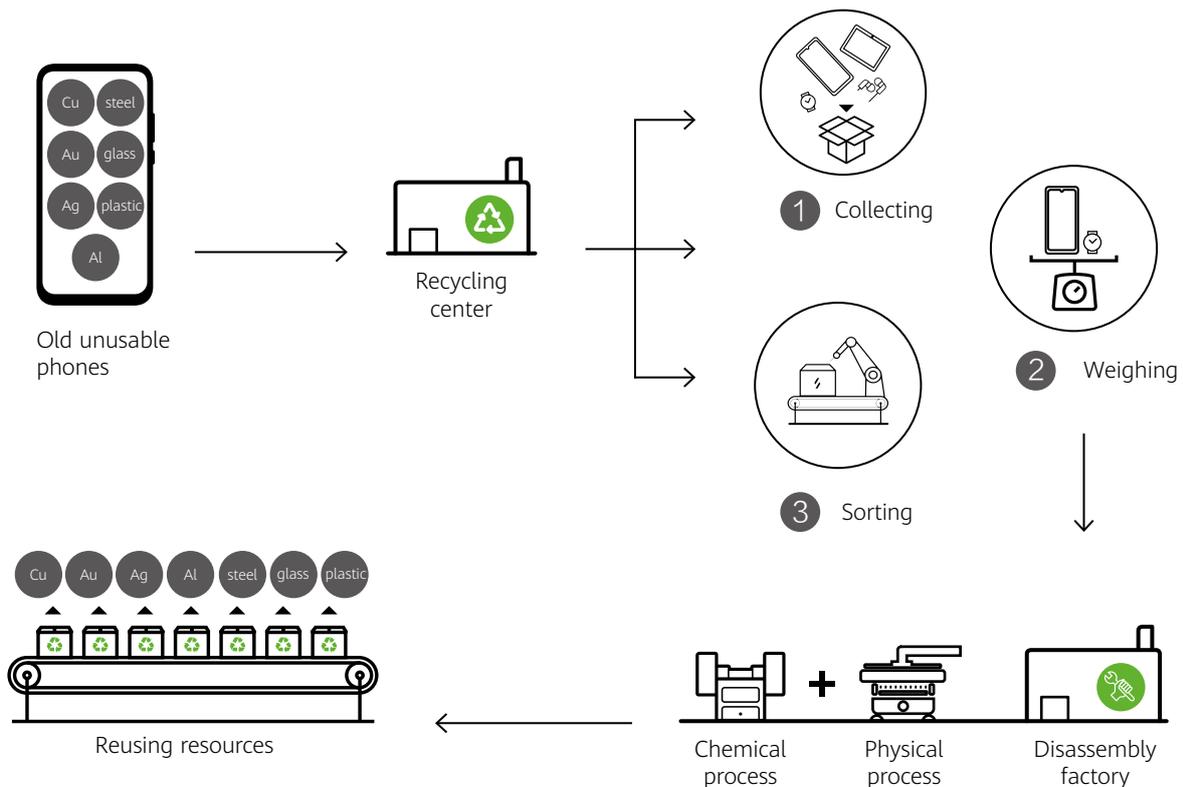
Reuse of Resources

Resource reuse, giving new life to every material

During the scrapping process, we reuse most of the raw materials to reduce the use of new resources. We also reuse resources during the maintenance process. For example, the refurbished screens will undergo stringent testing before re-entering the retail market. This process means that fully functional, specially-refurbished screens become available for half the price, contributing to the circular economy.

We reacquire and reuse raw materials from old devices and components. Working closely with suppliers, we break apart, sort, magnetize, decode, and strip away tin and heavy metals from the old devices using 23 different industrial processes. These eliminate the negative impact those phones might have on the environment and we reuse the aluminum, copper, steel, and plastic resources in those devices to avoid landfill disposal.

Take resin powder as an example. We worked with our suppliers as well as a research institution on its reuse. Resin powder is a major material in electronics waste landfills, and its treatment has always been a problem for the manufacturers using it. Therefore, working with our suppliers, we analyzed landfill data and we worked with the Chinese Academy of Environmental Sciences to research ways to improve its treatment. By modifying it for environmental protection and palletizing it, resin powder can be recycled into usable products. In 2019, we made significant headway and trial-produced many new products from resin powder, including trash cans and baskets.

Old unusable phones

Recycling center

1 Collecting

2 Weighing

3 Sorting

Reusing resources

Chemical process

Physical process

Disassembly factory

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CORPORATE RESPONSIBILITY

2.19M

We reduced the unlocking time for our latest flagship phone model by 0.12 seconds[4], saving our global users, 2.19 million hours every year

100%

All suppliers meet the requirements under the QC 080000 Hazardous Substance Process Management (HSPM) system

1.34M

Huawei CBG created 1.34 million supply chain jobs among first-tier suppliers alone

Technology repays trust with responsibility

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Customer Obsession

Efficient and Smooth Experiences – Small Changes with Great Impact

2.19M

We reduced the unlocking time on our latest flagship mobile phones by 0.12 seconds[④], saving our global users, 2.19 million hours every year.

No act of kindness, however small, is ever wasted. With hundreds of millions of online users, we know that even small changes will have great impact. We are committed to offering efficient, smooth, and smart lifestyle product experiences to help save your time. By upgrading the delay engine technology in our latest EMUI 10.1 system, we reduced system response delays by 20.8% while cutting the delay fluctuation rate by 10.5%. We also reduced the unlocking time by 0.12 seconds on our latest flagship mobile phones, saving 2.19 million hours per year for our users worldwide, just by implementing this minor change.
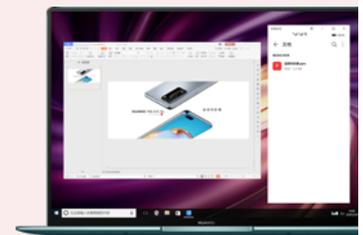
Efficient Communications
MeeTime enables high-quality smart video conferencing, making communications more direct, efficient, and effective.

Rapid Processing of Phone Files
Multi-screen collaboration allows for more efficient processing of mobile files.

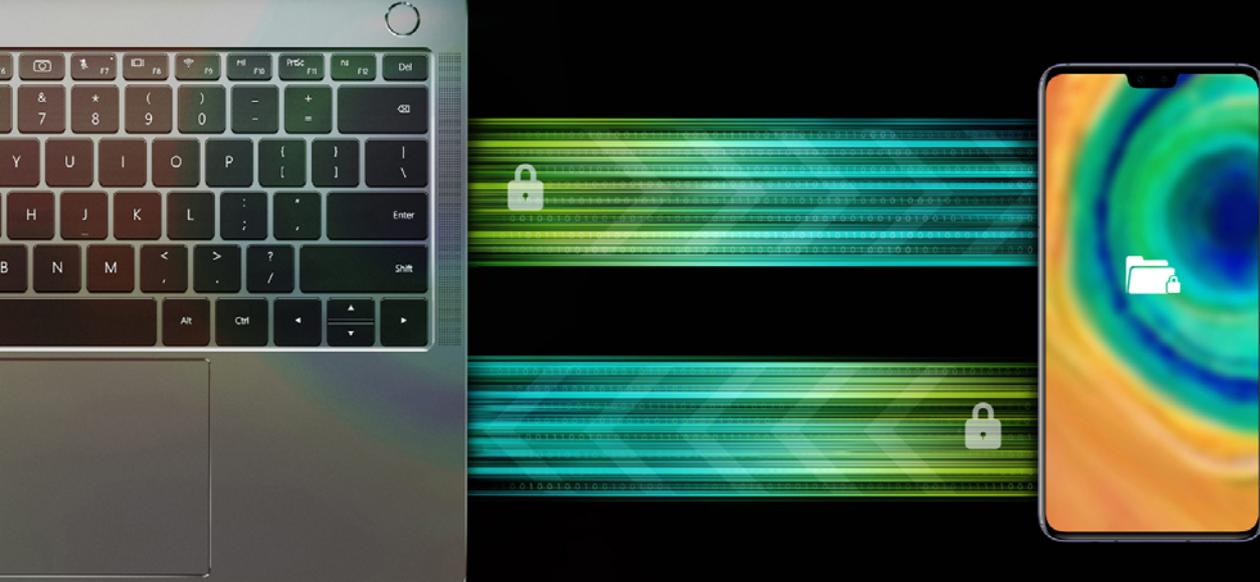### High-Speed Device Connection & File Sharing
The Huawei Share allows multiple devices to connect simply with a touch for fast wireless file sharing.

Instant Image Location
The new gallery layout helps you quickly locate and access the pictures you need across your devices.

| Privacy & Cybersecurity

Building a Privacy Protection Brand, Trusted by Users

Mobile Internet developments have made smart devices the most popular way to go online. These devices store a wealth of user data with an increasing number of apps installed from uncontrolled sources. This has led to user privacy and security being at greater risk, drawing increasing scrutiny to the security of mobile smart devices. Huawei takes the security of smart devices extremely seriously and we do everything we can to protect user privacy and ensure data security as we work to provide a premium user experience.

We are committed to building a brand that is trusted by global consumers in terms of privacy protection. We strictly comply with the Generally Accepted Privacy Principles (GAPP), the EU's General Data Protection Regulations (GDPR), and all other applicable laws and regulations in the countries where we operate. We believe that privacy is our consumers' basic right and that they should have full knowledge and control of what is done to their personal information. Achieving this goal is part of everything we do.

In practice, Huawei Consumer BG adheres to four basic principles when it comes to user privacy protection – transparency, user benefits, security, and legal compliance – and incorporates Privacy by Design throughout its business. Protecting user privacy requires advanced technologies. Starting from the product design stage, we leverage leading security technologies to protect user data and incorporate privacy protection principles. These principles continue throughout the entire product development process to fully protect user data. For example, Huawei has built a Trusted Execution Environment Operating System (TEE OS) that supports hardware isolation. Sensitive user data such as fingerprints, facial biometrics, and lock screen passwords are all encrypted, verified, and stored in the TEE to prevent privacy leaks. The TEE OS's microkernel has obtained the CC EAL5+ certification, the highest for a commercial OS

and uses the formal verification method. Compared with traditional verification methods, formal verification starts from code and uses mathematical methods for verification. It then analyzes each possible execution of that code, which eliminates system vulnerabilities from the source to enhance systemic security. The key features of the Emotion User Interface (EMUI) – Huawei over-the-air (HOTA), Celia, and HiView – received the EU's ePrivacyseal. In addition, EMUI 10.1 has received CC EAL4+ certification, making Huawei the first mobile phone manufacturer to receive this certification.

In the HMS domain, we have established a complete system for managing personal data protection, and we are the global leader in terms of personal data security management, transparency, and privacy compliance. For example, the AppGallery manages the security of apps with a unique four-layer system – malicious behavior detection, security vulnerability scanning, privacy leak checks, and manual real-name reviews. This system ensures that only secure apps are available to download from the AppGallery. HUAWEI Mobile Cloud encrypts the data transmitted in device-cloud channels and the data it stores to protect user data from end to end. HMS has obtained multiple authoritative certifications in all aspects of privacy protection. In November 2019, HMS obtained ISO/IEC27018 privacy standard certification and the world's first batch of ISO/IEC27701 certifications. In January 2020, HUAWEI ID (EU/EEA) received EuroPriSe privacy protection certification. In July 2020, HMS products and services, including Huawei Ads, Huawei AppGallery Connect, AppGallery, Petal Search, passed the ePrivacy certification, and have been awarded the ePrivacyseal certificate within the EU. This shows that our ability to protect user privacy and manage information security is recognized by world-leading organizations.

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Smart, Eco-friendly Retail Spaces, For a Comfortable Shopping Experience

Huawei has opened more than 5,000 experience stores around the world, including global flagship stores, smart living pavilions and authorized experience stores. We not only combine technology with stylish design in our stores, but focus on providing an eco-friendly environment that is welcoming to customers.

We conduct Environment Health and Safety (EHS) self-assessments and internal audits in every store to ensure that they are environmentally friendly and healthy places to be.

We have also added innovative smart living experience areas in our stores that let customers safely explore smart lifestyles at their leisure. Our stores not only connect consumers, developers, and local artists, but also connect our past and our culture to new technologies and the future. We also plan to build more "urban living rooms" and welcome everyone to visit and experience them.

5,000+

Huawei has opened more than 5,000 experience stores around the world, including global flagship stores, smart living pavilions and authorized experience stores

100%

We implement and audit our environment, health and safety (EHS) policy across all our flagship stores, premium authorized experience stores, and service centers so that they provide a safe environment for customers.
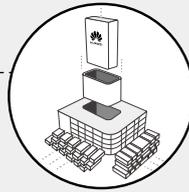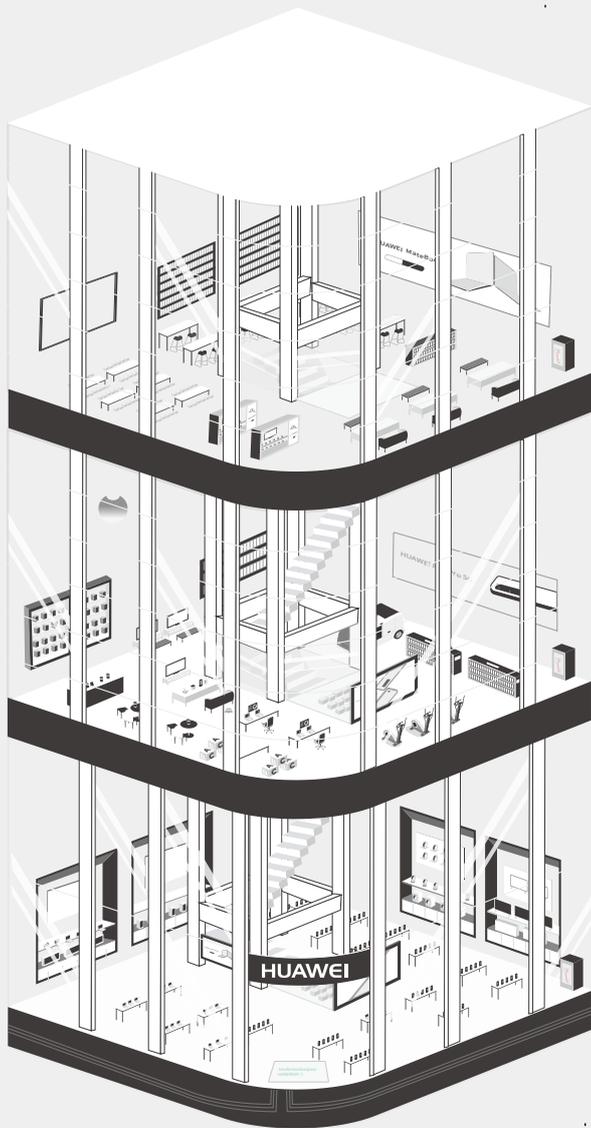
Detachable recycled materials

Copper-colored metal plates in the Nanjing East Road store's atrium area can be disassembled and recycled, following sustainable development principles.

Natural lighting

Our global flagship store on Nanjing East Road in Shanghai uses a large glass window structure to incorporate more natural light. This reduces energy consumption and seamlessly connects indoor and outdoor spaces, allowing you to transition freely and easily between them.


Safe concealed exhaust vents

At the Nanjing East Road store we are adding braid patterns, carved copper flower trays, and ceiling lanterns to the ceiling vents of our full-scene experience area. This conceals our air-conditioning exhaust vents and maintenance ports, increasing both the safety and aesthetic value of the store.

Sustainable felt walls

The felt materials in the ceilings and walls of our flagship store in the MixC shopping mall, Shenzhen, are recycled from the plastic parts of Huawei electronics products, reducing carbon emissions and promoting the development of a circular economy.

Smart lighting drivers

We have customized our DALI DT8 color temperature power controller at the store on Nanjing East Road. This controller, which meets the IEEE 1789 stroboscopic test standard, creates healthy lighting environments for extended periods, letting visitors stay as long as they like without eye strain.
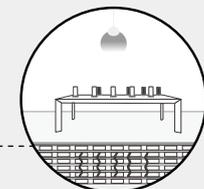
Innovative thermal management technology

Innovative thermal management technologies automatically protect our Nanjing East Road store store in the event of overheating, short-circuits, or power overloads therefore improving safety conditions.

Fire-fighting equipment

We follow local code regulations in every store and have set up special, visible fire-fighting equipment storage areas, letting visitors see how we are keeping them safe so they can enjoy their visit in peace and comfort.

Power-generating carpets

In our flagship store in Milan, Italy, we use an amazing bio-energy conversion technology to convert footsteps into electrical energy that we then use in the store.

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Responsible Supply Chain

Both Huawei's product quality and its sustainable development work are widely recognized. These achievements stem from joint efforts with suppliers from all over the world. We support our suppliers in assuming social and environmental responsibilities and meeting high standards. These include establishing a comprehensive social responsibility management system, respecting and protecting employees' rights and interests, and implementing responsible raw material procurement across our supply chain.

Corporate Social Responsibility in the Supply Chain

We created the *Huawei Supplier Social Responsibility Code of Conduct* as the main basis of our supply chain corporate social responsibility (CSR) activities. This document outlines clear requirements for suppliers' CSR work, encouraging them to work with us as we implement our mutual environmental, social, and labor responsibilities.

1,827

A total of 1,827 supplier audits carried out since 2011, jointly creating an industry chain with high standards

Our responsible supply chain management process:

1   New supplier Screening

We formulated a new supplier CSR entry threshold. Suppliers meeting the threshold must pass the CSR system certification and sign a supplier CSR agreement to become a Huawei supplier.

2   Supplier evaluation

We have developed a supplier social responsibility evaluation system in accordance with corresponding standards and compliance requirements, conducting comprehensive reviews of our suppliers' sustainable development capabilities.
We invite independent auditors to assess suppliers' social responsibility at their production sites, as per the terms of the *Huawei Supplier Social Responsibility Code of Conduct*. Subjects of potential audits are not limited to parties with a direct cooperative relationship with Huawei. This policy also includes tier one and upstream tier two suppliers.

3   Supplier capability building

We respond to problems found in evaluation with a project to develop our suppliers' strategic capacity. We work with them to identify the root causes of issues and invite senior industry experts to take the lead in identifying points for improvement. This improves our supply chain's social responsibility risk management and control system, enhancing all parties' professionalism and management capabilities.

4   Supplier performance management

We use our social responsibility evaluations, on-site audits, and subsequent performance improvement processes as an integral part of the supplier's comprehensive performance score. This is an important reference in supplier selection, bidding, and portfolio management for new projects. Suppliers with good performance receive preferential business partnership opportunities.

Suppliers Evaluation

We regularly review the construction and implementation of our suppliers' social responsibility system. To ensure the quality of these audits and increase their credibility, Huawei invites international certification agencies such as TÜV Rheinland and SGS to review our suppliers in accordance with the *Huawei Supplier Social Responsibility Code of Conduct*. The scope of this evaluation covers labor, health and safety, the environment, business ethics, their management system, and other areas.

We not only audit first-tier suppliers, but also extended our audits to upstream second-tier suppliers. In 2019, we audited more than 20 tier two suppliers. We request that suppliers assessed as medium and high-risk, undergo on-site review by a certification body within six months and until they drop to low-risk.

We instruct suppliers to trace the root causes of any problems found in the on-site audit and take targeted corrective and preventive measures. We incorporate these issues into the Huawei supplier improvement action request system and follow up using a closed loop mechanism. In February 2019, In response to CSR challenges and pain points found in our audits in February 2019, we led CSR management improvement seminars for at least 90 suppliers to help them quickly address their issues.

18,990

Since 2010, a cumulative total of 18,990 supplier managers received training from Huawei on CSR concepts, knowledge, and skills to improve factories' operation.

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We complement direct supplier audits with evaluations and self-assessments of suppliers' corporate social responsibilities. This has given us a deeper understanding of our suppliers' working conditions and enhanced their corporate social responsibility performance.

Special Evaluations

We invite professional organizations to conduct special assessments of our employees' environmental protection, fire protection, and occupational health. This special evaluation lasts for half a year. Senior industry experts lead the entire process including the preliminary investigation, on-site evaluations, identifying root causes of improvement opportunities, formulating corrective and preventive measures, problem improvement, and effective risk prevention.

Since 2010, special evaluations have been completed for 43 suppliers. Through these special evaluation projects, suppliers have identified potential risks, improved internal management mechanisms, and cultivated a professional management team. This has improved their professional management capabilities in terms of environmental protection, fire safety, and occupational health.

Self-Evaluations

Self-evaluations have been key in helping our suppliers to achieve truly independent management. In 2019, we promoted independent management among all our suppliers. By optimizing our supplier CSR checklist, we promoted 100% CSR self-evaluation, self-examination, and self-correction among our suppliers, and improved their CSR management performance.

Improving our suppliers' capabilities

We continuously assist and promote our suppliers' progress in fulfilling their CSR management goals, realizing self-development, and jointly constructing business models that conform to sustainable development principles.

Improving CSR Awareness

In March 2019, we invited 196 suppliers to participate in the Huawei Consumer Business Supplier Quality Conference. At the event, we emphasized the importance of our suppliers' fulfillment of their social responsibilities and introduced various management requirements to enhance their CSR awareness. This promoted CSR leadership among our top suppliers. We required top executives from high-risk suppliers to personally visit Huawei and report on their CSR status, and to personally promote and participate in the resolution of CSR issues.

Improvement of CSR Management Capabilities

Huawei routinely conducts supplier CSR training and coaching activities to guide suppliers in industry best practices, incorporate sustainable development principles into their business strategies, reduce business risks, and improve operational efficiency. We have also partnered with professional organizations to implement special improvement projects for suppliers in terms of labor rights, environmental protection, fire safety, and occupational health. These have benefited over 130 suppliers to date by helping them to identify potential risks, cultivate professional management teams, and improve their professional management capabilities in the fields of HR, environmental protection, fire safety, and occupational health.

Strategic Supplier Development Project

We have launched a Strategic Supplier Development Project to foster sustainable development among our strategic suppliers. It helps them to identify development opportunities related to strategy, business, technology, quality, project management, and CSR, all with the goal of improving their overall performance and competitiveness.

Supplier performance management

We conduct annual assessment on supplier sustainability performance. The assessment provides a comprehensive view on their CSR measures, on-site audit results, and improvements over the past year. The results make up 10%-15% of the supplier overall performance assessment, which significantly impacts our decision on future cooperation. The assessment also applies to new project supplier selection and category supplier portfolio management. Those with good performance will be prioritized for cooperation, while those with poor performance are required to improve within a limited time. we may also reduce the procurement and cooperation, or even cancel the partnership.

In 2019, we completed sustainability performance assessments on all suppliers and downgraded two suppliers and terminated a supplier with poor performance.

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Supply Chain Labor Condition

People-oriented supply chain responsibility management.

Highlights on labor protection in supply chain

Freely Chosen Employment

Suppliers must ensure that all employees are hired on a purely voluntary basis and must not employ any form of forced labor, restrict their employees' personal freedom, or withhold their identification documents. They must not engage in human trafficking, including transport by threat, coercion, violence, abduction, or deception to harbor, recruit, transfer, or receive labor or services. Employees shall not be required to pay deposits or fees to employers or agents before starting work.

Young Workers

Suppliers shall comply with all applicable local and national laws and regulations regarding the minimum working age and shall not employ child labor. According to the International Labor Organization's definition, child labor refers to people who are below the minimum employment or compulsory education age in the relevant country or region. If there is no clear definition in local law, they are defined as under the age of 15. Suppliers shall also not allow legally employed underage workers (minors under the age of 18) to engage in work that may endanger their health or safety.

Working Hours

Suppliers shall comply with all applicable laws and regulations related to working hours and rest periods, and all overtime must be voluntary. The standard work week (excluding overtime hours) should be determined by law, but cannot exceed 48 hours, and employees must not work more than 60 hours in a week. Employees should also have at least one day off for every six consecutive days of work.

Wages and Benefits

Employee remuneration shall comply with all applicable wage laws, including laws concerning minimum wages, overtime wages, and statutory benefits. Suppliers shall pay employees directly, in full, and on time, and provide clear and understandable payroll records.

Humane Treatment

In dealing with employees, suppliers shall not use violence, including but not limited to verbal insults, threats, corporal punishment, sexual harassment, or physical intimidation of employees, illegal body searches, body searches conducted by personnel of the opposite sex, or threats to commit such acts.

Non-Discrimination

Suppliers shall not be allowed to pay employees on the basis of race, color, age, gender, sexual orientation, gender identity or gender performance, race or ethnicity, disability, pregnancy, religious belief, political affiliation, membership in social groups, protected genetic information, or marital status. Discrimination against employees is forbidden during employment behaviors such as hiring, remuneration, promotion, rewards, offering training opportunities, and dismissal. Employees or prospective employees shall not be required to undergo medical tests or physical examinations that may have discriminatory purposes.

Freedom of Association

Suppliers shall respect the rights of all employees to voluntarily form and join trade unions, conduct collective bargaining, and engage in peaceful assembly, as well as to refuse to participate in such activities, in accordance with local laws. The supplier shall establish an effective labor-management communication mechanism and communicate with employees or employee representatives on a regular basis. Employees and/or their representatives should be able to communicate openly with management regarding working conditions and management practices and express their views and concerns without fear of discrimination, retaliation, threats, or harassment.

Training & communication on labor rights

Employees shall understand and protect their own rights

We motivate suppliers to provide labor rights training for their workers, allowing every worker to have a full understanding of internationally accepted labor principles, national and local labor laws, and the company's own employment policies.

The communication and appeal mechanism is in place to prevent and punish the infringement of employee' labor rights. Suppliers are required to establish effective grievance mechanisms, in particular the protection of a complainant's personal information, to avoid retaliation. The supplier's management is aware of every report and formulates an effective follow-up plan. If the supplier fails to manage the complaint promptly, or discloses the complaint's identity, the complaint can contact Huawei's supplier management department to file a complaint, and follow-up actions will be taken.

1.34M+

Since 2010, we have interviewed a total of 15,660 supply chain employees and improved 1.34M+ workers of their issues, providing workers with a healthier, safer, and more dignified working and living environment.

100%

As of 2019, 100% of our suppliers had established employee communication and grievance hotlines.

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Health and safety

We have a responsibility to work with our suppliers to provide our upstream workers with a safe and healthy working environment so that they can live and work with confidence.

Working conditions

1. Suppliers shall obtain, maintain, and update all necessary health and safety permits, and comply with the relevant provisions of these permits.

2. Suppliers shall identify and evaluate possible occupational health and safety risks (including risks related to fire protection, industrial hygiene, physical work, and machine safety), through the elimination of hazards, substitution of materials and systems, engineering controls, preventative maintenance, and safe work processes (including lockout/tagout processes) to eliminate or reduce risks, and shall provide appropriate personal protective equipment when necessary. In addition, appropriate measures should be taken to protect the safety and health of female workers, especially pregnant and lactating female workers.

3. Suppliers shall establish necessary procedures and systems to prevent, manage, track and report work injuries and occupational diseases, and implement corrective measures to eliminate the impact of these and help employees return to work.

4. Suppliers shall provide employees with appropriate health and safety training in local languages, and post health and safety-related information around the workplace.

Living conditions

Suppliers shall provide employees with clean toilet facilities and drinking water, as well as clean and sanitary food, storage, and dining facilities where necessary. Staff dormitories should maintain clean, safe, and reasonably spacious.

Emergency preparedness

Suppliers shall identify and evaluate possible emergency events that may occur, including but not limited to fires, explosions, fatal accidents, and mass poisonings, and implement targeted emergency plans and response procedures, including the filing of emergency reports, the provision of on-site first aid, public announcements, evacuation procedures, regular training and exercises, and recovery plans. The goal of this is to minimize the impact of any possible emergencies on local people, environments, and property.

Absolute rules

In terms of work requiring high-altitude operations, driving operations, and live-wire operations, suppliers shall abide by Huawei's absolute safety rules to ensure that all employees fully understand and comply with them, and shall supervise their execution.

In order to promote our suppliers' safety and health management mechanisms and institutional development, we regularly track and supervise our suppliers' safety and health management performance and conduct regular on-site audits. We promptly propose rectifications for any behavior not meeting our requirements, and require their implementation within a limited time period. We also train suppliers in our requirements and the laws relating to safety and health management, improving their awareness, analysis, and management of safety and health risks. Since 2010, we have provided 27 safety and health training sessions to our suppliers

Increasing sense of belonging for supplier employees

We pay attention to the health, safety, and dignity of our suppliers' working environment, especially for the front-line workers. We also pay attention to employees' career development path. We introduced the turnover rate audit in our supply chain corporate social responsibility assessment, and improved our suppliers' employee retention through the "selection, use, education, and retention" programs and measures, providing suppliers' employees with a stronger sense of belonging.

"

After a year of improvement, our employee turnover rate has dropped from 9.0% to 2.3%. As a result, recruitment and employee training costs have been reduced, the sense of belonging among employees has been enhanced, the overall operating efficiency of the factory has been significantly improved, and our sustainable development capability has been further consolidated.

"

–Huawei supplier

Changes in suppliers' employee turnover rate
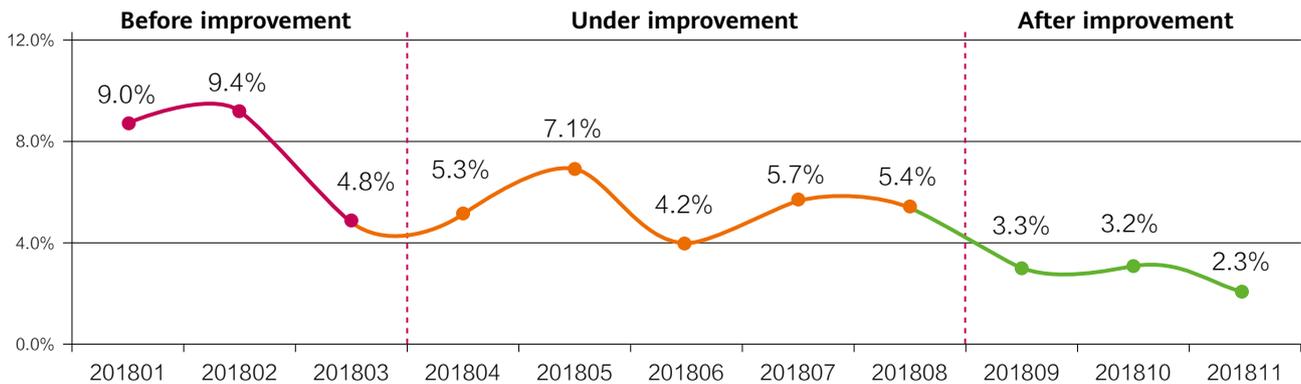
Safe chemical use by suppliers

100%

100% of our existing suppliers have formulated and implemented their QC 080000 system certification plan.

The selection of safe chemicals during the production process is the most direct way to protect suppliers' employees. We work with our suppliers to promote the use of safe chemicals. We created the *Restriction on Use of Hazardous Substances* in accordance with the various environmental regulations of various countries such as the RoHS and REACH standards used in the EU. We also require suppliers to sign the latest *Huawei Restricted Use List* and

Chemical List, and guide suppliers on safe chemical solution during production. We complete a full range of chemical safety risk screening tests on suppliers, entrust third parties to complete on-site audits of high-risk suppliers, and set time limits for improvements. Suppliers that do not pass the chemical use system certification will not be eligible for cooperation with Huawei.

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Supply Chain Environment Protection

We have clear environmental management requirements for factory leaders and materials suppliers, ensuring that all suppliers strictly abide by local environmental laws and regulations. We also require our supplier to reduce or eliminate production and discharge of all pollutants at each production link, reduce the environmental impact of production, and protect local ecosystems.

Environmental permits and reports

Suppliers must obtain, maintain, and update all required environmental permits (such as emission monitoring), approval documents, and registration certificates. Suppliers are also required to comply with operating and reporting requirements.

Pollution prevention

Suppliers must comply with all applicable laws and regulations regarding pollution (including wastewater, waste gas, and solid waste), as well as requirements for manufacturing, shipping, storage, treatment and discharge, reducing or eliminating pollution production and emissions from the source, to stop the illegal discharge of toxic or harmful pollution, and prevent noise pollution.

Environmental requirements for our products

Suppliers must comply with all applicable laws, regulations, and consumer requirements regarding prohibited or restricted substances, such as RoHS and REACH. They must take effective measures to prohibit or restrict the use of specified substances during the manufacturing process.

Energy conservation

Suppliers must take measures to save and replace energy, water, and natural resources to reduce greenhouse gas emissions.

Responsible Raw Material

"Conflict minerals" refer to minerals such as tin, tantalum, tungsten, and gold (the 3TG), which come from the Democratic Republic of the Congo (DRC) and neighboring countries. Exploitation of these minerals in the DRC and elsewhere involves human rights violations and environmental pollution, and income from their sale may financially support the ongoing armed conflict in the region. In addition to conflict minerals, as the amount of cobalt in lithium batteries has continued to increase, due diligence management of cobalt mines from the DRC has also attracted increasing attention.

The Huawei Supplier Social Responsibility Agreement and *Supplier's Social Responsibility Code* clarify our support and commitment to the responsible procurement of raw materials. They include comprehensive measures and management procedures to supervise procurement sources for metals.

These materials are widely used as raw materials for electronics and consqeuently, the Organization The Organization for Economic Cooperation and Development (OECD) issued the *Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas*, aiming to continuously improve local people's livelihood through joint efforts in the upstream and downstream supply chain, supporting the international community to protect human rights.

Resolving the conflict minerals issue requires commitment and cooperation from business, government, and civil society. We have committed to avoid the purchase or use of conflict minerals and we prohibit all our tier one and upstream tier suppliers from doing so.

The Huawei conflict minerals management process

Commitment

Each supplier must sign a commitment letter with Huawei prohibiting the purchase of metals from conflict areas. They must implement corresponding conflict minerals management requirements.

Investigation

Due diligence is a key part of Huawei's conflict mineral management. We investigate the use, origin, and purchase identification information for each metal procured by our direct and upstream suppliers. We also cross-check purchase and transport documents with corresponding certification numbers of final smelters and refineries to ensure the accuracy and validity of the information, finding the conflict mineral situation for the whole chain.

Follow-up

We provide the supplier with corresponding follow-up suggestions based on the investigation results. We require their completion by a certain deadline and provide further feedback in turn.

Policy

Huawei requires all suppliers to create conflict-free procurement policies clarifying the risk identification process for conflict minerals, management requirements for upstream suppliers, and procurement traceability responsibilities.

Audits

Our supply chain managers select suppliers for conflict mineral audits. They check the supplier's site to understand the details of its management system and its implementation. They also obtain corresponding forms to cross-check the materials provided by the supplier, verifying supply chain traceability information.

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Continuous advancement in responsible raw materials

2011 — 3TG investigation launched in 2011: We started investigating 3TG sources in our products.

2013 — Traced 3TG smelters in 2013: Full traceability of the 3TG supply chain, including to upstream smelters/refineries. We required suppliers to cut off raw materials supply from unqualified sources.

2015 — Improved due diligence in 2015: We improved our conflict minerals assessment and due diligence process by asking third parties to sort through our raw materials responsibility process in accordance with the OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

2016 — Started cobalt management in 2016: We further expanded the scope of our conflict mineral management to include cobalt, joined industry organizations, and discussed our cobalt supply chain due diligence management plans with upstream and downstream industries.

2017 — Policies announced in 2017: Huawei issued the cobalt supply chain policy, and included the responsible cobalt management in the "Huawei Supplier Social Responsibility Code of Conduct,". The policy requires suppliers to complete cobalt due diligence and communicate their due diligence requirements to the next tier suppliers.

2018 — Implemented five measures in 2018: We implemented cobalt due diligence in accordance with the Due Diligence Guidance for Responsible Mineral Supply Chains published by the OECD and CCCMC and appointed third-party auditor to complete due diligence on cobalt supply chain factories, tracing the supply chain back to smelters and even further upstream to mines.

2019 — Further improvements in 2019: We further improved our mineral management responsibility system, maintaining our focus on conflicts and high-risk regions while paying attention to human rights, environmental, health, and safety risks over the entire supply chain. We insisted on extending supply chain management to the origin of minerals and discussed upstream risk solutions with local governments and other stakeholders

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Since 2011, we have reviewed 978 responsible conflict mineral procurements of smelters and refineries and removed 69 unqualified smelters/refineries from our supply chain list

Huawei will continue to work with industry organizations, local governments, and upstream and downstream partners to improve supply chains and practise responsible supply chain management on a continuous basis. We endeavor to build a stable, orderly, diverse, responsible, and sustainable supply chain.

Community

Job Creation and Talent Development

Huawei CBG continues to build a diverse bank of global talent. Our employees from over 90 countries and regions help us to understand and embrace different cultures while promoting local employment and economic development.

We treat employees equally regardless of gender, race, ethnicity, or religious beliefs, ensuring that each employee has equal opportunities for work, study, and development.

A global talent development footprint

○ In Malaysia, we cooperated with the Centre of Technical Excellence Sarawak - a local institution of higher learning - to train digital economy talent through the implementation of our digital economy strategy.

○ In India, the Huawei and TSSC Telecom Skill Development Centre helped India solve the skills gap in the telecom industry, improving the employability of young people, especially in rural hinterlands. By the end of 2019, we had trained 134 customer care supervisors, mobile phone maintenance engineers, and optical fiber technicians, of which 56 have found jobs.

○ In Brazil, we worked with the National Institute of Communications (Inatel) to build the world's first innovation and competence center in cooperation with the university system to nurture telecommunications talent. This tackled the difficulty the difficulty many students of such training institutes have in finding jobs, with 95% of graduates gaining employment.

○ In Poland, In order to improve digital capabilities in Central and Eastern Europe, we launched the Thousand Dreams program in Poland, offering ICT training for 1,000 young people across 16 central and eastern European countries over five years. We also donated 1,000 books to university libraries in these countries and gave 1,000 toys to children's hospitals.

○ In France, we funded the Web@cadémie philanthropy project since 2016. It has offered vocational and technical training to over 1,000 young people without a high-school diploma, helping them understand the latest trends in technology and access jobs at IT companies.

80,000

Huawei CBG currently provides more than 80,000 direct jobs

20,000

Huawei CBG currently provides about 20,000 direct jobs outside of China

1,340,000

Huawei CBG created 1.34 million supply chain jobs among first-tier suppliers alone

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Creating a diverse and inclusive workforce

We recognize that diligent and dedicated professional talent is the driving force for sustainability and is a determining factor for staying ahead of our competition. For many years, our view on professional talent has been defined by "positivity, diversity, opennes" and we put an emphasis on the professional development of our employees to provide them with multiple paths to achieve greater success.

We have dedicated ourselves to creating a diverse and varied workforce, actively promoting localization efforts overseas, and ensuring people of different genders, ages,

academic backgrounds, nationalities, and religious beliefs all have equal access to the same work, study, and personal development opportunities.

We have always aimed to create an open, inclusive, and mutually beneficial work environment for our employees and strive to promote an atmosphere of efficiency, innovation, and progress. It is our goal to eliminate any unintended prejudices so as to allow every single one of our employees to reach their full potential as part of our organization.

Age structure of employees working in consumer business

Under 25: **13%**

26-35: **56%**

36-45: **29%**

Over 46: **2%**

Educational backgrounds of employees working in consumer business

Doctorate degree: **3%**

Master degree: **52%**

Undergraduate degree: **43%**

Other: **2%**

Community Engagement

As a corporate citizen, we actively integrate into local communities, carry out a variety of community activities, and work with local communities to contribute to philanthropic activities such as disaster relief and health and social welfare.

In the face of this pandemic, technology helps us continue learning outside the classroom

Even though the COVID-19 pandemic has restricted our ability to attend classes, technology has made it possible for us to learn using online resources, bringing together teachers and students from different locations and making it possible for proper instruction and learning to still take place, even without a classroom. However, for households that don't have access to such technology, this unfortunately creates new challenges. IIn February 2020, in an effort to make education equally accessible to everyone during these unusual times, the Guangdong Provincial Education Foundation provided 9262 third-year high school and third-year middle school students from 2277 underserved

communities with tablet PCs to facilitate remote learning during the pandemic shutdown. To ensure the computers would arrive as soon as possible, as possible, we organized emergency product sourcing, and rapidly scheduled shipments. Within one day, each one of the students had received their computer and was able to attend online classes. For these students who were just about to transition into the next stage of their education, this provided access to vital educational content, ensuring they continued their progress on schedule and allowing them to return their attention to studying hard for their futures.

Disaster relief in Cambodia

Huawei cooperated with Cambodia's Civil Society Alliance Forum (CSAF) to support local disaster relief. We donated 2941 water purifiers to the Cambodian government, providing clean drinking water for families severely affected by floods. We also joined local supporters in donating learning materials and other resources to poor local primary school students.

Food donations to plague-stricken areas in Madagascar

Madagascar is one of the world's poorest countries. A lagging economy and poor sanitation contribute to over 200 cases of plague every year. Huawei donated two tons of rice, a ton of sugar, and 1,350 boxes of edible oil to people in plague-affected areas in Madagascar, helping its government to fight the epidemic and treat patients with safe food supplies.

Sanitation facilities for Indian villages

A report published by the international charity WaterAid showed that over 70% of rural areas in India lack complete sanitation facilities, with over 56% of Indians lack access to basic facilities. Huawei has helped schools in many Indian villages build sanitation facilities, helping to provide clean water. These facilities have protected the health of over 1,000 poor students.

Telecommunications repairs and donations in Peruvian mudslide disaster area

In March 2017, 13 of Peru's 24 regions suffered severe rainstorms and mudslides. Almost 10,000 people were evacuated, almost 100 died, and 627,000 were affected to varying degrees. We invested in engineers for rapid repairs in cooperation with local carriers to restore the communications network as quickly as possible. We also donated PEN 100,000 in living materials and US$ 600,000 in emergency communications equipment for the impacted areas, ensuring that rescue work and communications continued as normal.

Looking Forward

Difficulties are always a prelude to a larger victory, with challenges strengthening a team's competency. Over the last decade, Huawei Consumer Business Group has taken strides towards sustainable practices and, looking forward to the next decade, we will continue to walk through all the trials and hardships, and pursue harmonious development among people, nature, and society.

Huawei continues to create technological products for all and to involve more target audiences in the development of accessibility features. We strive to achieve digital inclusion by turning accessibility into the hallmark of our products. Living in the era of technology, we will also work with specialized institutions to address key social needs such as education and health, and develop "technological empowerment" solutions. We integrate technology and environment by optimizing the industry value chain, and create a "big cycle" for recycling throughout the value chain and a "small cycle" for products and parts recycling. We will keep working with our business partners to advance the circular economy.

Our vision is to create the best smart devices in the world, not only lead industry development, but also bring consumers the best experience. We are very proud of our focus on offering the real and valuable innovation.

This report summarizes our achievements over the past ten years and provides the world with a holistic view on our sustainability development. We look forward to the challenges ahead. We are committed to creating value for consumers and society, reducing demand for resources and minimizing the adverse impact on the environment.

Appendices

| **About this Report**

Overview

The Huawei Consumer Business Sustainability Progress Report (2011-2020) is a summary of how Huawei's Consumer Business has implemented and promoted sustainability in the past 10 years. This report is a detailed explanation and supplement for the consumer business section of Huawei's annual sustainability report.

Time scope

This is a ten-year progress summary report covering the period from January 1, 2011 through August 31, 2020. Because progress and development within each specific sector occur at varying paces, part of the content within this report may have occurred not exactly at the beginning of 2010.

Scope of the report

The subject of this report is Huawei Device Co., Ltd., which includes all of its global branches, subsidiaries, and directly affiliated institutions. A portion of the sustainability projects mentioned in this report were jointly planned and implemented with Huawei Technologies Co., Ltd.

Concerning titles

To facilitate presentation and for the convenience of the reader, unless otherwise specified, "Huawei", "the Company", or "us/we" in this report refers to Huawei Devices Co., Ltd.

Data sources

The data and cases in this report mainly come from Huawei's official documents, statistical reports, and publicly available information.

Report access

This report was published in September of 2020. If you would like to view or download this report online, please visit: https://consumer.huawei.com/en/sustainability. If you would like to print out a paper copy of this report, please use recyclable paper when printing.
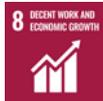
Notes

① Packaging plastic content data compared Huawei P40 with Huawei P30.

② Packaging utilization improvement data compared the next-generation Huawei Mate flagship model with the Huawei Mate 7.

③ Packaging weight reduction data compared the next-generation Huawei Mate flagship model with the Huawei Mate 7.

④ Flagship phone unlock time reductions compared the Huawei P40 with the Huawei P30.

⑤ Different Huawei devices provide different health-related functions based on local regulations and actual conditions.

⑥ Huawei wearables supporting 301 Hospital Heart Health Research APP are not medical devices. The test data and screening results are for reference only. They can assist medical professionals to assess the risk of arrythmia, and should not be used as a basis for diagnosis or treatment. The data comes from the 301 Hospital Heart Health Research APP and has been de-identified to protect user privacy. Conclusions from the data are based on the opinions of the 301 Hospital Heart Health Research APP, are provided for reference only, and should not be taken as the basis for any medical diagnosis.

⑦ Durability improvement data compared the Huawei Mate 20 with the Huawei Mate 10.

⑧ Test data from Huawei laboratories, compared to EMUI 10.

⑨ Latency increase data compared the Huawei P40 with the Huawei P30.

| UN SDGs

We are aligned with the UN SDGs

As a global corporate citizen, we support the Sustainable Development Goals (SDGs) of the UN, The SDGs have guided and inspired us to formulate our own sustainability plans and implement sustainability practices in order to achieve a more sustainable and equitable world.

Item		UN Sustainable Development Goal (SDG)
Accessibility	Accessibility through technology experience Technology for all ages Technological popularization starts with the user	10 REDUCED INEQUALITIES 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Education and Health	Education: inspiring imagination and creativity	4 QUALITY EDUCATION
	Health: active health management through technological innovation	3 GOOD HEALTH AND WELL-BEING
Environmental protection	Reducing resource usage, starting from design	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
	Energy conservation during manufacturing	7 AFFORDABLE AND CLEAN ENERGY 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION
	Reduced resource usage through durable products Recycling and reuse	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Corporate responsibility	Consumer-centered mindset	11 SUSTAINABLE CITIES AND COMMUNITIES 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 17 PARTNERSHIPS FOR THE GOALS
	Responsible supply chains Community	1 NO POVERTY 8 DECENT WORK AND ECONOMIC GROWTH 11 SUSTAINABLE CITIES AND COMMUNITIES

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