

Protecting Our Planet

— Huawei Has Been In Action



Huawei: Leading provider of ICT infrastructure and smart devices

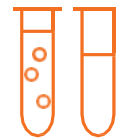


Vision and mission:

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



194,000
Employees



96,000+
R&D employees

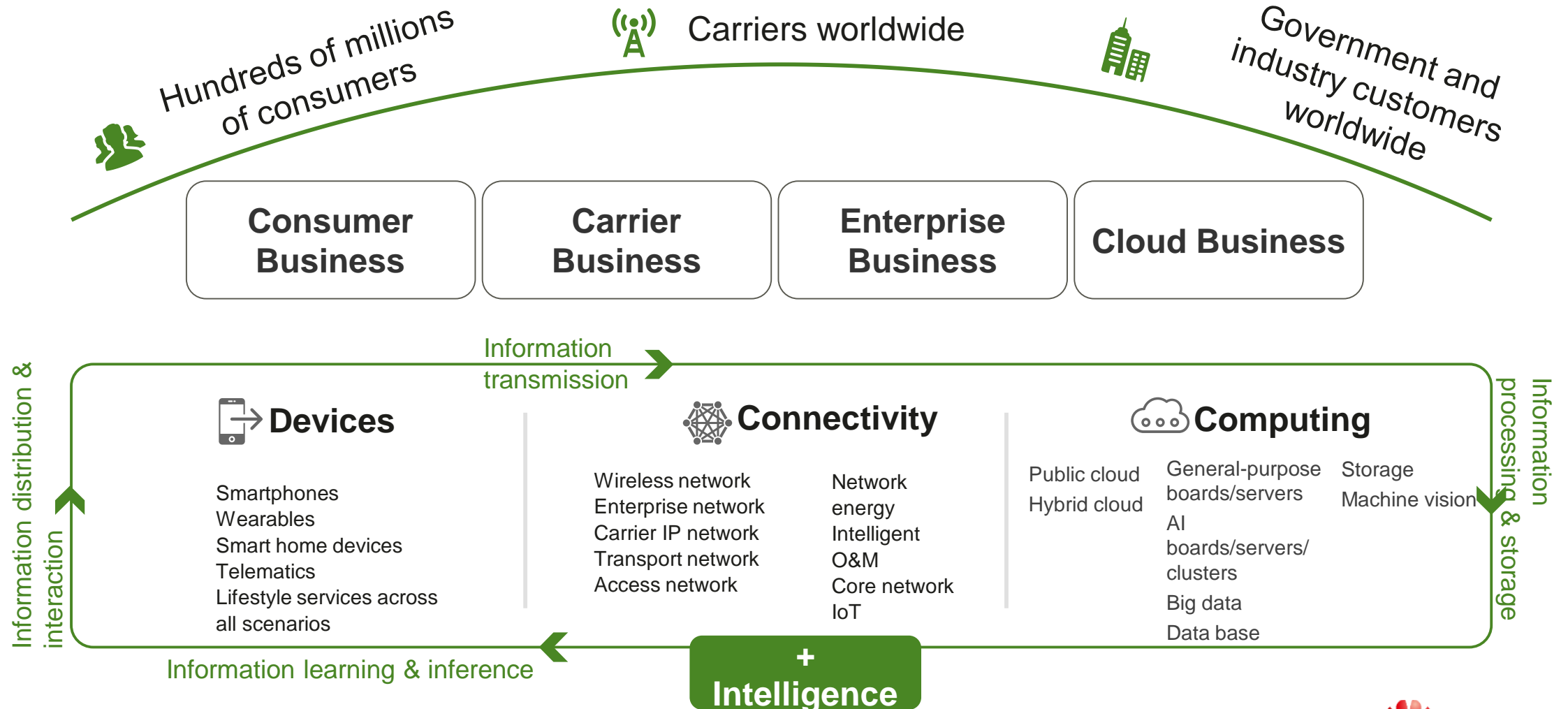


170+
Countries and
regions

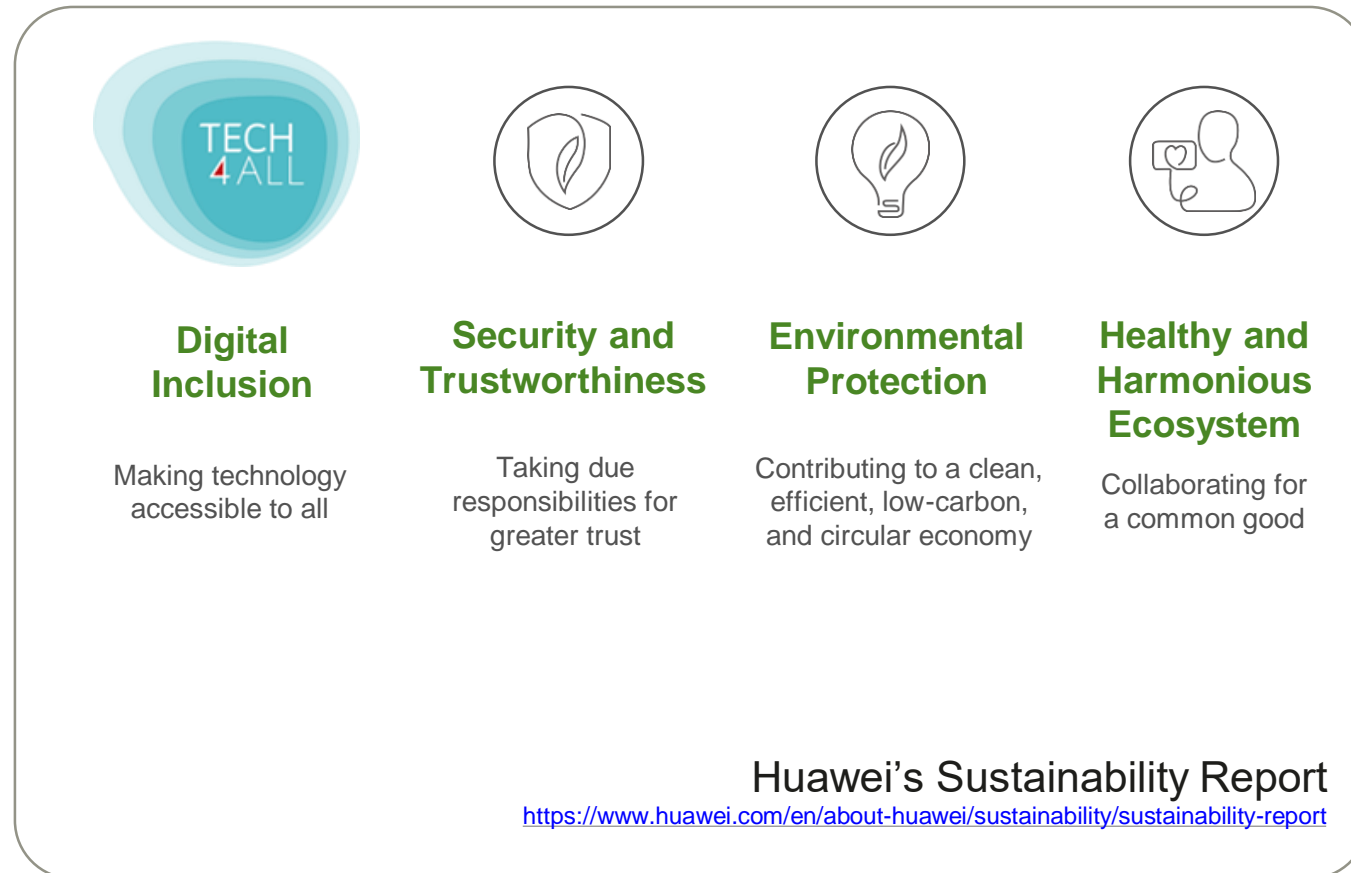


61
on Global 500

Focusing on ICT technology to provide products, solutions, and services to three customer groups



Being a responsible corporate citizen, environmental protection has been integrated into Huawei's corporate sustainable development strategy



TECH 4 ALL

Digital Inclusion
Making technology accessible to all

Security and Trustworthiness
Taking due responsibilities for greater trust

Environmental Protection
Contributing to a clean, efficient, low-carbon, and circular economy

Healthy and Harmonious Ecosystem
Collaborating for a common good

Huawei's Sustainability Report
<https://www.huawei.com/en/about-huawei/sustainability/sustainability-report>

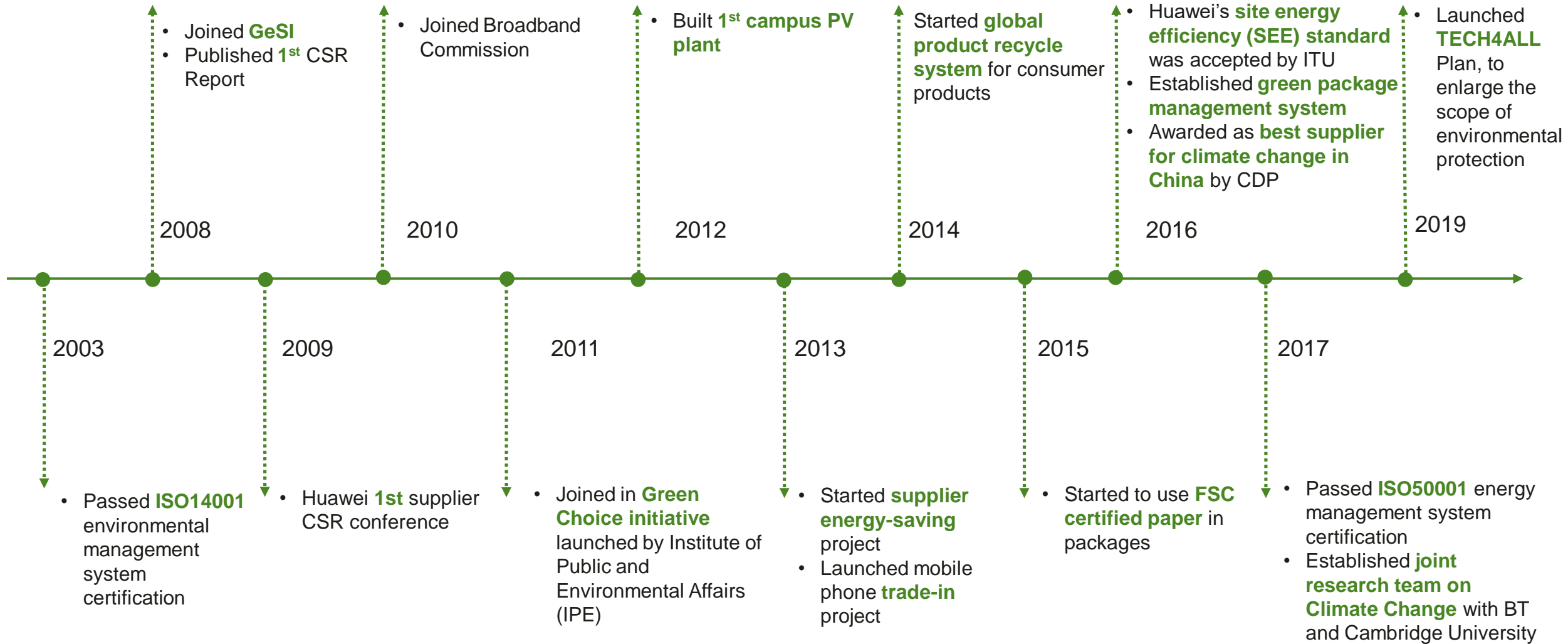


Huawei Investment & Holding Co., Ltd.
2019 Sustainability Report

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



Key Milestones in Huawei's Environmental Protection Action



We Believe: ICT Technology Enables A Greener World



- According to Huawei's Global Industry Vision, in 2025, average carbon emissions per ICT connection will drop to 15kg, a massive decrease of 80% relative to 2015 levels.



- ICT-enabled power savings and carbon emission reductions will far exceed the industry's own, helping greatly conserve energy and reduce emissions worldwide.



- ICT is creating a better future for humanity, and will play a key role in achieving the UN's Sustainable Development Goals (SDGs).

A lush green forest with misty rays of light filtering through the trees. The scene is serene and natural, with sunlight creating a soft glow through the dense foliage.

We believe:

Technology is not against nature, but part of nature.

Tech for a better planet.

It's our commitment, which drives us to keep moving forward.

Based on ICT technology, Huawei takes action in four major directions

Tech. for a Better Planet



Reducing carbon emissions



Promoting renewable energy



Contributing to a circular economy



Conserving nature

Goals and Objectives

-16%

In 2025, reduce carbon emissions intensity (Scope 1&2) per million RMB of revenue (baseline year: 2019)

2.7 x

In 2025, improve Huawei's mainstream product energy efficiency (baseline year: 2019)

TOP100

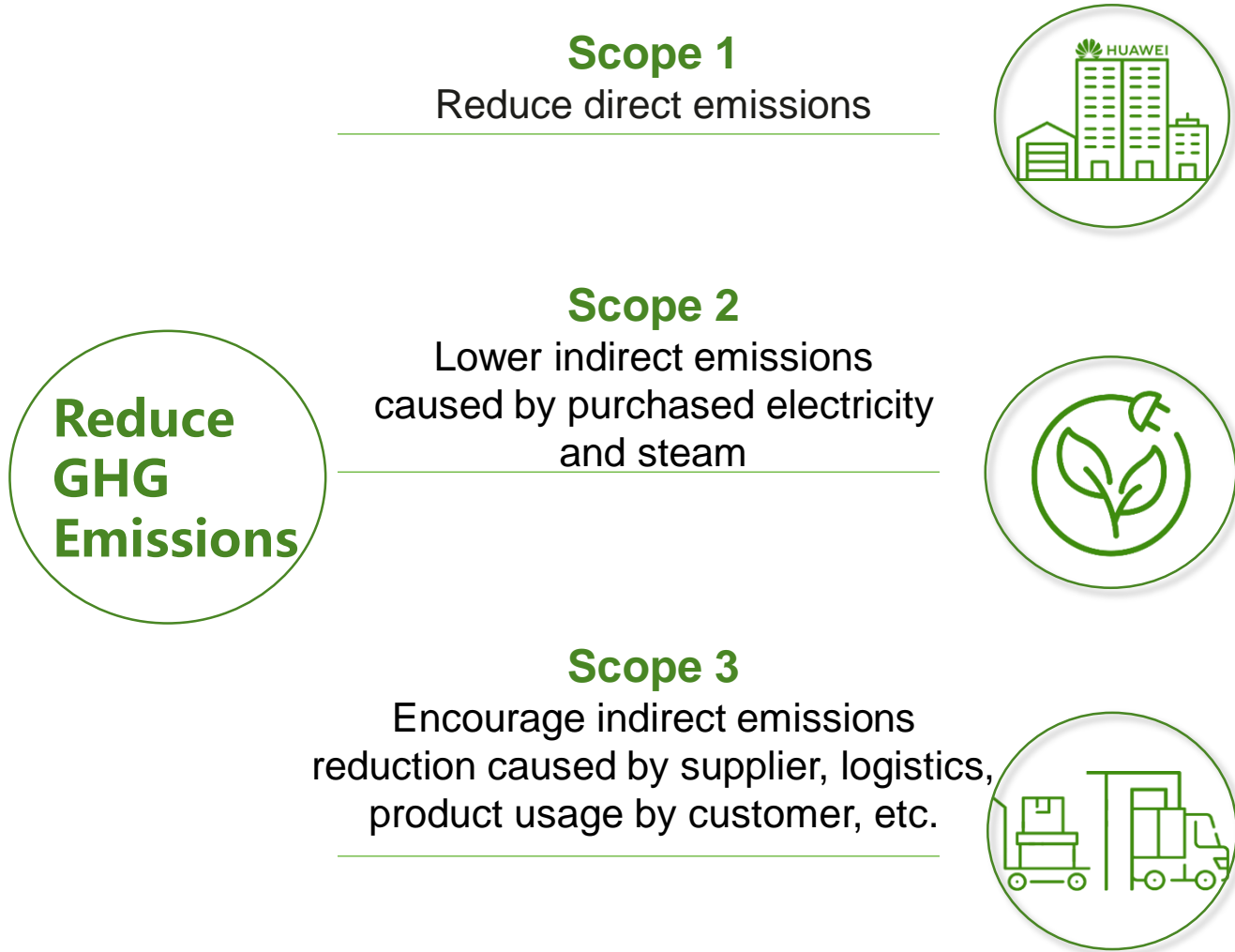
Suppliers to set carbon emission reduction targets by 2025

A landscape of rolling green hills with several wind turbines in the distance under a cloudy sky. The hills are covered in lush green grass, and the wind turbines are spaced out across the horizon. The sky is filled with soft, white clouds, and the overall scene is bright and clear.

Reduce Carbon Footprint

Take each step with a responsible carbon footprint

We are Working to Reduce GHG Emissions at All Three Scopes



Key approaches for Scope 1&2

- Build photovoltaic power station on the campus
- Energy-saving operational management each year

Key approaches for Scope 3

- Technology innovation for higher product energy efficiency
- Green logistics system
- Supplier energy-saving projects

Constantly Reducing the GHG Emissions Intensity

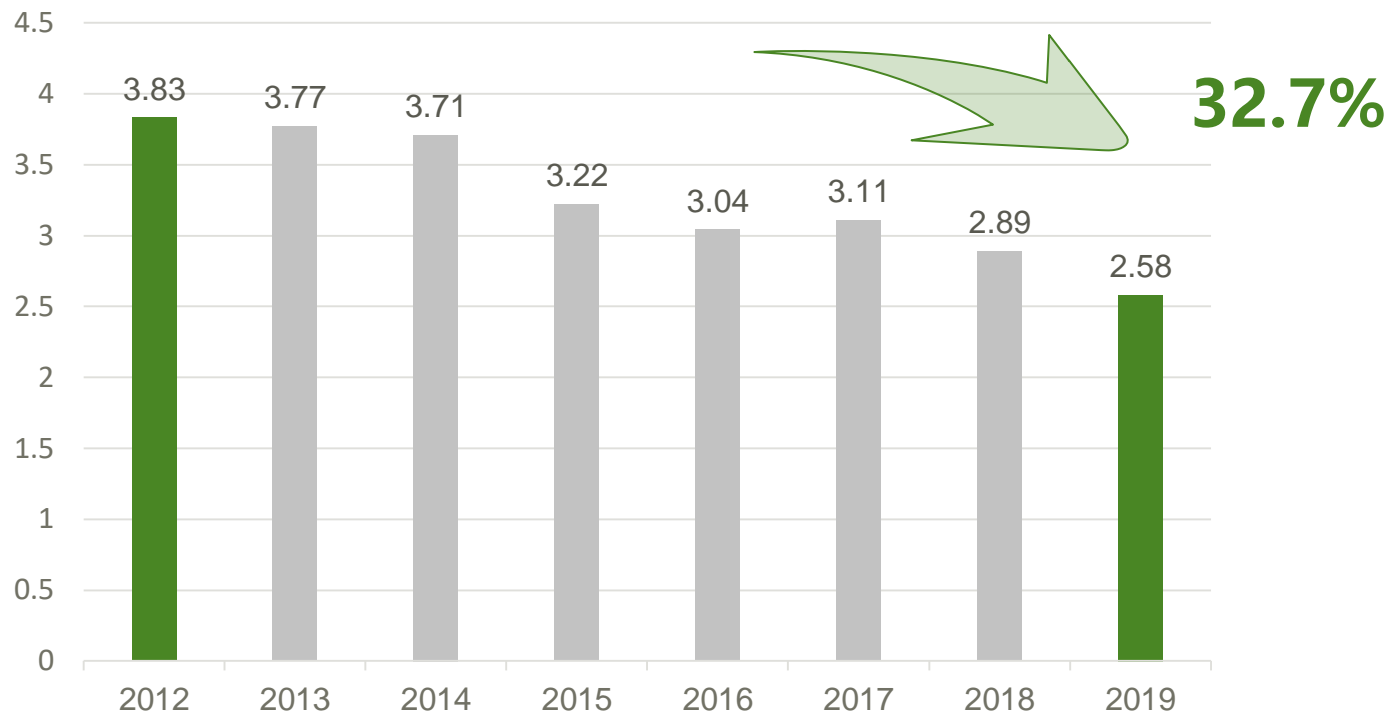
**Achieved 2020
Target in Advance**

Reduce 30%
GHG emissions intensity
(2020 VS 2012)

Updated 2025 Target

Reduce 16%
GHG emissions intensity
(2025 VS 2019)

Huawei GHG Emission Intensity Progress(Scope 1&2)
(Unit: ton / Million RMB)



Energy-Saving Management to Reduce Energy Consumption



Energy efficient building



24-hour management in the Lab



Energy optimization in the office



Energy-saving renovation in the production line

Established Low-Carbon Logistics System

4

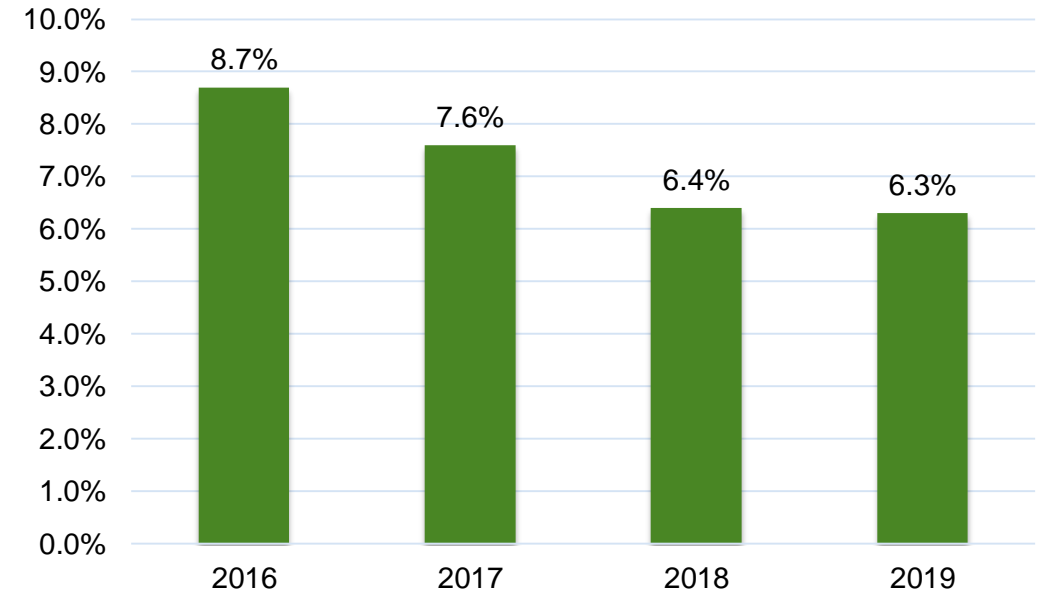
Global Supply Centers

112

National warehouses overseas



Huawei Global Air Freight Proportion

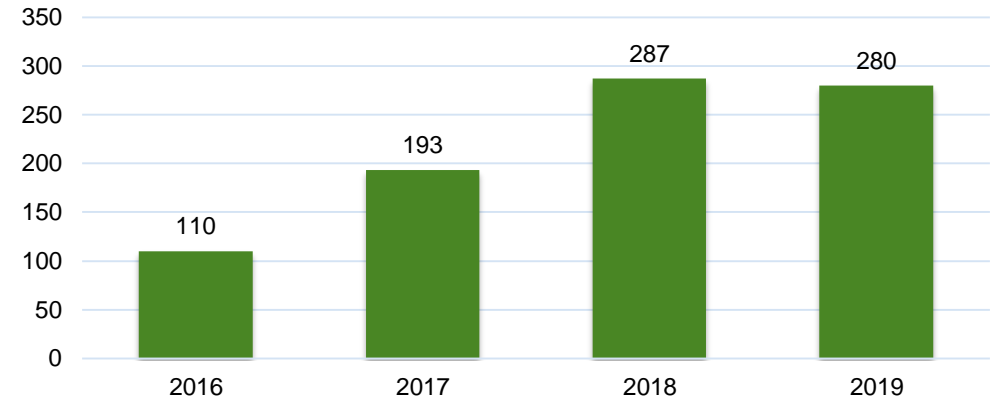


Integrate Environmental Requirements into Supplier Lifecycle Management

Supplier Management Process

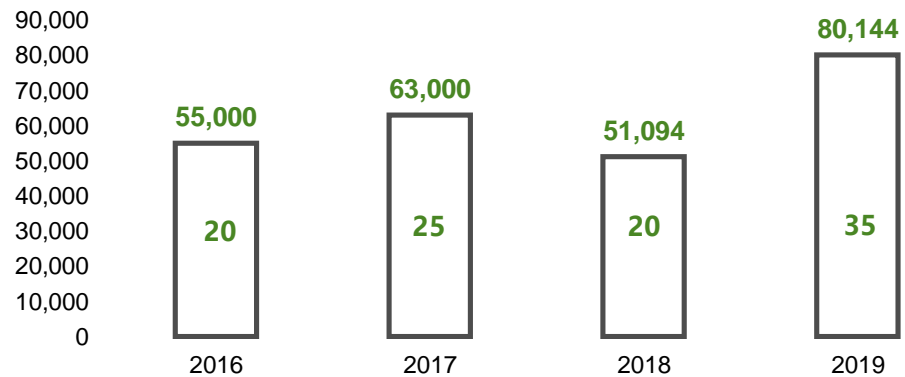


Number of Environmental Audited Suppliers



Energy Saved by Suppliers Management Projects (tons)

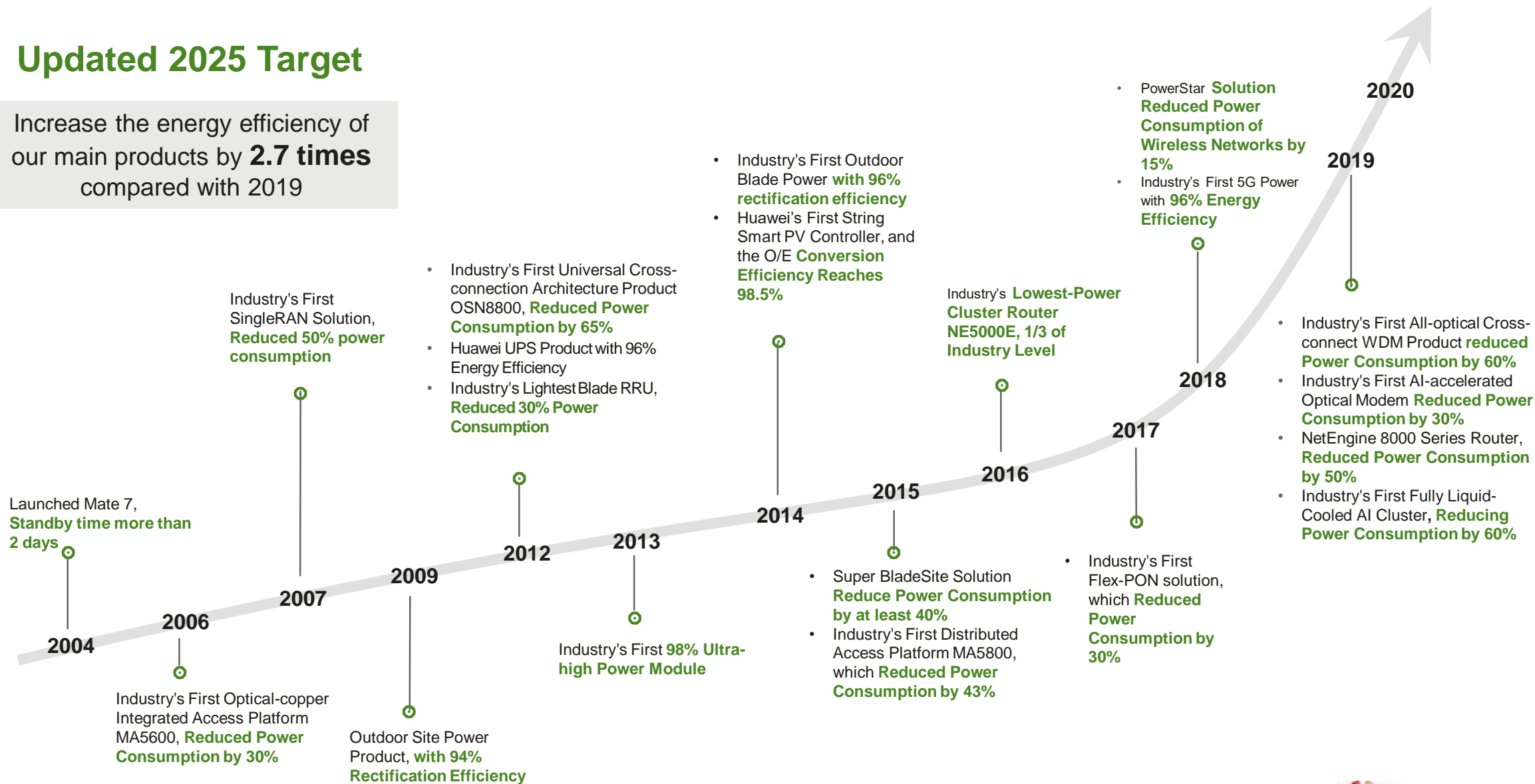
Unit: tons



Perseverance in Technology Innovation to Improve Product Energy Efficiency

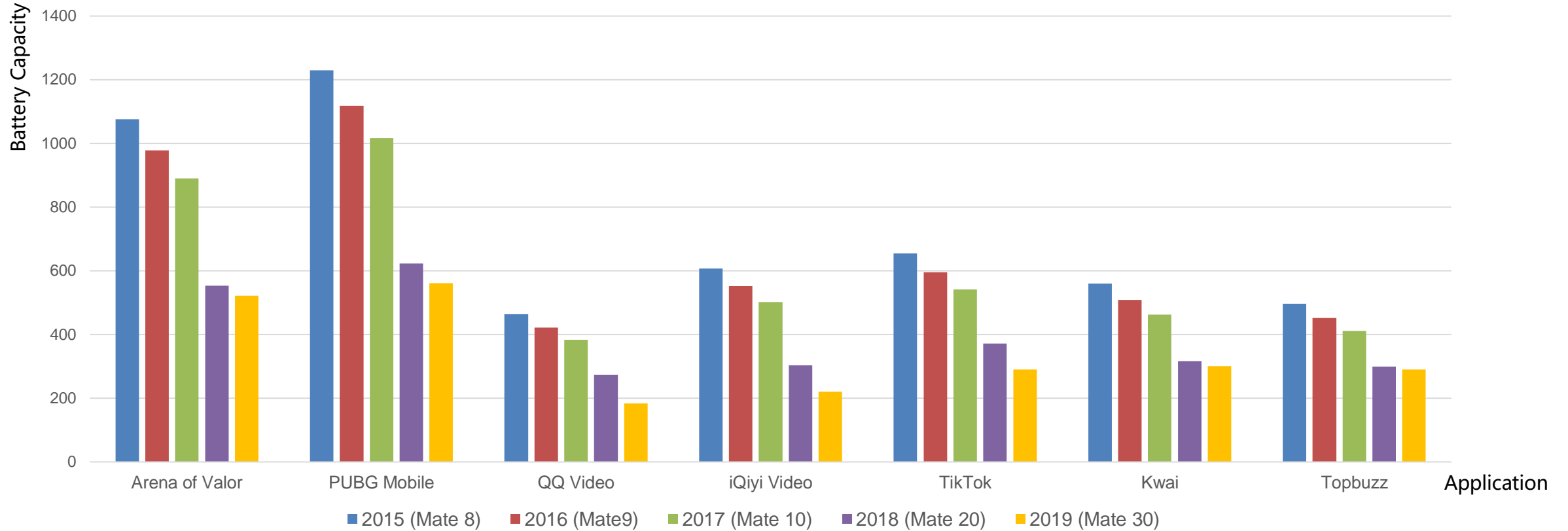
Updated 2025 Target

Increase the energy efficiency of our main products by **2.7 times** compared with 2019



Case: Huawei's Mobile Phones have Improved Energy Efficiency by about 50% from 2015 to 2019

Typical Application Power Consumption Analysis



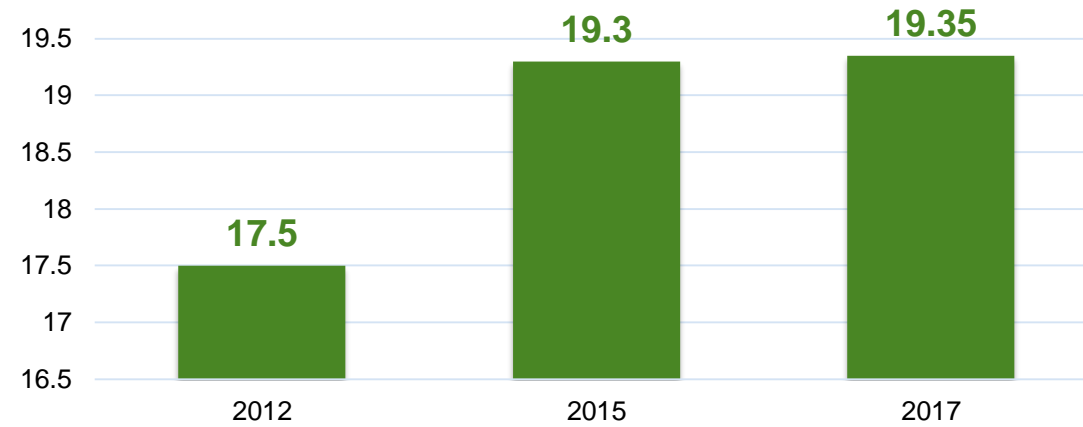
The image is a composite background. The foreground is dominated by a vast field of solar panels, their surfaces reflecting the warm, golden light of a low sun on the left. The panels are arranged in neat, parallel rows that recede into the distance. In the background, three wind turbines stand tall against a sky transitioning from a soft orange near the horizon to a clear, pale blue at the top. The overall scene conveys a sense of clean, renewable energy production.

Promoting Renewable Energy

Converting Every Joule of Solar Energy into Electricity

Built Campus PV Plants to Increase Renewable Energy Supply

Accumulated Capacity of PV Plants in Huawei campus(MW)



Smart PV plant at Huawei's Southern Factory in Dongguan
Capacity: 17.5 MW



Jun, 2012

Smart PV plant at Huawei's Hangzhou Research Center
Capacity: 1.8 MW



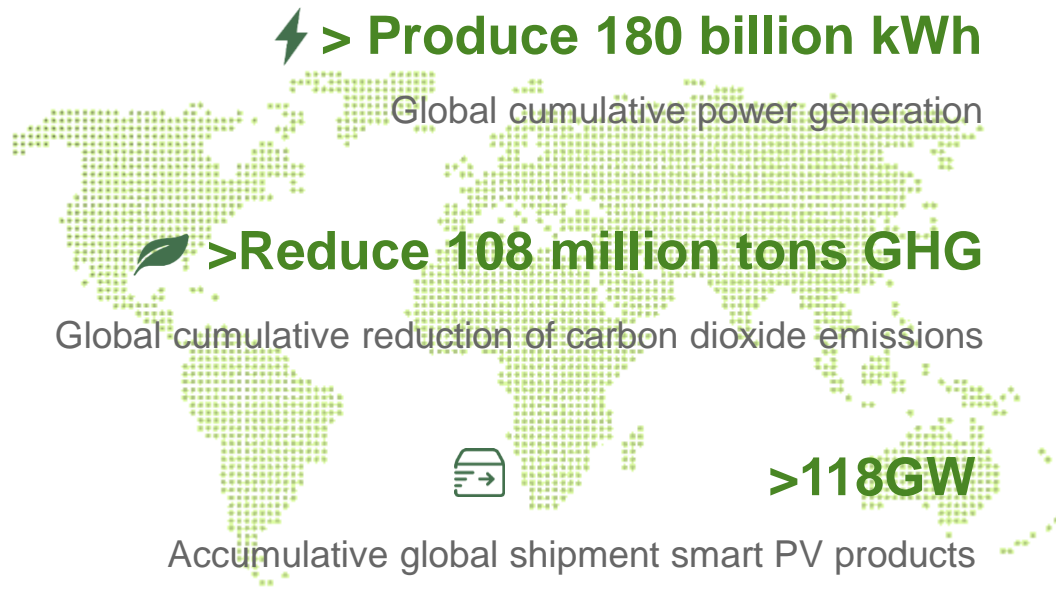
Mar, 2015


Smart PV plant at Huawei's Nanjing Research Center
Capacity: 0.05 MW




Feb, 2017

Working With Partners to Promote Renewable Energy Worldwide




 **Argentina Gauchari 300MW**

- **660 million** electricity generated per year
- Provision of clean electricity to **160,000** households
- Annual reduction of carbon dioxide emissions **>72,600 tons**

 **Saudi Arabia Sakaka 300MW**

- Supplying electricity to **45,000** homes per year
- **430,000 tons** of carbon dioxide emissions reduced annually

 **Huawei Southern Factory 17.5MW**

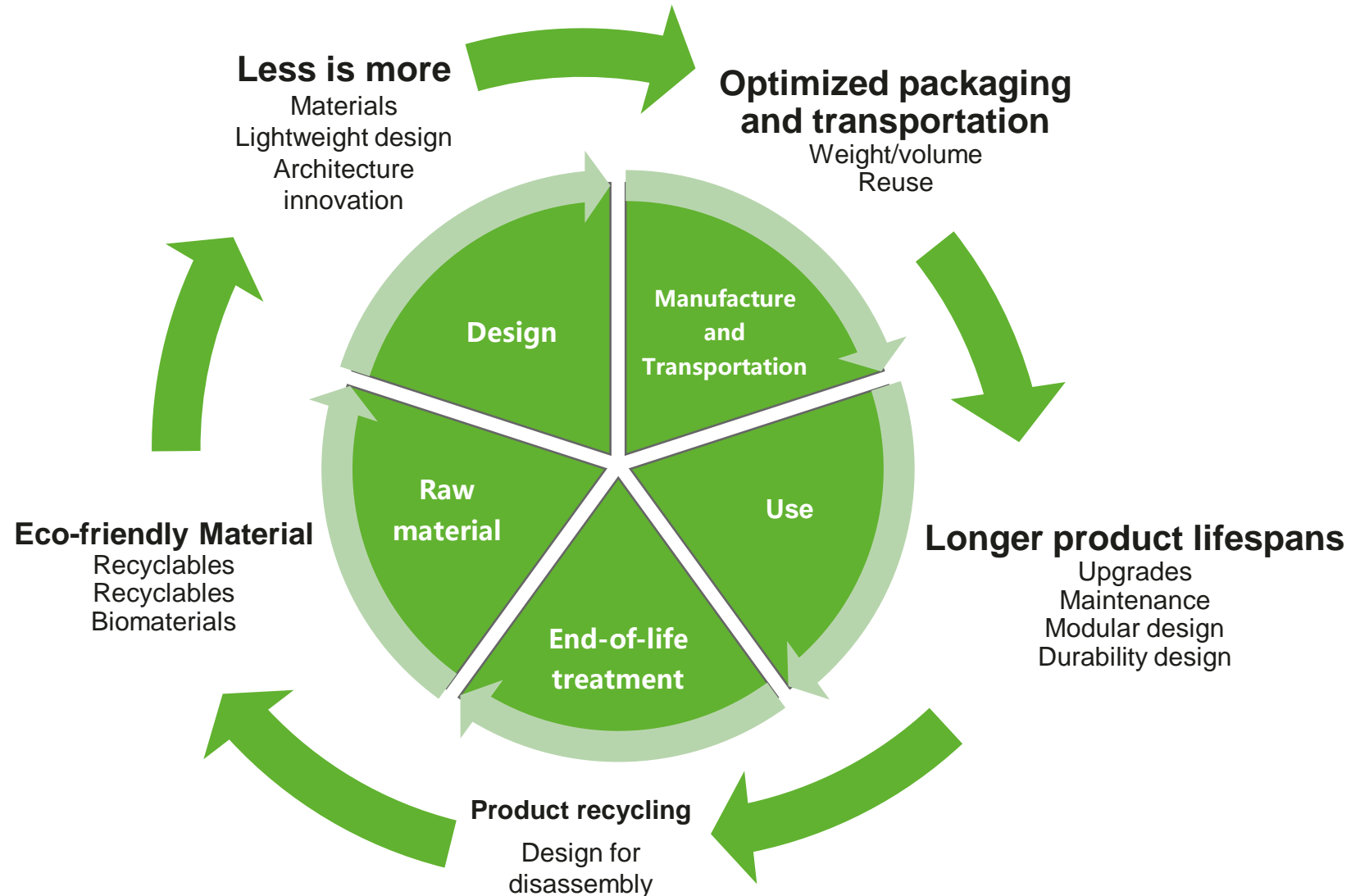
- Annual power generation **~18millionkWh**
- Provides **10%** of the factory power consumption

Contributing To A Circular Economy

Use less resources for more technology benefits



Integrate the Circular Economy Concept into the Entire Lifecycle of Products



LCA Methodology for Energy Efficiency Maximization

Transparent Environmental Information



We explore innovative ways, using LCA methodology and design for environmental, to maximize product energy utilization efficiency, and at the same time minimize carbon footprint and negative environmental impacts.



Released environmental information reports for **90** Huawei smartphones and tablets.



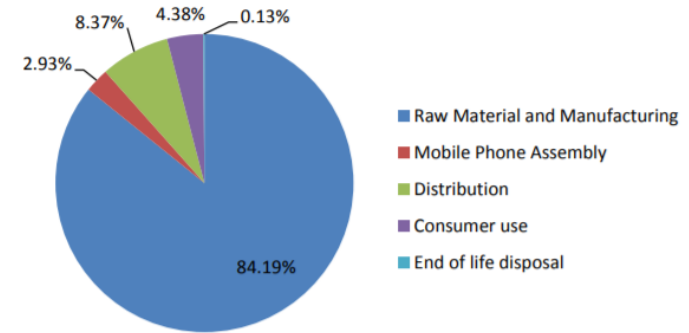
Follow **ISO 14040** and **ISO 14044** to conduct lifecycle assessments and quantify the environmental impact of our products.

For more consumer product environmental reports, please refer to:

<https://consumer.huawei.com/en/support/product-environmental-information/>

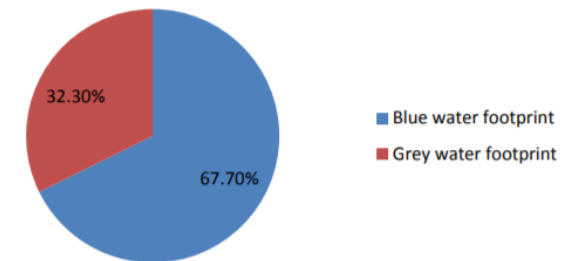
HUAWEI P30 Pro

The chart below represents the greenhouse gas emissions of the device:



Total greenhouse gas emissions*: 80.6 kg CO₂e

The chart below represents the water footprint of the device, including its accessories and packaging:



Total water footprint: 1480kg

Provide the Ultimate-experiences Product in a Responsible Way, Reducing Dependence on Natural Resources

Bioplastics

The plastic part of power bottom latch, sound volume bottom latch and receive latch contain **42% bio-based materials**



Huawei P30 and package



- BFR(Brominated Flame Retardants) Free
- CFR(chlorinated Flame Retardants) Free
- PVC Free
- Phthalates Free
- Antimony trioxide free
- Beryllium (and its compounds) free



Packing box is made of FSC-certified paper.



Packing box is printed with soy ink.

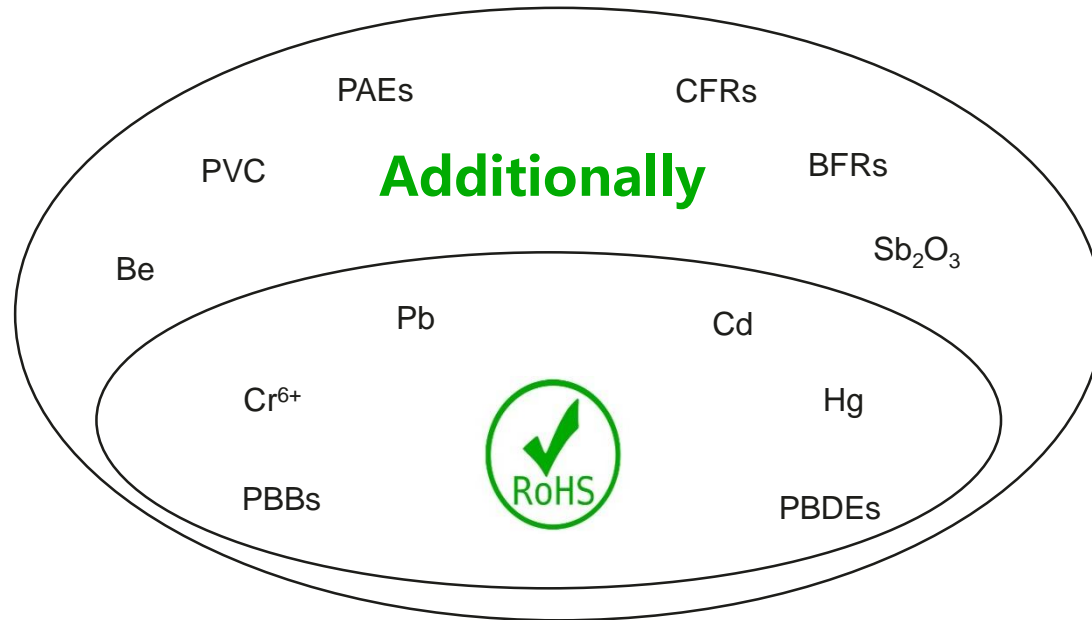


Light-weighted design, with 20% lighter than previous generation

The fiber of paper is bleached elemental chlorine free.

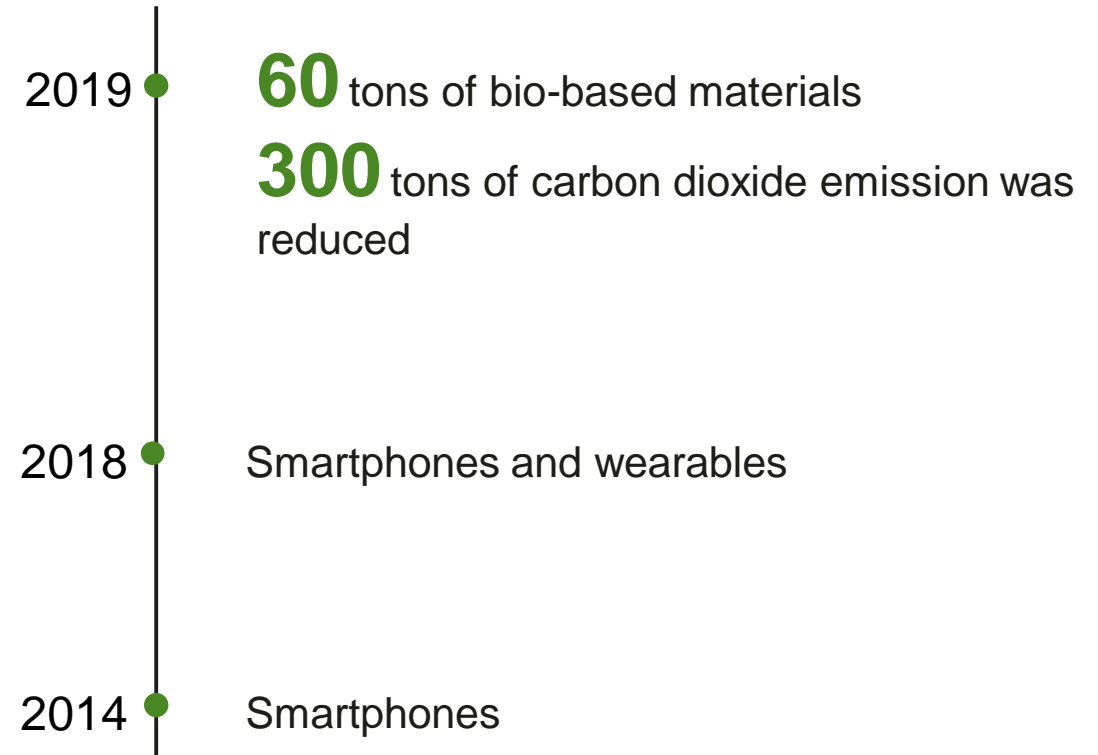
Environment Friendly Materials: Make the ICT Products Healthier and Greener

Huawei's Strict Restriction of Hazardous Substance



Since 2016, Huawei mobile phones, tablets, and wearable products have fully forbidden hazardous substance above

Widely-used bioplastics



Simplified Design Saves Materials, and 3R Rate Reaches 93.5%

Simplified 5G AAU

1*RRU + 1*Antenna



Feeder Installation

Complex Waterproof Design

1*AAU



Feeder **Free**

Waterproof Installation **Free**



Design for Recovery

- Lighter product: **38 → 27 kg**
- Less components: **10 → 6 PCS**
- Simpler structure : **↓ 50 PCS Screw**
- Lower power consumption: **↓15%**

3R(reduce, reuse and recycle)

93.5%



- Recyclable materials for the radome , improving the efficiency by 70%.
- The surface coating of the heat sink replaces the spray paint, improving the efficiency by 90%

Green Package: Reduce the Nature Resource Consumption in the Product Packaging



**Environmental Friendly
Material**

FSC-Certified

Smart Phone Package

**Save 99% of filling
material**

Inflatable film bag



**Light-weighted
Design**

**Reduce AAU
packaging volume
by 37.7%**

Multi-density EPP molding

**Reduce RRU
packaging volume
by 41.2%**

Pulp molded products



**Reusable
Design**

**Reduce wood
consumption**

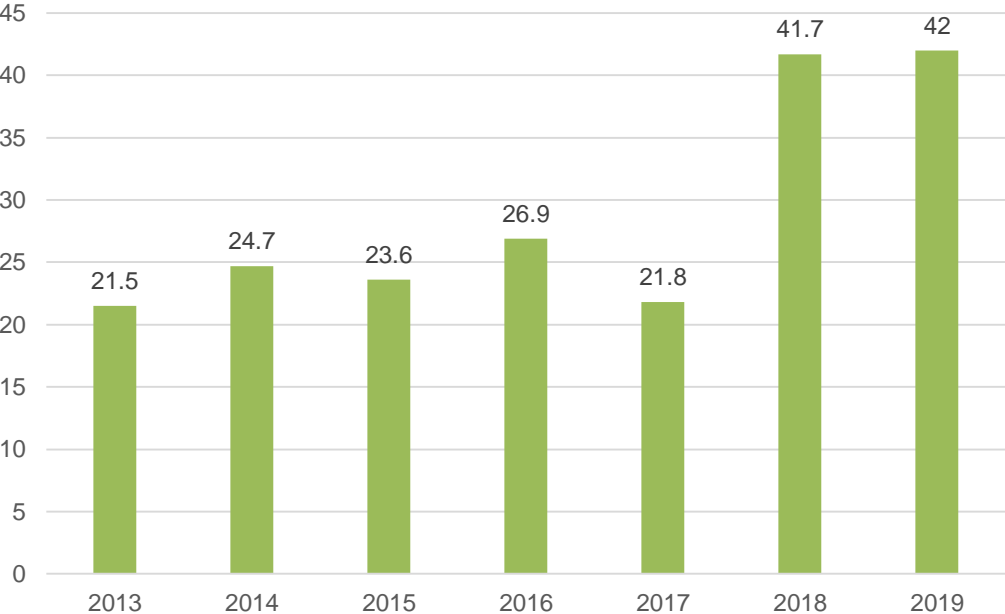
Steel tray replaced
plywood tray

Reusable

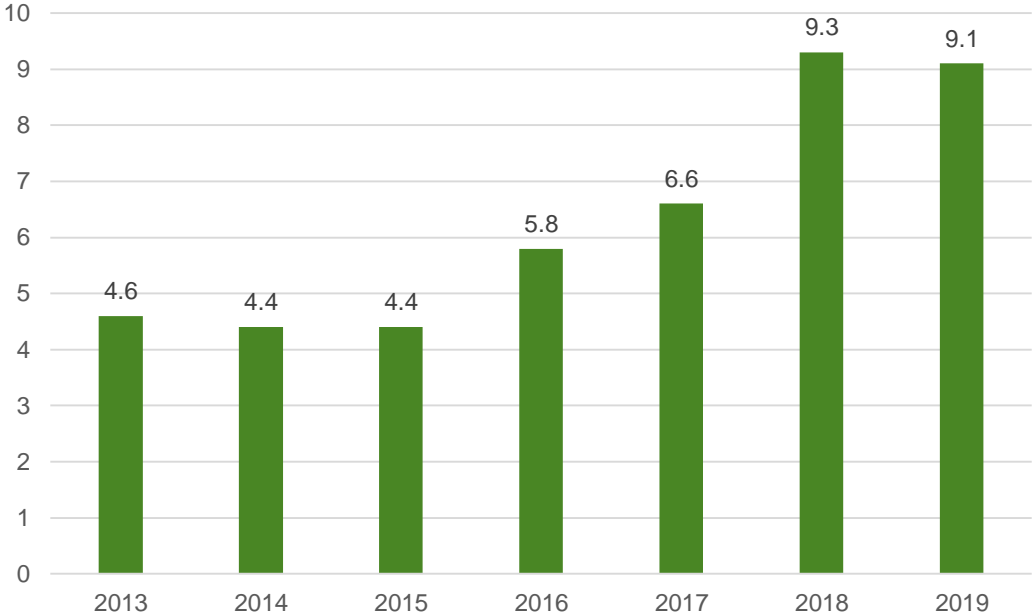
transfer box for mobile phone

Green Packaging Design to Reduce the Wood Consumption

Green Package Shipments (10,000 pieces)



Saved Wood Volume (10,000 m³)



Global Reverse Logistics Management Platform and Scrap Management System Increase Reused Material and Reduce the E-waste

4

Reverse Logistics Center

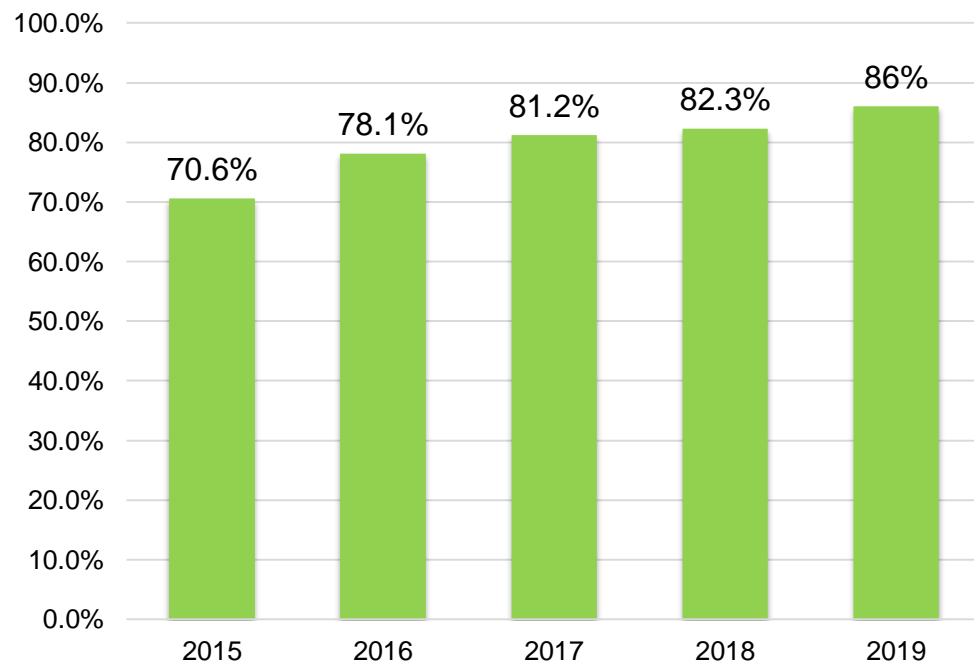
234

Reverse Warehouse

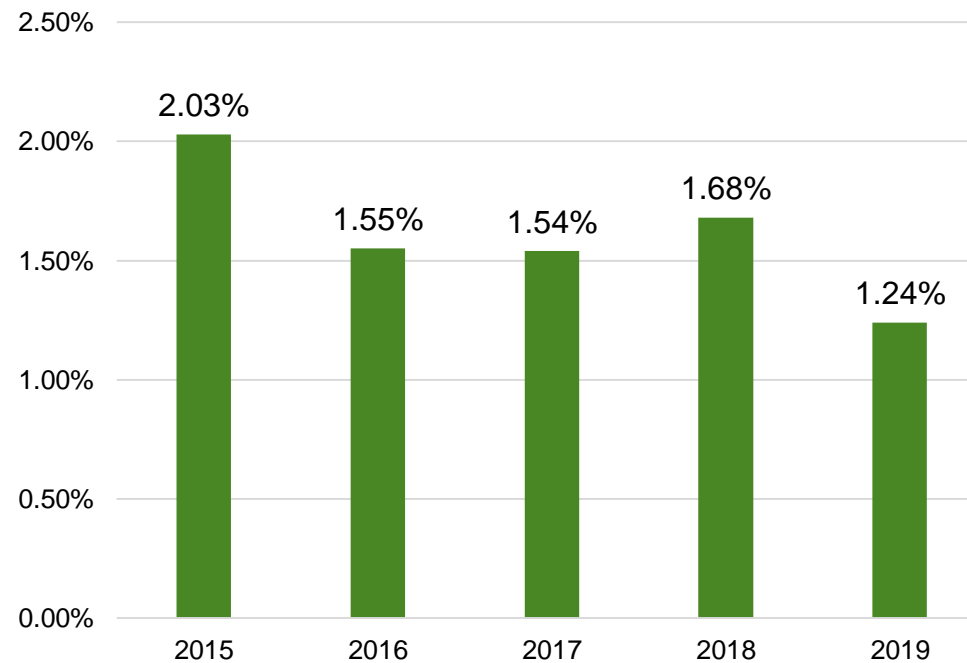
1

Scrap Management System

Reuse Ratio of Returned Materials



Landfill Ratio of E-waste



Constantly to improve the Product Recycling System and Trade-in System



2019 Built **1,700+ recycling centers** covering 48 countries and regions, recycling 60 tons of electronic waste

2018 **1300 recycling centers** have been established

Covering 48 countries and regions, the number of **recycling centers exceeded 1,000**

The trade-in project was expanded to 15 countries and regions, and the **recycling volume reached 200,000 units**

2017

2016 Covering 36 countries and regions, with **705 recycling centers**
Trade-in projects form two modes, online and offline

2015 Covering 23 countries and regions
Huawei launches **trade-in campaign** in Vmall



2014

Recycling was carried out in **8 countries** including China, Saudi Arabia and Thailand, and **190 recycling centers** were built

2013

On April 22, Earth Day, Huawei launched **a trade-in pilot in France**



Established Consumer Product Recycling System to Promote Resource Recycling

48

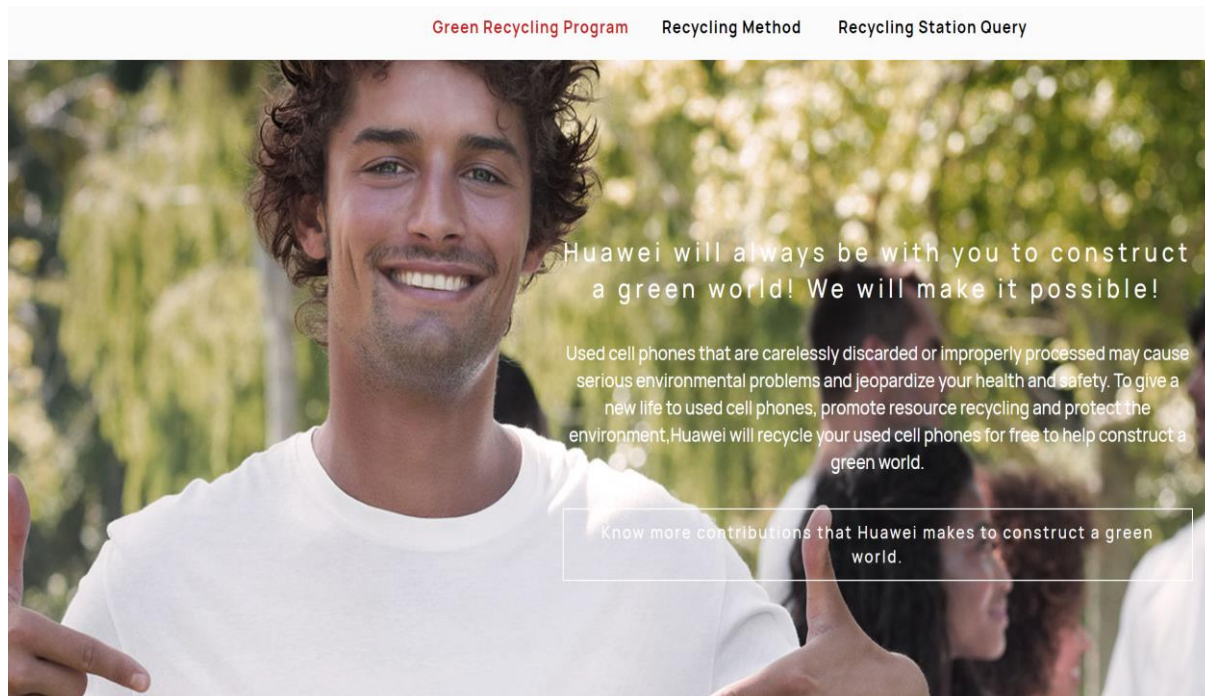
Countries and Regions

~1700

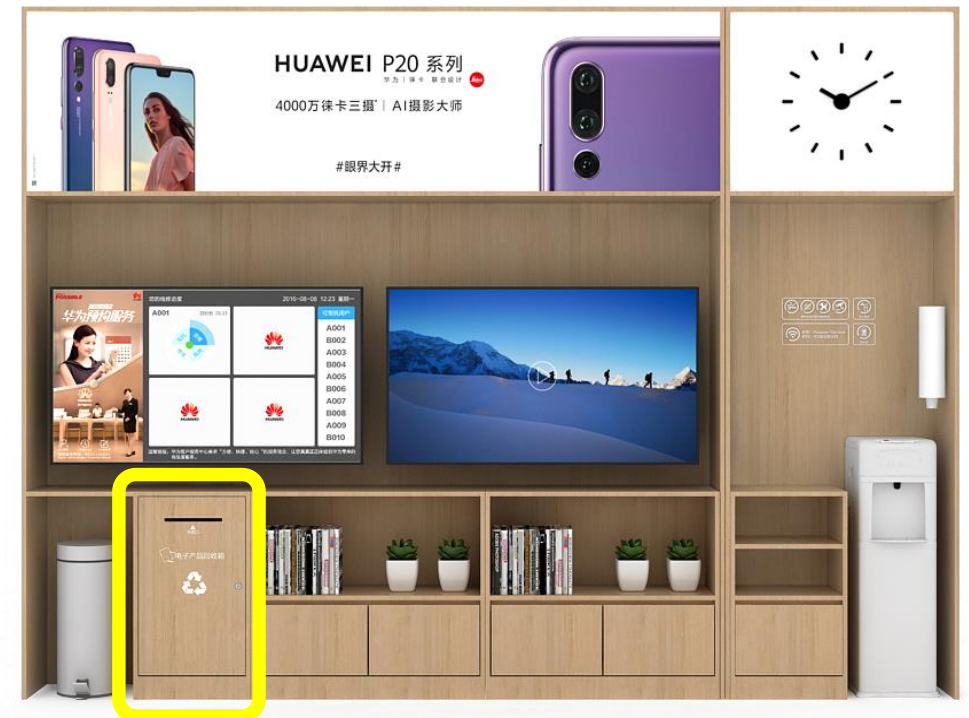
Recycling Center

~60 tons

Recycling in 2019



Recycling bin in the retail store



Recycling Website in China : <https://consumer.huawei.com/cn/support/recycling/>
Overseas Recycling Website : <http://consumer.huawei.com/en/support/recycling/>

Gradually Scale Up the Global Smartphone Trade-in Project

9 countries

Russia, Italy, Germany, UAE, etc.

130,000 units

Trade-in quantity in 2019

193 stations

Newly built in 2019

Easy Four-Step Trade-in process



Valuation of used phones
(Online/Offline)



Free delivery by
Courier



Professional quality
inspection
(Clear private data)



Recycling completed
(Refund
immediately)

A photograph of a lush green park with many trees and a grassy field. The image is overlaid with a semi-transparent green filter. The text is centered in the middle of the image.

Conserving nature
Maximize the potential of technologies to protect our ecosystem

Environment Protection

Using AI to Protect Rainforests

Huawei is working with Rainforest Connection (RFCx) to build "Guardians" using AI and upcycled Huawei phones. These Guardians protect rainforests and animals from illegal logging and poachers. We're currently running projects in 10 countries across 5 continents.



Building a Fully Connected, Intelligent World

Hyperlink on this page

TECH
4ALL

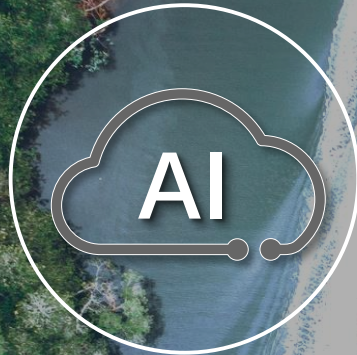
Topher White
Founder & CEO of RFCx



ICT Enables Conserving the Forests More Efficiently



+



Helping **NPO** protect rainforests
with **Old Phones** and **CLOUD AI**



2019
Forest Guardians



2020
Scale Up

ICT Enables Preserve Biodiversity and Protect Endangered Species



Species monitoring



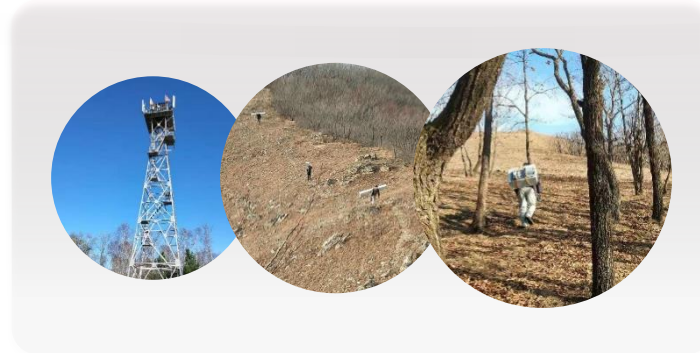
Habitats conservation



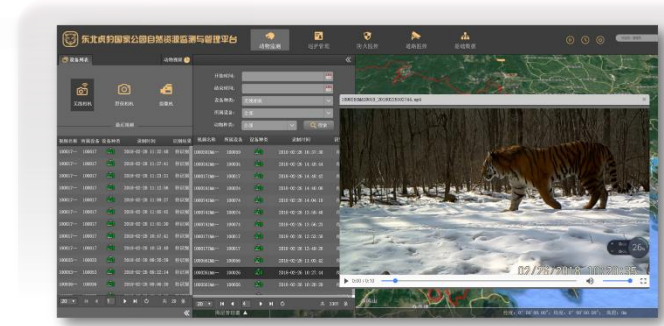
Nature science education



Sensing



Connecting



Intelligent

China Tiger and Leopard National Park (14,600 square kilometers, equivalent to 1.6 Yellowstone parks)

A wide network monitors biodiversity, tiger and leopard activity, and the overall environment in real time

Communication and Participation



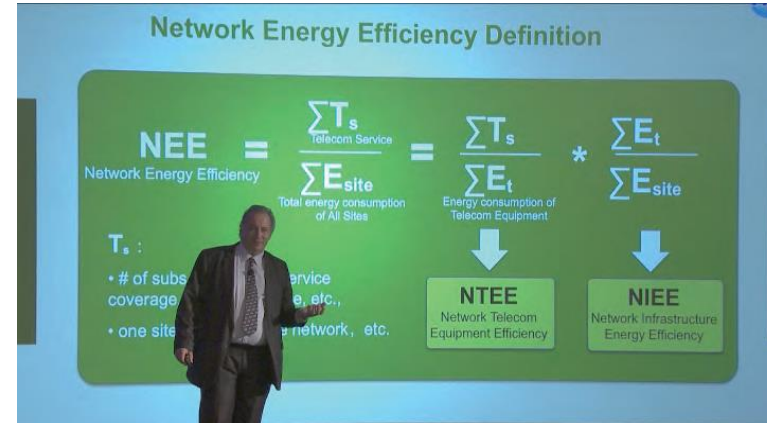
Active and Extensive Dialogue with International Organizations



Joint cooperation with customers and standards organizations to improve the capability of ICT technology towards climate change



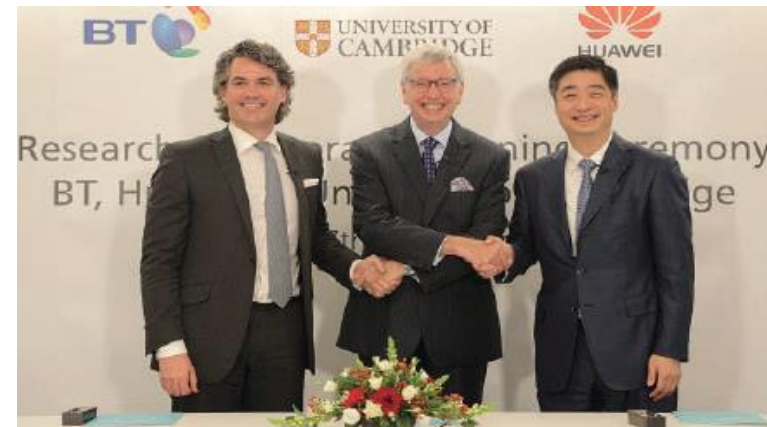
In 2014, Huawei hosted ITU Green Standards Week and shared Huawei practices



In 2016, Huawei proposed Site Energy Efficiency Definition was accepted into ITU standard



In 2015, Orange and Huawei signed Green ICT Network 2020 agreement

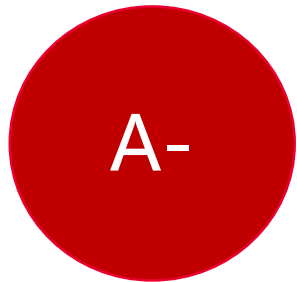


In 2017, Huawei, BT and Cambridge University set up the Cambridge R&D team to speed up environmental protection research

Overall Achievements



EcoVadis CSR Gold Metal in 2019



2019 CDP Climate Change Score A-



Passed ISO 14001 Environment Management Certification in 2018



Extended China CQC Energy Management Certification in 2020



2019 Green Factory Certificate By MIIT, China



Excellent Corporate Certificate By MEE, China

In 2019, Huawei Received Climate Change Score A- from CDP



- CDP (Carbon Disclosure Project) is an international non-profit organization, and operates the world’s largest environmental reporting system to disclose environmental information;
- CDP is the authority that collects and provides climate change data, and is responsible for rating the climate change performance of companies and cities.

CDP Climate Change Scoring

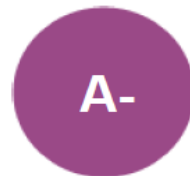
Category	Score
Leadership	A
	A-
Management	B
	B-
Awareness	C
	C-
Disclosure	D
	D-

Huawei’s score is higher than the average score of Asian region (C), and also higher than the average score of the electrical and electronic equipment industry (C)

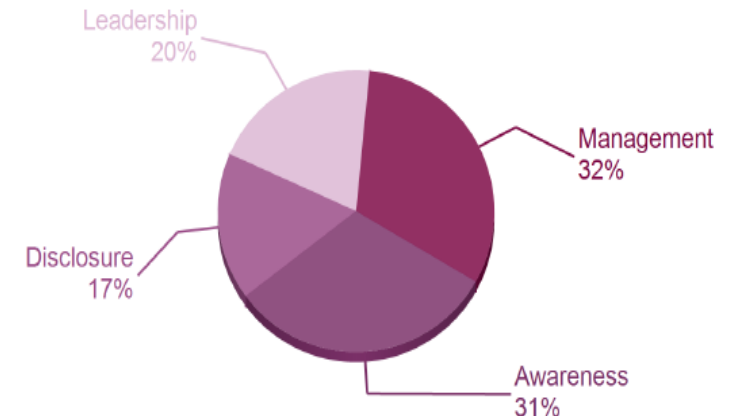
Huawei Technologies Co., Ltd.

Region	Asia
Country	China
Questionnaire	General
Activity Group	Electrical & electronic equipment

Your CDP score

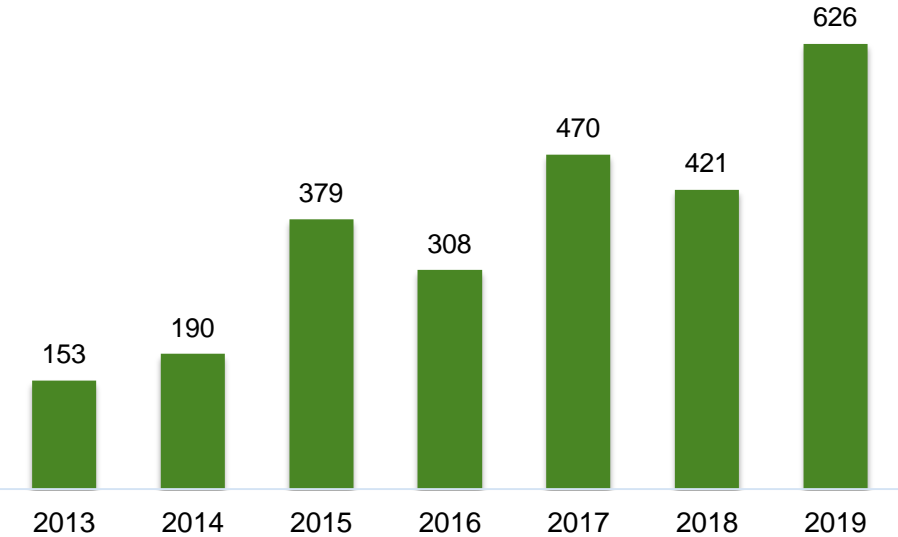


Your company is amongst 20% of companies that reached Leadership level in your Activity Group



Environment-friendly Products Certificates by Third Parties

Number of Environmental Certifications



* It includes the certifications for both ICT products and terminal products



USA



Germany



Germany



USA



中国质量认证中心
CHINA QUALITY CERTIFICATION CENTRE

China



China

Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

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

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