

**Leader in Smart Living  
Agent of Digital Economy Empowerment**

**2019 Chunghwa Telecom  
Corporate Social Responsibility Report**

# Corporate Social Responsibility Report

# ✳ Editorial Policy

Welcome to Chunghwa Telecom's 13th Corporate Social Responsibility (CSR) Report. This report is published in both Chinese and English on a dedicated CSR website. We hope to integrate the advantages of both paper-based and Internet-based reports to let our stakeholders gain a better understanding of our CSR-related efforts and performances in 2019.

<https://www.cht.com.tw/en/home/cht/sustainability/csr-report-download> 🔍

## Reporting Period

This report discloses the Company's CSR management policies, material issues, countermeasures, initiatives and results between January 1 and December 31, 2019. However, to ensure complete coverage, parts of the report include descriptions of initiatives and results from 2018 to 2020.

## References

Issuing Organization	Item
The Global Reporting Initiative, GRI	GRI Standards: Core option
	G3.1 Telecommunications Sector Supplement
The International Integrated Reporting Council, IIRC	International <IR> Framework

## How to Read the Report

S	M	A	R	T	I
Strategy	Management	Action	Response	Target	Indicator
Develop strategies and commitments	Management mindsets and mechanisms	Important projects and actions	Stakeholder requests and responses	Future outlook, targets and plans	The GRI and Chunghwa Telecom's own Indicators

## Assurance

Content and data of this report have been reviewed and assured by SGS Taiwan Ltd. based on the "Core" option of GRI Standards for compliance with the Core elements of GRI Standards and AA1000 AS (2008) Type 2 High Assurance Standards and requirements of the Integrated Reporting <IR> Framework.

## Feedback

If you have any feedback to share, please do not hesitate to contact us through:  
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**GRI** Topics of GRI Standards

**CHT** Chunghwa Telecom's Indicator

Unless otherwise specified, all currency units used in this report's financial data are by default New Taiwan Dollars (NT\$).

# CONTENT

EDITORIAL POLICY	01
MESSAGE FROM THE CHAIRMAN	04
2019 CSR MILESTONES	06

## 1

### Chapter



<b>Corporate Overview</b>	<b>08</b>
Corporate Governance	14
CSR Management	19

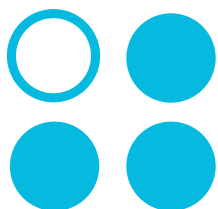
## 2



### Chapter

<b>Sustainability Value Strategy</b>	<b>22</b>
Six Main Capitals Create Sustainability Value	24
Five Major Forces Drive the Sustainable Cycle	24
Creating Sustainable Value	26

## 3



### Chapter

<b>Material Topics and Impact</b>	<b>28</b>
2019 Material Topics and Impact	30
Stakeholders Engagement	34

## 4

### Chapter



<b>Sustainability Risks and Opportunities</b>	<b>38</b>
---	-----------

Emerging Opportunities	42
Emerging Risks	42
Climate Change Risks and Opportunities	44
Cybersecurity Risks	50

## 5



### Chapter

<b>The Creation of Sustainable Value</b>	<b>52</b>
The Digital Economy Motivator	56
The Creative Industry Pilot	58
The Happiness Value Protector	66
The Green Corporation Pioneer	92
The Social Value Guide	108

## 6



### Chapter

<b>Public Policy Participation</b>	<b>126</b>
Strategies and Goals for Material Topics	129
Assurance Statement	130
GRI Standard Index	132



## ✦ Message from the Chairman

Welcome to the 13th Corporate Social Responsibility (CSR) Report released by Chunghwa Telecom Co., Ltd. Deeply rooted in the corporate social responsibility, Chunghwa Telecom utilizes its advantages in the ICT industry and in technology, endeavoring to facilitate relevant industry ecosystems in Taiwan to fulfil their sustainable development goals while creating more positive social impacts. In 2019, Chunghwa Telecom confronted the fierce competition in the telecommunication market, proactively took on challenges, and successfully secured its place as a leader in the markets of mobile communication, broadband network, and the MOD platform. Early in 2020, Chunghwa Telecom also successfully acquired the best frequency bands of the 5G spectrum as the first step to establishing steadily its competitive advantages in the long-term development in the future.

In light of the significant economic crisis brought by the climate change, Chunghwa Telecom continues to push for the “Low-carbon Economy & Sustainable Supply Chain” Initiative. In line with “ISO 20400 Sustainable Procurement Guidance” it implements a green procurement, partakes in the CDP Supply Chain Program, pushes for carbon management in over 100 suppliers, and proactively promotes a classification management system of sustainability as well as implements the ideal of a “green enterprise.” In 2019, ahead of other players in the industry of Taiwan, it completed the introduction and verification of international environmental standards, “ISO 14046” (water footprint) and “ISO 14067” (carbon footprint), for the Internet Data Center (IDC) at Banqiao and Syntrend Service Center, which thus made it the first telecom carrier in Taiwan that obtained both of these international environmental standards. Meanwhile, Syntrend Service Center also obtained the certification of PAS 2060 of SGS-Taiwan. Apart from actively adopting measures that save energy and reduce carbon emissions, the Service Center also purchases carbon rights from Zhangbin Solar Power Plant to neutralize carbon emissions in its daily operation. As such, it becomes the very first “carbon-neutral telecom store” in Taiwan, creating substantial contributions to the environment and sustainable development in Taiwan with an innovative thinking and practical actions.

In terms of social inclusion, Chunghwa Telecom, as an international-level sustainable enterprise, proposed proactively the initiative of “5I SDGs” that specifically bridges with the Sustainable Development Goals (SDGs) of the United Nations. Upholding its 5 strategies of sustainability, i.e. “The Digital Economy Motivator,” “The Creative Industry Pilot,” “The Happiness Value Protector,” “The Green Corporation Pioneer,” and “The Social Value Guide,” it has been living up to its philosophies of “sustainable development for corporate management,” “conformity with the global trend of eco-friendliness,” and “substantial assistance to the underprivileged communities” as well as fulfilling its corporate social responsibilities. Through 360-degree actions of digital inclusion, Chunghwa Telecom puts its core abilities in the ICT industry into good use, encouraging its employees as volunteers throughout Taiwan to go into communities to provide services in an attempt to achieve the goal of “Sustainable Digital Inclusion of 5I SDGs.” Setting sails from Taiwan, the solid contributions of Chunghwa Telecom in bridging the Sustainable Development Goals shall be seen worldwide.

In face of the pandemic of COVID-19 in the early 2020, to ensure its operation and the health of its employees, Chunghwa Telecom promptly enacted the contingency plan for “COVID-19.” Also, it proactively channeled its technological

energy to facilitating the government in and ensuring the communications among disease control agencies and medical units. Furthermore, it offered various products-and-services packages as a mean to assist businesses and schools to maintain daily operation and avoid clustering via telepresence. Meanwhile, mobile value-added services were available, free of charge, to keep people company during their home isolation and for a more harmonious society.

### Brilliant performances and recognitions of Chunghwa Telecom in 2019:

- Inclusion in the Dow Jones Sustainability Index (DJSI), 8 years in a row
- “2019 Asia-Pacific Emerging Market Telecom Service Provider of the Year,” “2019 Taiwan Mobile Service Provider of the Year,” and “2019 Taiwan Data Center Service Provider of the Year” presented by Frost & Sullivan
- Top 5% in the assessment of corporate governance
- Inclusion in the Taiwan Sustainability Index (TWSI)
- Inclusion in the FTSE4Good Emerging Index
- “Exemplar Award” of the Global Views Monthly Corporate Social Responsibility Awards
- 6 Awards, including the CSR Report Top 50 Platinum Award, of the Taiwan Corporate Sustainability Awards
- “Best Smart Customer Service System Application” and “Best Enterprise in Service Innovation” from the 2019 Customer Service Excellence Awards (CSEA) of TCCDA
- “Top Prize in the Telecom Category” of the 2019 Five-Star Service Awards presented by Global Views Monthly

### Other significant achievements on sustainability include:

- Green energy generation ranked No. 1 in Taiwan with the total capacity up to 600.745 kWp
- Annual CSR Supplier Conference, organized 9 consecutive years, with 1,200 suppliers as participants
- Participation in the CDP Supply Chain Program, 2 years in a row, prompting 100 suppliers engaging carbon management, achieving a 4.12-million-ton of CO<sub>2</sub>e reduction through the supply chain
- Promotion of “Click Taiwan” Program for over 10 years, facilitating students from 100 departments and institutes in 60 universities and colleges to go into the communities of Taiwan with over 330 video records produced
- Engagement of “Read with You” Community Network Tutoring over 11 years with an accumulated number of 4,460 tutoring from college students to 2,875 younger students after school
- “EYE Social Innovative Call Center” established nearly a decade, facilitating visually-impaired individuals in education and employment

With a ceaseless innovation at the core of the brand, Chunghwa Telecom shall employ a customer-oriented, duo-axis strategy for “5G+ Transformation,” ushering the corporation into the Age of 5G. On the basis of “Core Businesses Consolidation,” “Emerging Businesses Exploration,” “Cost Optimization,” and “Basic Capability Elevation,” Chunghwa Telecom shall continue to better itself, construct 4G/5G mobile broadband networks with maximum bandwidth and the widest coverage, as well as drive the digital economy development and smart living applications in variety, so as to fulfill the needs in the age of diverse consumption, establish the mid- and long-term development foundations for the enterprise, and ultimately stand as the most valuable and most trustworthy ICT company.

“Chunghwa Telecom can do more.” Aiming to form a virtuous cycle via technology, we are committed to listening and responding to social needs. Following the developments of Internet of Things and innovative digital services, Chunghwa Telecom is to position itself as “the Leader in Smart Living” and “the Agent of Digital Economy Empowerment.” Hence, it shall ceaselessly utilize its core technological advantages in the ICT industry, dedicate itself to the development of industries in Taiwan as well as to facilitating the sharing of resources in knowledge and technology, and create more positive social momentums. With that, we look forward to your continuous support and encouragement to Chunghwa Telecom Co., Ltd. in the days to come.

Chairman & CEO  
Chunghwa Telecom Co., Ltd

*Shieh Chi-man*





# 2019 CSR Milestones

Jan

Awarded No.1 Fastest Mobile Network in “Taiwan’s Speedtest Awards for mobile network speed” by Speedtest in the second half of 2018

Mar

Winners of both “Download Speed: 4G” and “Download Speed: Overall” in Taiwan from the OpenSignal Report

Apr

- “Exemplar Award” of the Global Views Monthly Corporate Social Responsibility Awards
- Awarded Top 6-20% of the Corporate Governance Evaluation from the Taiwan Stock Exchange Corporation

May

Won the Platinum Awards of Trusted Brand from Reader's Digest

Jun

Included in the Taiwan High Compensation 100 Index of Taiwan Index Plus

Aug

- Awarded with “Excellence in Corporate Social Responsibility Award” from Commonwealth Magazine
- Awarded with First prize in “Corporate Health Responsibility Award” from Common Health Magazine

Sep

- Inclusion in the Dow Jones Sustainability Index (DJSI)
- Best Omni-channel Customer Service Enterprise Excellence Award from the 2019 GCCA Conference
- “Sponsorship Award Gold Class” and “Promotion Award Gold Class” of the 11th Sports Activist Awards of Sports Administration, Ministry of Education

Oct

- “Best Smart Customer Service System Application” and “Best Enterprise in Service Innovation” from the 2019 Customer Service Excellence Awards (CSEA) of TCCDA
- Received 4 prizes for the Taiwan Corporate Sustainability Awards, including the “Top 50 Corporate Sustainability Report Platinum Award” “Social Inclusion Award,” “Climate Leadership Award,” and the “Growth through Innovation Award”
- Awarded the first place in the “Telecom 4G Industry” of NEXMAG’s “Top Service Awards 2019”

Nov

- “2019 Asia-Pacific Emerging Market Telecom Service Provider of the Year,” “2019 Taiwan Mobile Service Provider of the Year,” and “2019 Taiwan Data Center Service Provider of the Year” presented by Frost & Sullivan
- 2019 Enterprise Project Management Benchmarking Award presented by PMI-Taiwan

Dec

- Won the first place of the Global Views' Five-Star Service Award of the telecom industry division in 2019
- S&P Ratings: rated “AA” In foreign long-term rating
- Taiwan Ratings: rated “twAAA / twA-1+” in domestic long-term/short-term rating
- Awarded “Second Prize” and “Special Prize” of “Buying Power- Social Innovative Product and Service Procurement Awarding System” from MoEA
- Selected for Taiwan Sustainability Index (TWSI) and FTSE4Good Emerging Index



MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM



January

Awarded No.1 Fastest Mobile Network in “Taiwan’s Speedtest Awards for mobile network speed” by Speedtest in the second half of 2018



March

Winners of both “Download Speed: 4G” and “Download Speed: Overall” in Taiwan from the OpenSignal Report



April

“Exemplar Award” of the Global Views Monthly Corporate Social Responsibility Awards



September

“Sponsorship Award Gold Class” and “Promotion Award Gold Class” of the 11th Sports Activist Awards of Sports Administration, Ministry of Education



October

Received 4 prizes for the Taiwan Corporate Sustainability Awards, including the “Top 50 Corporate Sustainability Report Platinum Award” “Social Inclusion Award,” “Climate Leadership Award,” and the “Growth through Innovation Award”



November

2019 Asia-Pacific Emerging Market Telecom Service Provider of the Year,” “2019 Taiwan Mobile Service Provider of the Year,” and “2019 Taiwan Data Center Service Provider of the Year” presented by Frost & Sullivan



# Chapter 1

## Corporate Overview

Chunghwa Telecom (TAIEX:2412, NYSE: CHT) is the largest integrated telecom carrier in Taiwan. The head office is located at 21-3, Section 1, Hsinyi Road, Taipei with more than 714 locations in 22 counties and cities in Taiwan. Our major business areas include fixed and mobile communications, broadband access and the Internet. We also provide corporate customers with information and communication services, including big data, information security, and cloud and Internet information centers. We also offer innovative technology services, such as the IoT (Internet of Things) and AI (Artificial Intelligence), to create an outstanding communication environment and extraordinarily convenient digital life. We also have important business partnerships with other international telecom carriers.

Chunghwa Telecom has been actively involved in “Corporate Social Responsibility” since 2006, and has won praise from many domestic and international professional organizations. The establishment of the “Corporate Social Responsibility Best Practice Principles” and legalization of the governance structure has prompted us to a stringent and ambitious practice of CSR.

Three Telecom Laws [↗](#)

The main business of the branches and re-investments:  
Please refer to page 17,109-111 in the 2019 Annual Report.

The SDGs contributes to in this chapter: 8, 12



For 2019, Chunghwa Telecom's consolidated net income was NT\$ 207,520,061 thousand and its annual earnings per share was NT\$ 4.23.



Chunghwa Telecom is the only telecom company to have established a labor director.



To link sustainability performance with compensation, Chunghwa Telecom implemented a soft incorporation of sustainable development strategies and targets into its review of director compensation.



Chunghwa Telecom established a CSR committee and six task forces responsible for the setting of sustainability policies.



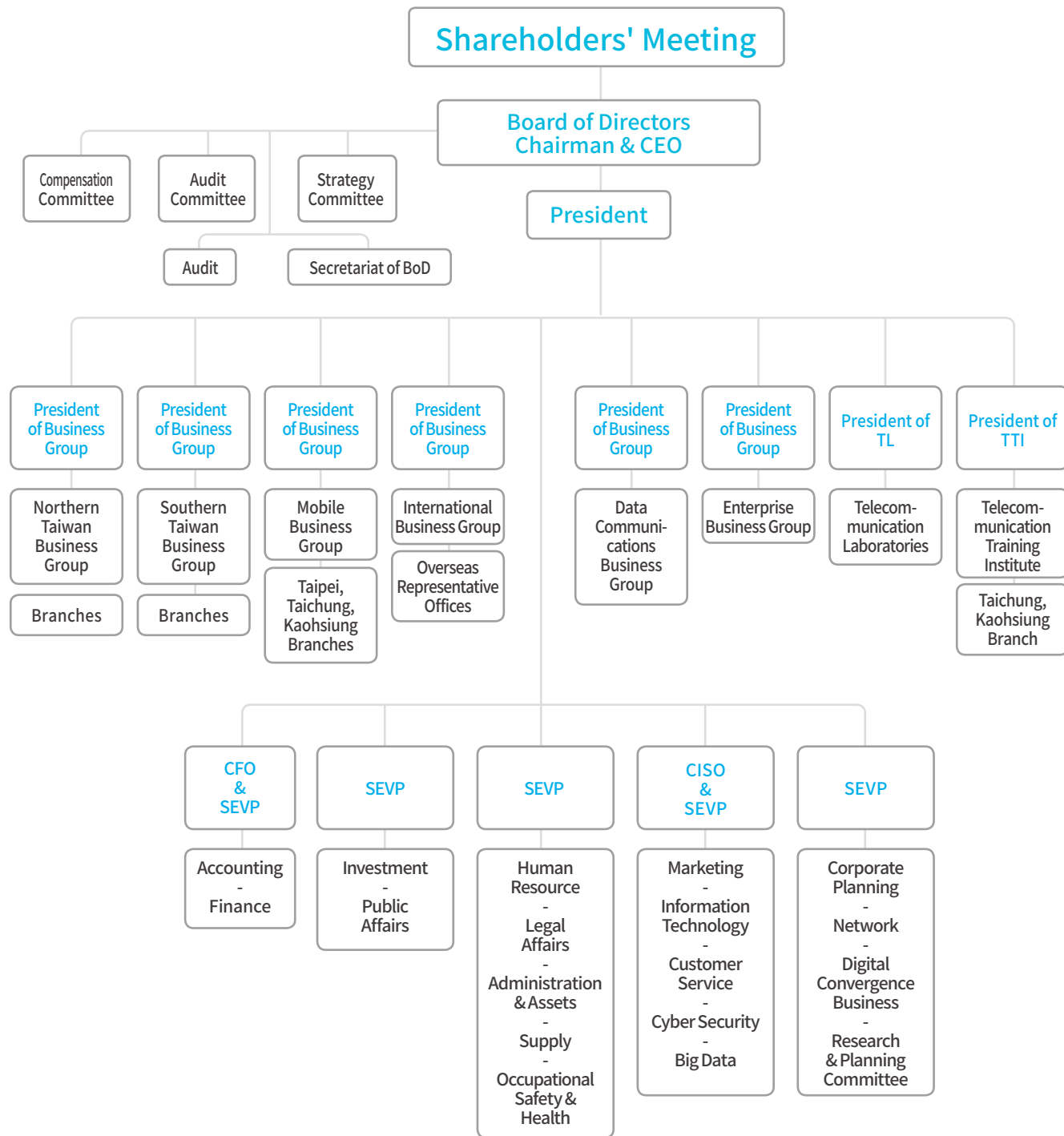
Annual review of the Company's budget planning for carbon management strategies; execution of action plans; setting performance targets.



Sustainability issues addressed by Chunghwa Telecom: social integration, digital inclusion, green ICT products & services, green brand management, and energy-saving & carbon reduction.

Corporate Governance ..... 14

CSR Management ..... 19



**We Strive to**

- Enhance the operational efficiency of corporations.
- Create a gateway to an enjoyable digital life for people.
- Facilitate industry scale to expand in a good way with our contribution.
- Allow investors to enjoy the business profit from a satisfied customer base.

## Business Model



### Household market

- Domestic fixed network service
- Domestic leased line service
- Internet and value-added service
- MOD (IPTV) service
- International fixed network service



### Personal market

- Mobile communication service
- Wi-Fi service
- International fixed network service



### Corporate market

- Integrated service
- Data security service
- Mobile service
- Data service
- International service
- Diversified integrated payment service

## Products and Services



### Mobile phone

Customer amount **10.649 million**  
Annual growth **+0.5 %**



### 100 Mbps

Customer amount **1.582 million**  
Annual growth **+11.3 %**



Customer amount **3.619 million**  
Broadband customers **82.2 %**



Customer amount **3.624 million**  
Market share **No.1**

## Share of Revenue by Product

### Mobile communication

**46 %**

Customer amount **10.649 million**  
Market share **36.5%**

### Domestic fixed network

**31.7 %**

	Customer amount / Communication amount	Market share
Local network	10.163 million households	92.5%
Long haul Internet	1,804.8 million minutes	82%
Broadband access	4.405 million households	68%
MOD	2.082 million households	29.5%

### Internet

**14.5 %**

Customer amount **4 million households**  
Market share **64.4%**

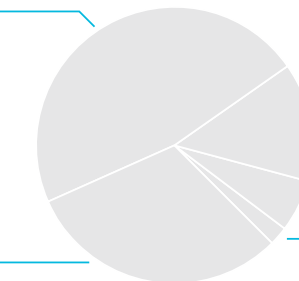
### International fixed network

**5.5 %**

Communication amount **485 million minutes**  
Market share **69.6%**

### Others

**2.3 %**

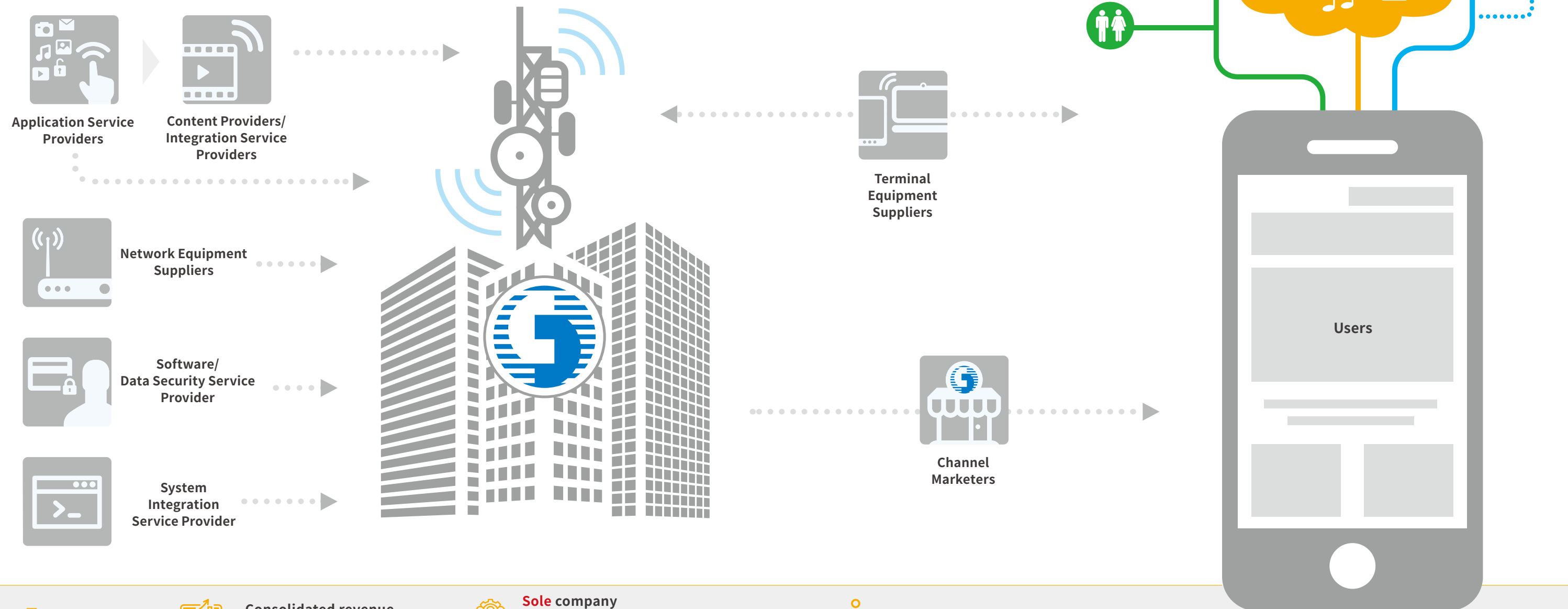




## Industry Value Chain and Critical Sustainability Performance

Due to technological advancements, boundaries of specialized markets that we used to know of are starting to shift, thus allowing industry participants to compete outside of their dominant markets. International Data Corporation has even combined ICT, e-Commerce, Electronics and Entertainment into a new segment called eICT to recognize the increasingly common cross-industry collaboration.

The wave of digital convergence brings new values to the telecom industry and opportunities to meet users' needs by offering innovative eICT services, which makes content providers and integrators, application service providers, network equipment suppliers and terminal equipment suppliers the important value partners to a telecom carrier in the development of digital convergence services.



Moving forward, Chunghwa Telecom shall continue to better itself in services of fixed network, mobile, data, and eICT while strengthening the partnership with its suppliers throughout the supply chain to form a closer industrial ecosphere to introduce more quality services.

### Economy



Consolidated revenue  
NT\$ 207.5 billion



Sole company  
in the industry to establish  
a labor director



Independent director percentage 38.5%

### Environment



Local procurement  
percentage 95 %



Contract capacity of  
photovoltaic  
system 600.745 kWp



First telecom carrier that has been certified with  
environmental standards "ISO 14046 Water  
footprint and ISO 14067 Carbon footprint"



Sole company in the  
industry to have signed  
TCFD initiative

### Society



Telecom subsidy for the  
underprivileged  
NT\$ 172,682 thousand



Social investment  
NT\$ 761 million



Collective Agreement  
coverage 99%



"51 SDGs", first initiative connecting  
to the UN SDGs and DIGI+ in Taiwan

## Corporate Governance

Chunghwa Telecom Board of Directors is the highest governing body. The Board of Directors is responsible for appointing and nominating high-level managers, as well as formulating and reviewing corporate social responsibility, and sustainable development strategies. The 9th Board has 13 directors. To date, there are 1 female and 12 male directors, including 5 independent directors. Directors' tenure is three years (June 21, 2019 to June 20, 2022). All of the independent directors are included in the Audit Committee to ensure the independence of governance and the perspectives of the stakeholders.

To meet the needs of Chunghwa Telecom's business development, the Board of Directors of Chunghwa Telecom shall comprise experts and scholars in the industries as well as in the fields of finance and accounting, management, etc.; the members on the Board of Directors shall include one or more talent in the fields of innovation capacity, business experience, legal expertise, and ICT, respectively. In addition, gender equality in the composition of the Board of Directors is highlighted. A goal of 20% female seats on the Board of Directors in 5 years has been stipulated.

Chunghwa Telecom's independent directors and outside directors provide expertise based on their respective areas of practice and professionalism to assist the Board of Directors in making decisions as to benefit the Company and the shareholders. To prevent personal liability and financial losses due to third-party litigation, we have purchased indemnity insurance for Directors.

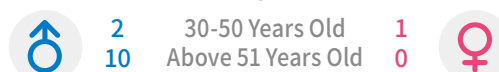
To ensure an effective operation of sustainable management, apart from the key performance indicators listed for the Company, departments, and individuals, we also incorporate items pertaining to the CSR development trends, including innovative development, risk management, code of conducts, information/cybersecurity, climate change, stakeholder engagement/inventory, and social participation, in "Directions Governing Performances of Senior Managers of Chunghwa Telecom".

Advanced studies of the Board of Directors: Please refer to the 2019 Annual Report on page p.74-76

Experiences of the Directors: Please refer to the 2019 Annual Report on page p.20-22

### CHT Board of Directors

Unit: person



### Corporate Strategy Committee

Consists of 8 board members, who are responsible for mid and long-term development plans and other critical issues, as well as major investment and mergers and acquisitions, major reorganization of the Company, applications for or returns of business licenses, annual operating plans and budget compilations and revisions, capital increases or decreases, and other strategic decisions. The resolutions are submitted to the BoD for final approval.



### Audit Committee

Consists of all the independent directors, whose main duties are to select or dismiss the CPA, determine the CPA compensation, review and discuss quarterly, semiannual, and annual financial reports, the adoption of or amendments to the internal control system and the assessment of the effectiveness of the internal control system.



### Compensation Committee

Consists of three independent directors, who are responsible for the evaluation of the performance of directors and managers, and for determination of appropriate compensation policies, system standards and structures. Also, the compensations of directors and managers are evaluated and stipulated on a regular basis.

## Linking Director Compensation to Sustainability Performance

All Chunghwa Telecom directors are nominated by the Board of Directors and shareholders holding the legally required percentage of shares, they are then subsequently appointed by the Board of Directors. The Compensation Committee has implemented a soft incorporation of sustainable development strategies and targets into its review of director compensation in accordance with the Company's Articles of Incorporation so as to achieve the following: (1) evaluation of required core competencies in order to facilitate the connection between director performance and the Company's sustainability outlook and short, medium, and long-term strategies and targets, (2) strengthening accountability and linking performance with compensation, recruitment and retention to attract key talent on the Board of Directors. The implementation of this measure coupled with the substantial effect of the variable compensation plan is a win-win for the Company and its directors.

Director compensation: Please refer to page 34-37 of the Company's 2019 Annual Report.

## Board Diversity Policy

Chunghwa Telecom values diversity in Board of Directors and recruits talents primarily based on skill sets. Selection of directors is not limited to any particular gender, age, nationality, culture or ethnicity. Directors are expected to have outstanding quality, industry experience and expertise to complement the Board.



## Avoidance of Conflict of Interest

Chunghwa Telecom's Chairman is concurrently the CEO. The elections of directors comply with relevant laws and regulations, which suggest the Board and shareholders with qualified shareholding ratio nominate the candidates, and director's nomination and review are conducted accordingly. In order to avoid conflicts of interest in the highest governance body, we conduct strict controls in accordance with the following procedures, including:

- All the new directors shall sign the Consent to Appointment to announce that they will follow Article 23 of the Company Act, conduct faithful business and perform the duty of care as a bona fide manager.
- All directors have to sign the Statement to show that they clearly knew the content of Article 206 of the Company Act, which is about the content of avoidance of voting rights and the legal effect of violations.

Due to the directors' high ethical standards and self-discipline, in the operation of the mechanism, no conflict of interest has occurred since the Board of Directors was established. Moreover, the Board has resolved to approve a total of 50 articles of "Code of Corporate Governance for Chunghwa Telecom," while all departments are required to implement the Code of Conduct, and the the Secretariat of the BoD also evaluates on a regular basis.

## Performance Evaluation for the Board of Directors

To implement corporate governance and elevate the functions of the Board of Directors, performance targets are established to enhance the operation of the Board of Directors. In 2019, at the 2nd meeting of the 9th Board of Directors approved and enacted the Regulations Governing the Performance Evaluation of the Board of Directors of Chunghwa Telecom Co., Ltd. that details rigidly the cycle and scope for the performance evaluation of the Board of Directors as well as the execution procedures, evaluation indexes, and standards for reference.

The self-evaluation for the Directors on the Board as well as the self-evaluation on the performance of functional committees is conducted on an annual basis, while the performance evaluation by external, independent, professional institutions or external teams of experts and scholars is liable to be carried out once every 3 years. In 2019, we commissioned Taiwan Corporate Governance Association to conduct an external evaluation. Kindly refer to the following link for details of the execution.

[Regulations Governing the Performance Evaluation of the Board of Directors of Chunghwa Telecom](#)

[Results of the 2019 Performance Evaluation](#)

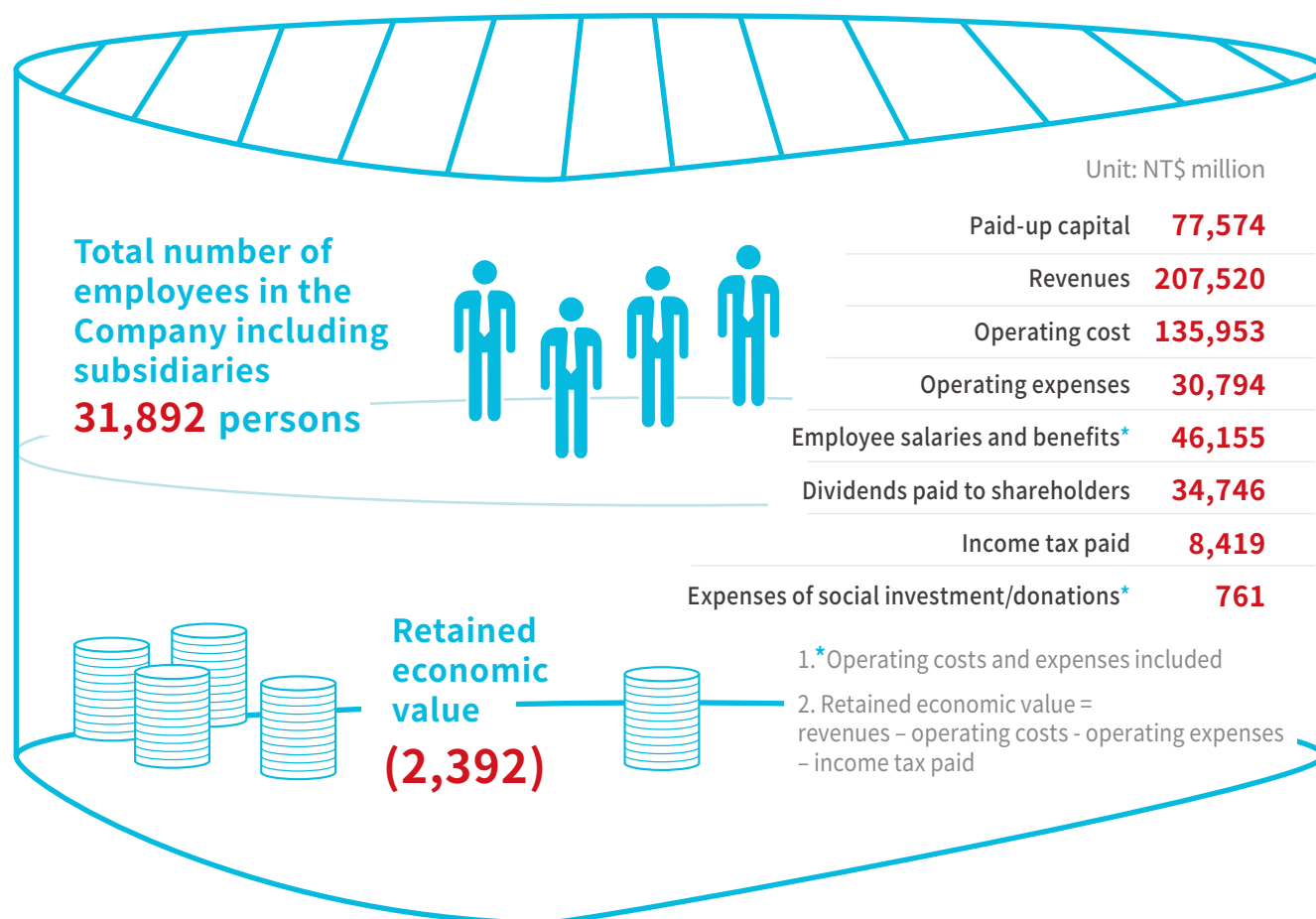


## Creating Value for Shareholders

Chunghwa Telecom business operations have been stable for years. Profitability and financial completeness have been uninterrupted. We pay our taxes honestly year after year, following the law, and make solid contributions to the country. Despite the existence of many challenges in the telecom operation environment, we maintain complete focus on our field and create value for the shareholders. Chunghwa Telecom generated consolidated revenues totaling NT\$ 207.5 billion in 2019.

Owing to the impact by replacement and competition from free messaging apps and VoIP technology, the revenue from voice service tumbled; ICT projects were completed as scheduled in line with the quality requirement, which benefited the revenues from tender projects. Net income attributable to the parent company amounted to NT\$ 32.8 billion while EPS reached NT\$ 4.23 in 2019.

In 2019, Chunghwa Telecom income tax was the equivalent of an effective tax rate of 19.13%. The deviation from statutory 20% tax rate was mainly attributed to the provisions of Article 42 of Income Tax Act, in that net dividends or net earnings recognized from local invested businesses are exempt from income tax. In addition, the application can also be made for tax preference pursuant to Article 10 of the Statute for Industrial Innovation as well.



## Encourage Shareholders to Participate in Corporate Governance

Chunghwa Telecom has made changes and revisions to several systems and measures based on a corporate governance mindset. These include e-voting, voting by poll and the disclosure of meeting resolutions made on the Company official website. These diverse voting channels allow shareholders to exercise their rights easily and this has made corporate governance more effective.

### Shareholder Structure of Chunghwa Telecom

Government	Financial Institutions	Other Legal Entities	Individual	Foreign Institutions and Individuals
40.32%	17.18%	8.03%	17.9%	16.48%

Date of data: 2020/3/31 (the most recent book closure date)

## Highest Moral Standard

We have set up the “Code of Ethics of Chunghwa Telecom Co., Ltd.” “Ethical Corporate Management Best Practice Principle,” and “Procedures for Ethical Management and Guidelines for Conduct.” These are formulated as basic ethical guidelines to ensure that all employees engage in all activities with the highest standard. In addition to these codes being included in the training program for new hires, all employees are required to log into the web, review the material and take a test annually. All employees participated in the test in 2019 except for those who were not available for a legitimate reason at the time of the test.

### Prevention of Corruption

Chunghwa Telecom has prepared the “Employee Appraisal Guidelines” and “Employee Reward/Disciplinary Standards” for the evaluation of performance. Rewards and sanctions are applied according to these rules whenever employees exhibit conduct deserving of them. Information such as a grievance hotline has been made available on the Chunghwa Telecom intranet/employee portal. A total of 25 internal complaint cases (disciplinary and leak investigations) were accepted in 2019, 23 of which are closed and 2 of which are still under investigation; 18 were associated with violation of the code of conduct. All complaints were investigated and handled according to company internal policies and principles, and taught as case studies to strengthen employee esteem for the rules, discipline, corporate image, and shareholders’ interests.

[CHT's Anti-corruption Policy](#)

### The Internal Audit System

The internal audit helps the Board and managers to check the effectiveness of the internal control systems and operations. It is located under the Board and conducts business audits in accordance with the regulations and policies. The annual audit plan is formulated based on the results of the risk assessment made at the end of every year. After the approval of the Board, the plan is sent to the competent authorities via the Internet information system for their reference.

[Organization and functioning of Chunghwa Telecom's internal audit unit](#)

### Transparent Information Disclosure

The corporate governance of Chunghwa Telecom places great emphasis on integrity, accountability, and trustworthiness. We are committed to reducing information asymmetry between the management and external stakeholders, and utilize a variety of means such as the corporate website, a Market Observation Post System, Annual Reports, CSR Reports, press conferences and investor conferences to facilitate transparent communication with stakeholders. Furthermore, measures have been taken to ensure the timeliness, quality, balance, and credibility of the information disclosed. In 2019, the Company was ranked among the top 6-20% in the 5<sup>th</sup> Corporate Governance Evaluation by the TWSE. Thanks to the joint efforts by all personnel, we achieved the best performance as one of the top 5% in the 6<sup>th</sup> Corporate Governance Evaluation, which is the fifth time we are recognized with such honor.

### Strengthen Business Management

To improve the quality of business marketing and consumers' trust, we have formulated the “Business Marketing Standards” to ensure the execution of business aligns with the requirements of the competent authority, while including compliance status into the evaluation of higher management's performance. We were fined NT\$2 million by the National Communications Commission (NCC) due to the 499 cases in 2018. Upon appeal to administrative litigation, the High Administrative Court ruled a reduction of the fine to NT\$1.2 million. Chunghwa Telecom received no penalty from the competent authority in 2019.

### Supporting Global CSR Initiatives and Guidelines

We willingly comply with the principles of The UN Global Compact and respect and uphold all basic human rights recognized in the world. We refrain from any disregard or neglect of such rights. In terms of employment practice, we protect the right of workers to freedom of association, while recognizing and supporting their rights to also negotiate with the employer. We are dedicated to eliminating all forms of illegal labor and discrimination.

Chunghwa Telecom has publicly disclosed its human rights policy and emphasizes the importance of such issues. It has a system in place to address violations and will continue with human rights protection as part of corporate policy. The Company openly states a respect for human rights and reviews human rights issues on a yearly basis. The Company keeps detailed records of internal findings concerning human rights policy, including child labor, the rights of indigenous peoples, and supplier human rights assessment. Current practices are audited regularly and the findings are used for review and correction by relevant departments. Chunghwa Telecom Training Institute organizes human rights-related courses on a yearly basis and whenever there is a change in labor regulations and policies. 11 courses totaling 31 hours were held in 2019; 1,681 employees had participated in these courses.

[Chunghwa Telecom Human Rights Policy](#)



## Climate Risk Management

Chunghwa Telecom builds a systematic and organized corporate governance structure to ensure that climate change-related challenges are incorporated into the Company's annual strategy in real time and that relevant projects are implemented.

### The Supervisory Responsibility of the Board of Directors

The chairperson and vice-chairperson of the CSR Committee are the Company's Chairman and President respectively, who both are also members of the Board of Directors of CHT. As the chairperson for Chunghwa Telecom's Risk Management Committee, the President can further manage the risks and opportunities related to climate change thanks to the overlapped responsibilities and familiarity thereof, so as to ensure that climate change-related issues are discussed and reviewed at the annual CSR Committee, while supervise and manage the routine operation via the existing internal control and risk management process and report to the Board of Directors.

Recognizing the importance of climate change issues, CHT started to promote the "Directions Governing the Performance of Senior Managers" in 2018, incorporating "Corporate Social Responsibility" and "Climate Change" flexibly in the indicators for performance evaluation of the Directors and senior managers that are hooked with the compensations respectively.

### The Role of Management

The CSR committee conducts annual review of the Company's carbon management strategies, and appropriate budget implementation action plans, and sets related performance targets to ensure the incorporation of climate-related strategies in departments' annual business operations. The related management mechanisms include:

## CSR Management

We launched a CSR management system in 2006, and established the "CSR Committee" to stipulate sustainable policies. We also established six CSR groups, using a top-down approach to achieve sustainable action. The Chunghwa Telecom sustainable development strategy utilizes the competence and unique resources of the Company to implement sustainable action from the six groups with the focus on such matters as "Create social harmony, Digital inclusion, Green ICT products and services, Green brand management and Energy conservation and carbon reduction."

[Corporate Social Responsibility Best-Practice Principles for Chunghwa Telecom Co., Ltd](#)

### Chunghwa Telecom's CSR Vision

#### Corporate Mission

Innovation  
Excellence  
Sensation  
Reliability

#### Social Contribution

Minimizing the digital divide  
Implement environmental protection  
Caring for the vulnerable

#### Team Culture

Trust  
Responsibility  
Sharing  
Growth

#### Customer Relations

Always caring,  
always around

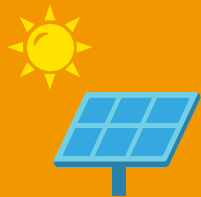
1. Facilitate positive business evolution through mobile, broadband, value-added and ICT integration services.
2. Develop emerging service opportunities such as Cloud and IoT (Internet of Things); work with partners to generate best strategies.
3. Continue to strengthen the applications of Internet facilities and information technologies to support business transformation and growth.
4. Strengthen resource utilization and management mechanism to improve the efficiency of resources.
5. Develop overseas ICT market to explore new opportunities.
6. Sharpen the unique advantage of the subsidiaries to enhance the Company's competitiveness.
7. Infuse telecom expertise into corporate social responsibility issues to implement the Company's commitment to corporate citizenship.



### Target Setting



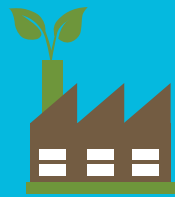
Setting the targets for Chunghwa Telecom greenhouse gas management and carbon reduction.



### Strategic Planning



Planning for energy efficiency enhancement projects and product/service of carbon intensity reduction strategies and action plans.



### Solutions



Oversight and proposal of innovative solutions, including innovative ICT technologies & services and the reduction of CO2 emissions within the Company and the industry.



The Environmental Sustainability Task Force is established under the Chunghwa Telecom CSR Committee to evaluate climate-related risks and opportunities via the Company's risk management procedures, which is carried out in accordance with the long-term strategies set by the Board of Directors, the needs of international investors, rating agencies, and stakeholders, and to faithfully implement various solutions.

## Internalization and Communication of CSR

To ensure that all employees understand the spirit of CSR, we have established diverse channels for communications and education of related topics. The initiative integrated with a performance evaluation that helps to translate the concept of CSR into actions and is practiced in routine operations.

### The CSR Committee

The “Chunghwa Telecom CSR Committee” was established for expanding sustainable benefits of our core competence and implementing CSR vision as a starting point to promote the sustainable development of the industry and society.

Item	Description
Representative	Chi-Mau Sheih, Chairman
Mechanism	CSR Committee is responsible for coordinating each plan and supervising the progress of the policies approved by the Board of Directors. It also periodically reports the relevant issues and the results of communicating to stakeholders to the Board. The Board is in charge of the final performance evaluation every year.
Execution	<ul style="list-style-type: none"><li>The Public Affairs Department is designated as CSR Secretariat.</li><li>The CSR Secretariat is responsible for relative policies and action planning. It is also in charge of budgeting, educational training, and management of follow-ups and awards measures.</li><li>The six groups, branches and affiliates are responsible for promotions and implementation of related projects.</li></ul>
Meeting Frequency	Quarterly
Report Approval	Reports are submitted to the Chairman for final approval after the managements' (SEVP) review.



Channel	Item	Content
Communication within Senior Management	Senior management meeting	Material CSR issues are discussed in the senior management meeting annually, and the resolution indicates our improvement and direction.
Employee Forum	Chunghwa Telecom online forum	We have an intra-site for employees to share opinions with the Company and make suggestions. We will discuss the issues of concern with the employees and resolve them timely.
Employee Training	Environmental training	We provide at least 4 hours of training every year as well as educational ecological tours that instill a spirit of environmental sustainability.
	CSR training	We provide CSR related education every year, and invite external consultants to run seminars and courses in accordance with international trends.
	New employee training	New employees undergo digital pre-service training that includes the personnel system, working guidelines, and labor relations. The Labor Standards Act is explained in detail with respect to labor-management coordination and the handling of disputes.
	e-Learning	We post relevant training courses and information on the e-Learning system that can be downloaded and studied freely by the employees.

Channel	Item	Content
Annual Evaluation	Administrative sustainability performance	We set energy reduction targets and link the results with employees' performance bonuses.
	Online test on CoC	All our employees are required to take the “Chunghwa Telecom Code of Business Conduct Test” each year.
	Reporting mechanism	Once an employee is found to violate corporate regulations, it will affect his/her performance bonuses.
Others	CSR Report workshop	Internal training on new ways of preparing reports is held from time to time.
	Official website and Social media	To coordinate with modern stakeholders' communication pattern, we established dedicated CSR multimedia webpages on the official website, YouTube channel and a Facebook fan page as ways of communicating with our stakeholders.



# Chapter 2

## Sustainability Value Strategy

The result of our CSR input has been the creation of profit in corporate operation and a maximization of shareholder value. Our shareholder structure allows us to carry on a broad citizen responsibility. Our position in the ICT industry and the innovative products and services we provide give us the opportunity to use technology and innovation to control the risks and grasp opportunities. Our innovative products and services have a positive economic influence on the value chain, create sustainable value for the industry and the public and greatly minimize the negative impact on the environment.

The SDGs contributes to in this chapter: 8, 9



Six Main Capitals - “Financial Capital, Human Resource Capital, Intelligence Capital, Manufacturing Capital, Social Capital and Nature Capital”



Five Major Forces - “The Motivator of the Digital Economy, The Creative Industry Pilot, The Happiness Value Protector, The Green Corporation Pioneer, and The Social Value Guide”



Vision-“Digital economy transformation, Industrial innovation, Talent startup, Happy corporation, Considerate services, Transform into a green corporation thoroughly, and Connect · Hope · Technology”

Six Main Capitals Create Sustainability Value ..... 24

Five Major Forces Drive the Sustainable Cycle ..... 24

Creating Sustainable Value ..... 26



## ✧ Six Main Capitals Create Sustainability Value



### Financial Capital

- Share capital  
**77,574,465** thousand
- Capital expenditures  
**24,165,857** thousand



### Human Resource Capital

- Salary and welfare expenses  
**46,155,421** thousand
- Training expenses  
**497,901** thousand



### Intelligence Capital

- R&D expenses  
**3,941,446** thousand
- Marketing expenses  
**22,219,688** thousand



### Social Capital

- Social investment  
**760,701** thousand
- Universal telecom services  
**425,633** thousand



### Manufacturing Capital

- Equipment installation and maintenance expenses  
**20,221,618** thousand
- Cell tower installation expenses  
**4,438,241** thousand



### Nature Capital

- Green procurement  
**1,023,939** thousand
- Environmental management expenses  
**328,558** thousand

## ✧ Five Major Forces Drive the Sustainable Cycle

We utilize our ICT corporate core competence and integrate with CSR to establish the five main forces, “The Digital Economy Motivator, The Creative Industry Pilot, The Happiness Value Protector, The Green Corporation Pioneer and The Social Value Guide.” We think that the input in these five main fields will help accomplish a society with digital inclusion and the future of sustainability development.

### The Motivator of the Digital Economy

**Vision** Digital economy transformation

- Strategy**
- Becoming the 5G telecom leading brand
  - Stimulating innovative application and creating new business models

### The Pilot of Creative Industry

**Vision** Industry innovation & Talent Startup

- Strategy**
- Investing and fostering startup business
  - Encouraging innovation and start-up internally

### The Happiness Value Protector

**Vision** Happy corporation & Considerate services

- Strategy**
- Establish a healthy and happy workplace
  - Protect cyber and labor human rights
  - Provide excellent innovative service

### The Green Corporation Pioneer

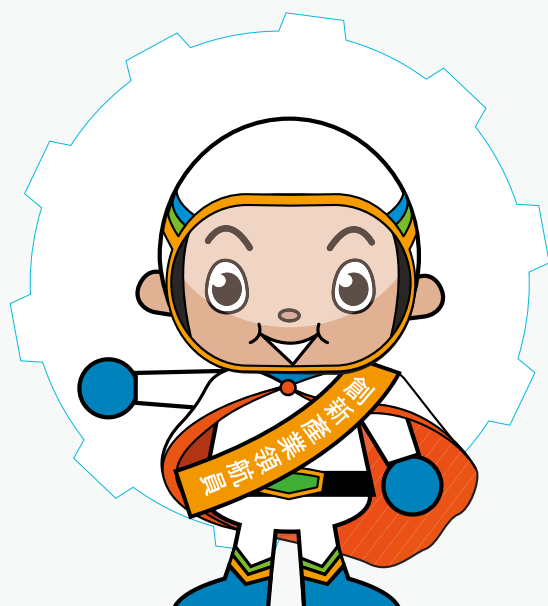
**Vision** Transforming into a green corporation thoroughly

- Strategy**
- 5G(Green) green action
  - Constructing a green and low-carbon supply chain

### The Social Value Guide

**Vision** Connect · Hope · Technology

- Strategy**
- 5I SDGs digital inclusion initiative
  - Corporate volunteer work



## ✦ Creating Sustainable Value

Our CSR issues and actions have created sound economic, environmental and social value since 2006. Although we have made serious efforts to adapt quantized data when setting-up and managing CSR plans, targets and performance, we have come to realize the difficulty of quantizing environmental and social values. There is still lots of true value that cannot be realized with the currency presently used as evaluation indicators of CSR performance.

### Shareholders

- EPS NT\$ **4.23**
- Consolidated revenue NT\$ **207.5** billion
- Selected for the Emerging Index of the Dow Jones Sustainability Index for the **8<sup>th</sup>** time



### Employees

- Employee salary and benefits are NT\$ **46,155** million
- The average training hours per person are **44** hours
- The total training cost is NT\$ **497,901** thousand
- The total service hours of the corporate volunteer service are **21,375** hours
- The occupational injury rate per thousand workers is **0.69** for men and **0.18** for women
- We have **751** employees with disabilities (the legal amount is 201 people)
- **49** aboriginal employees
- The employee satisfaction score is **83.63** (out of 100)



### Clients / Costumers

- We have more than **53** thousand public Wi-Fi hotspots
- The customer satisfaction score is **8.98** (10-point system)
- The customer hotline service satisfaction score is **4.74** (5-point system)



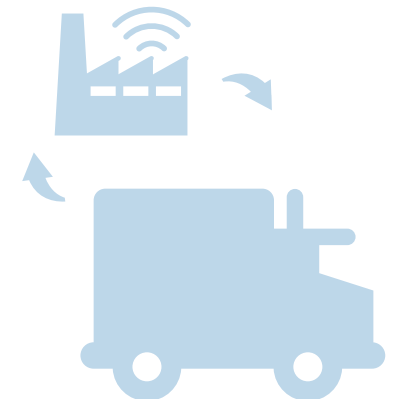
### Communities / NPOs

- We provide the disadvantaged groups' communication for **62,387** households
- The subsidy amount is NT\$ **172,682** thousand
- Coverage rate of the 12Mbps universal broadband service is over **97.6%**
- The voice assistant App for the blind has been downloaded **54,270** times since 2013
- The location of digital good neighbor has accumulated to **89** places



### Supply Chain Partners

- **10** certified Gold-tier sustainable partners
- The local procurement percentage takes up **95%** of the total procurement
- The green procurement amount is NT\$ **1,024** million



We have used a "True Value" method of calculation. Positive (+) and negative (-) currency values have been assigned in an assessment of our influence on society and the environment. This gives a sound idea of the real environmental and social value (profit and cost) of our sustainability efforts in 2019. The economic, social and environmental currency value CHT created on operation has also been blended in. The true value CHT creates in 2019 is NT\$ 22.73 billion.

■ Economic Value ■ Environmental Value ■ Social Value  
● Positive value ● Negative value



Consolidated revenue  
2,075

The innovative research and development  
39.4

The green procurement  
10.2

The renewable energy (green energy) procurement  
75

Internal carbon pricing (greenhouse gas emission)  
0.03

Environmental management cost-general waste processing  
1.91

Environmental management cost-domestic water resource management  
0.3

Social investment  
23.1

Telecommunications universal service  
52

The corporate volunteer service  
0.34

Total  
2,273

Unit: 100 million

[Source of true value calculation for corporate volunteer service](#)

Source of true value calculation for Telecom universal service:  
Research conclusion, Journal of China Institute of Technology Vol.40-2009.06

# Chapter 3

## Material Topics and Impact

We intend to provide all stakeholders concerning the future of Chunghwa Telecom as well as the telecom industry with a more comprehensive understanding of how Chunghwa Telecom has exerted its industry influence on CSR topics. This purpose has improved the quality of our actions and disclosures.



The annual material topics are determined through the following process: internal feedback, external questionnaires, topic identification by the CSR Secretariat, topic analysis by the six CSR task forces, ranking the topics, and finally, confirming the results.



We have a set of procedures in place to identify, engage, interact, and communicate with stakeholders through various channels based on the Stakeholder Engagement Standard (AA 1000SES:2015).

**2019 Material Topics and Impact** ..... **30**

**Stakeholders Engagement** ..... **34**



## ✳ 2019 Material Topics and Impact

CHT is an integrated telecom service provider. Except for the use of electricity at business locations, facility rooms, and data centers, our other service processes and mechanisms have no major negative impact on the environment and society. However, with over 20 thousand employees, the capabilities of value chain procurement and supply and business locations all over Taiwan, we understand that our ICT services and products can bring positive transforming and business opportunities to the industry, economic development and people's life in Taiwan. Therefore, we seize opportunities and endeavor to decrease the potential risks from material CSR topics.

Range of impact		Within the organization			Outside the organization	
Material Topics	Entity	CHT	Honghua Subsidiary	CHT Security Subsidiary	Engineering Suppliers	Equipment Suppliers
Economic Performance		●	▲	▲		
Market Presence		●	▲	▲		
Anti-Corruption		●			□	□
Energy		●				□
Employment		●	▲	▲		
Labor Management Relations		●	▲	▲		
Occupational Health and Safety		●	▲	▲	□	□
Marketing and Labelling		●	▲	▲		
Customer Privacy		●	▲	▲		
Socioeconomic Compliance		●		▲	□	□

1. ●: direct impact; ▲: indirect impact; □: impact from business relations
2. Except for the impact within the CHT organization (including 2 subsidiaries), the influence of the external impact is determined by the "supplier type."
3. CHT also promotes relative management principles and actions. For detailed topic information, please refer to the corresponding chapter and page.

## The Materiality Matrix

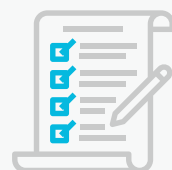


1. The materiality threshold: 2.6 and above for both the X-axis and the Y-axis (3-point scale)
2. Chunghwa Telecom also willingly discloses issues that are not identified as material issues in 2019, please refer to the topics with "✳" in the index catalog (P.136-137).

## Process for Determining Material Topics

### STEP 1

#### Confirming the determining process for material topics



The CSR Secretariat calls for the six CSR working groups to confirm the material topics determining process of the current year. We perform through feedback and external questionnaires.

### STEP 2

#### Information collecting / Topic identification



The CSR Secretariat is responsible for identifying CSR topics while considering CHT's short-, mid-, and long-term achievement and referring to the material it collects including international guidelines, such as the GRI Standards, sustainability rating surveys, international business information benchmarks and the news related to CHT in 2019.

### STEP 3

#### Analysis / Prioritizing



The CSR working groups analyze topics and hold discussions based on internal consideration, industry status, industry chain practice, and advice from stakeholders. The topics are prioritized according to urgency and seriousness and the level of impact.

### STEP 4


















#### Result Confirmation / Materiality matrix



Members of the CSR working groups were invited to consider the relevance between the topics and the actual operation according to internal and external information. The 2019 topic identification results were confirmed and a materiality matrix was prepared for submission to the CSR Committee for approval.



## 2019 Material Topics Description

Sustainability Aspect	Material Topics	Meaning to CHT	Topic Corresponding to the GRI Standards	Management Principle (page number)	2019 Performances (page number)	Topic Corresponding to UN SDGs
 <b>Economy</b>	Innovative ICT products and services	Due to impacts from the global industrial chains, Chunghwa Telecom more proactively strengthens its core businesses, introducing momentum to drive revenues via innovative ICT products and services while elevating shareholders' willingness to hold shares in the long run.	Economic Performance	p.16	p.16	 
	The integrity and business ethics of the employees	Performing operational activities with the highest ethical standards not only complies with the regulations but also allows employees to reflect on themselves when performing business activities.	Anti-Corruption	p.17	p.17	
 <b>Environment</b>	Climate change and energy management	The climate change issue has a close relation with the operation of a corporation. We actively establish relative plans and goals to strive for the reduction of the cost and risk related to climate change in the value chain.	Energy	p.96	p.97	  
 <b>Society</b>	Building a happy business	We develop benefits better than the regulations, enhance employees' well-being, and act to give employees peace of mind to work and share business results.	Market Presence Employment	p.66,67	p.66,67	 
	Fair and equal labor-management relations and employee engagement	Through formal engagement, an agreement can be reached regarding the rights and responsibilities of employees to both protect them and the employer.	Labor / Management Relations	p.70	p.70	 
	Health and safety	We incorporated ISO 45001 to ensure that each process is in compliance with the regulation.	Occupational Health and Safety	p.76	p.78	 
	Accurate product labelling	We accurately communicate product and service information, and actively provide instructions and usage regulations to ensure that consumers are aware of the effects of overuse of products and services.	Marketing and Labelling	p.17	p.17	 
	Rigorous Cybersecurity Protection	We have continued to strengthen our processes and systems in response to external security threats and regulatory changes, and constantly refine information security systems and management strategies for consumer data protection.	Customer Privacy	p.85	p.85	 
	Corporate Governance	The upright operation is the core value CHT insists on. We make the employees strictly follow the laws and regulations through policies and propaganda.	Socioeconomic Compliance	p.17	p.17	 



## Stakeholders Engagement

We have always thought that “Chunghwa Telecom can do more.” As the leading brand in the telecom industry in Taiwan, CHT focuses on industry development and competition. In addition to good products, services and profits, we also give back to society. We also pay close attention to the voices of our internal and external stakeholders before making careful responses to the needs of society.

The identification of the stakeholders and their issues is a very important part of the practice of CSR. In the initial meeting of CSR report preparation, we invite members from all departments to exchange the issues related to current key stakeholders and their concerns. Upon reaching mutual understanding, the result is incorporated into a table that is regarded as an essential reference for the disclosures in the report. In the process of promoting CSR activities and information disclosure, we consult the opinion of the internal and external stakeholders, important relevant mechanisms include:

- “Consultation meeting with external professionals” for CSR report
- Regular invitation of external professionals to the “CSR Conference” and relevant forums
- The “CSR Supplier Conference” is held every year
- Specialists designated for CSR and the CHT Foundation
- CHT was the first to create “CSR videos” and the CHT official YouTube CSR program to record the implementation of CSR action on a regular basis, as well as the collection of internal and external feedback for further improvement

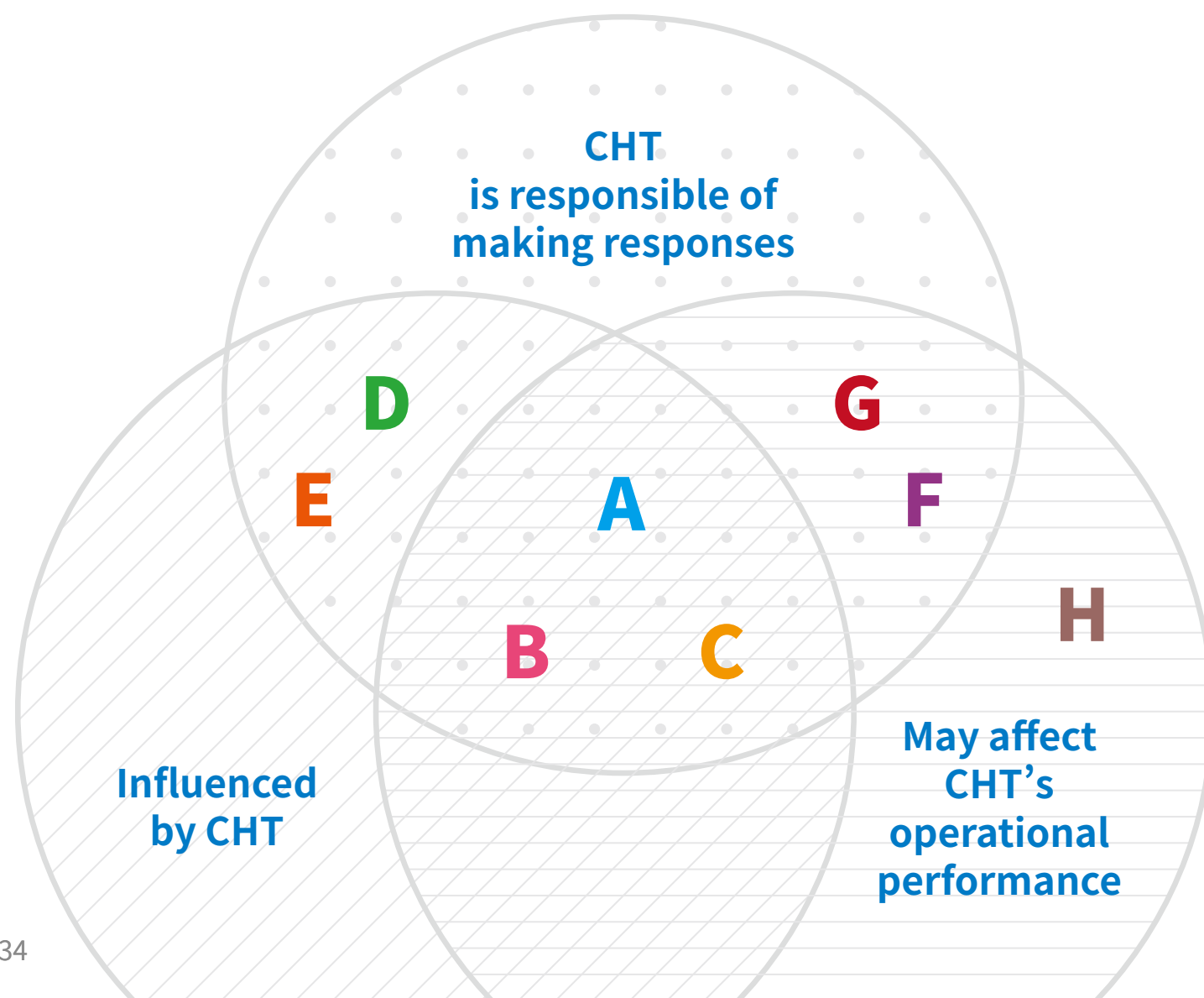
[CSR Video link](#)

[CHT Stakeholder Engagement Guideline:](#)

[CHT Stakeholder Communication Channel](#)

[CHT Stakeholder Engagement Guideline](#)

[CHT Stakeholder Engagement Agreement](#)



Stakeholder	Meaning to Chunghwa Telecom	Focused Topics	Communication Channel	Communication Frequency
<b>A</b> Shareholders / Investors	As shareholders / investors are our stockholders, we must be accountable to them.	<ul style="list-style-type: none"> <li>Economic Performance</li> <li>Anti-Corruption</li> </ul>	<ul style="list-style-type: none"> <li>Shareholders' meeting</li> <li>Shareholder hotline</li> <li>Earning results conference</li> </ul>	<ul style="list-style-type: none"> <li>Annually</li> <li>Real-time</li> <li>Quarterly</li> </ul>
<b>B</b> Employees	Employees are critical to the sustainable development and they are the driving force for sustainable growth.	<ul style="list-style-type: none"> <li>Market Presence</li> <li>Energy</li> <li>Employment</li> <li>Labor / Management Relations</li> <li>Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>E-mail</li> <li>Telephone call</li> <li>Online forum</li> <li>Labor employer meeting</li> <li>Negotiation meeting</li> </ul>	<ul style="list-style-type: none"> <li>Real-time</li> <li>Every 2 months</li> </ul>
<b>C</b> Clients / Customers	Only when customers prefer the products and services of Chunghwa Telecom could we have value for existence.	<ul style="list-style-type: none"> <li>Marketing and Labelling</li> <li>Customer Privacy</li> </ul>	<ul style="list-style-type: none"> <li>Service hotline</li> <li>Customer service center</li> </ul>	Real-time
<b>D</b> Suppliers	The large product and service chain of Chunghwa Telecom relies on the stable support of the suppliers.	<ul style="list-style-type: none"> <li>Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>E-mail</li> <li>Hotline</li> <li>CSR Supplier Conference</li> <li>Supplier Training</li> <li>Survey</li> </ul>	<ul style="list-style-type: none"> <li>Real-time</li> <li>Annually</li> </ul>
<b>E</b> Communities / NPOs	We wish to reciprocate to society with our professional standing in telecom and create a better future.	<ul style="list-style-type: none"> <li>Energy</li> <li>Socioeconomic Compliance</li> </ul>	<ul style="list-style-type: none"> <li>E-mail</li> <li>Hotline</li> <li>Stakeholder forum</li> </ul>	Real-time
<b>F</b> Media / Accreditation Institutes	We have learned and grown with the media and accreditation institutes through their mentorship in sustainable development.	<ul style="list-style-type: none"> <li>Socioeconomic Compliance</li> </ul>	<ul style="list-style-type: none"> <li>E-mail</li> <li>Hotline</li> <li>Press release</li> <li>Press conference</li> <li>Survey</li> </ul>	Real-time
<b>G</b> Competent Authorities	Our products, services and related marketing behaviors are subject to audits by the competent authority.	<ul style="list-style-type: none"> <li>Anti-corruption</li> <li>Socioeconomic Compliance</li> </ul>	<ul style="list-style-type: none"> <li>E-mail</li> <li>Official document</li> <li>Meeting</li> <li>Telephone call</li> <li>Visit</li> </ul>	Real-time
<b>H</b> Competitors	As the leading brand in the telecom industry in Taiwan, we strive to engage in fair competition in the industry for a healthy development of the industry.	<ul style="list-style-type: none"> <li>Economic Performance</li> </ul>	<ul style="list-style-type: none"> <li>Official document</li> <li>Meeting</li> <li>Telephone call</li> </ul>	1-2 times annually

## 2019 Results of Critical Stakeholders Engagement



### Employees

- 6 Labor-management conferences (including 1 Unscheduled meetings)
- 7 Negotiation meeting



### Shareholders / Investors

- 1 Annual general meeting
- 4 Earning results conferences



### Clients

The “123 customer service hotline” has served over **35.1 million** case



### Competent Authorities

- 7 press conferences and public hearings convened
- 510 appeal and negotiation meetings completed



### Media

- 243 Press releases in total
- 35 Press conferences in total



### Suppliers

Approximately **100** suppliers participating in the “2019 Annual CSR Supplier Conference”

Approximately **50** suppliers participating in the Supplier Sustainable Environmental Visits

## “Strategic Transformation & Sustainable Upgrade” 2019 Annual CSR Supplier Conference

In 2019, we officially launched “supplier sustainability rating” system to bridge to the international standards. The supplier sustainability rating comes with four ratings, i.e. Gold, Silver, Bronze, and Participation, which is audited and certified by SGS-Taiwan. On 2019 Annual CSR Supplier Conference, President Shui-Yi Kuo awarded 10 outstanding suppliers that passed the “Second-Party Audit” for sustainable supply chain the Certificate of Gold-tier.

The suppliers awarded with “Gold-tier Certificate” in the first year are 10 brilliant suppliers, including Nokia Taiwan, Ericsson in Taiwan, Hua Eng Wire & Cable Co., Ltd., Ta Ya Electric Wire & Cable Co., Ltd., Chung-Hsin Electric & Machinery Manufacturing Corp., D-Link Corporation, Zyxel Communications Corp., LienSheng Telecom Technology Co., Ltd., Stark Technology Inc., and Evertop Wire Cable Corporation. On the Annual CSR Supplier Conference, “CSR Information disclosure Award” and “CDP Award” are also presented to recognize the outstanding performances of the suppliers in the CSR issues.

On the Annual CSR Supplier Conference this year, Mr. Stephen Pao, Sr. Assistant Director, attended on behalf of the SGS-Taiwan, presenting the assurance statements of the two international environmental standards introduced in 2019, ISO 14046 for water footprint and ISO 14067 for carbon footprint while announcing that Chunghwa Telecom is the first telecom carrier in the industry of Taiwan that obtained “two international environmental standards” that endeavors to implement its philosophy of environmental sustainability.

On the Conference, we also proclaimed that the supplier management will be strengthened starting from 2020. In addition to incorporating the sustainability certification mechanism into the supplier evaluation, brilliant suppliers of “sustainable supply chain” will be recognized so as to create a sustainable future for the industry together. Upholding “customer-centered value creation,” we shall join hands to fulfill the prospect of “Leader in Smart Living” and “Agent of Digital Economy Empowerment.”



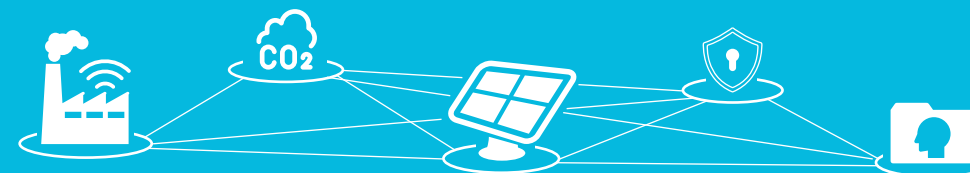


# Chapter 4

## Sustainability Risks and Opportunities

CHT places emphasis on the control of the corporate operation and sustainability risk. In 2016, the Company established a Risk Management Committee with the President as convener and high rank managers as members. The committee supervises risk management throughout the organization and is responsible for prioritizing identified risks, formulating response strategies to key risk issues, and reporting to the board of directors when deemed necessary. Through control of the mechanism at each level, potential risks and loss to the Company can be minimized.

The SDGs CHT contributes to in this chapter: 7, 9, 11, 13



Our “Risk Management Committee” adopts Enterprise Risk Management (ERM) software and the “Risk Analysis Matrix” as our assessment tools, governing every business decision made by our employees.



The development of the Artificial Intelligence of Things (AIoT) will popularize edge computing, IoT phone numbers, drones, AR, VR, and smart homes. These emerging industries will propel the development of hardware and operating systems.



CHT is the first telecom company in Taiwan to sign the support statement issued by the Task Force on Climate-Related Financial Disclosures (TCFD).



CHT promises that it will submit its Science Based Targets (SBT) on carbon reduction for review within the next 2 years.



CHT is actively looking into the development of renewable energy. We have the largest capacity, self-built or otherwise, for solar energy among all telecom companies in Taiwan.



Adopting a risk-based approach, CHT established the “Chunghwa Telecom Cybersecurity and Privacy Protection Framework.” Based on NIST’s Cybersecurity Framework (CSF) and domestic and international standards and regulations, the framework includes five steps: identify, protect, detect, respond, and improve.

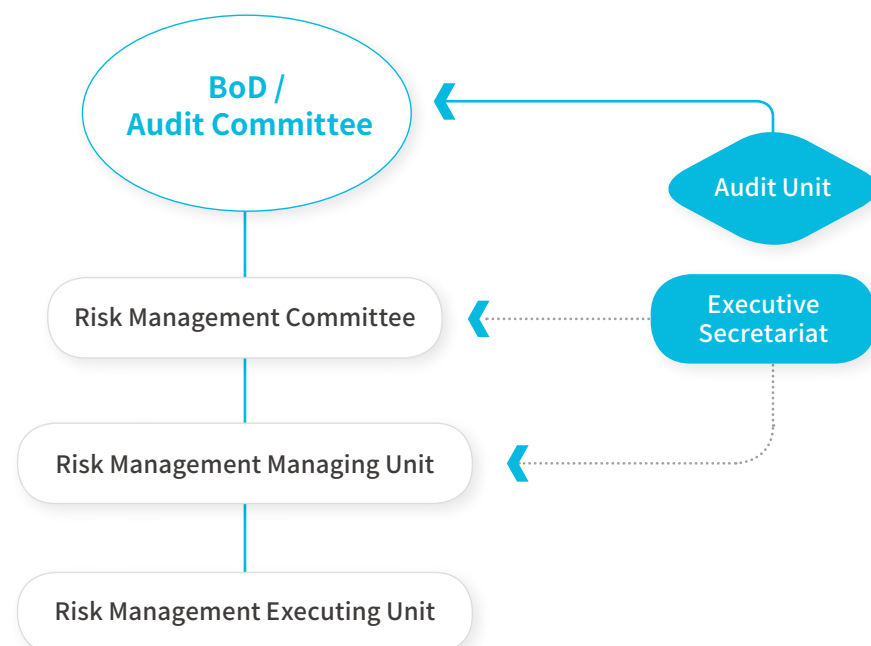
Emerging Opportunities ..... 42

Emerging Risks ..... 42

Climate Change Risks and Opportunities ..... 44

Cybersecurity Risks ..... 50

## CHT Risk Management Organization Structure



## Identifying and Analyzing Climate Change Related Risks

Chunghwa Telecom's Risk Management Committee is the highest level of risk management within the Company. Led by CHT's President in conjunction with committee members, the committee takes charge of risk management. Identifying and analyzing climate related risks are important responsibilities of CHT's Risk Management Committee. Issues are prioritized based on the types of risks and urgency involved. CHT's CSR Environmental Sustainability Group and Administration & Assets Department formulates an action plan to respond to climate-related risks, which is reported on the Committee as the Committee reports to the Board in a timely manner.

## Managing and Assessing Climate Change Related Risks

CHT's Environmental Sustainability Group systematically reviews climate change-related issues that could potentially impact day-to-day business operations and comes up with countermeasures based on its "Five Year Plan of Sustainable Development Strategies and Goals."

The review process includes a scenario analysis of physical and transitional risks and how they could affect major business operations. It also evaluates the effectiveness of energy-saving practices and the adaptability of equipment, ensuring normal operation even in extreme weather conditions. The potentiality of natural disasters is considered in the construction of telecom equipment. In other words, we assess the risks of earthquakes, tsunamis, geological instability, and other weather-related risks to ensure our equipment operates correctly and to ensure the safety of our employees in the event of a natural disaster.

## Including Weather Related Risks in the Internal Risk Management Framework

CHT's CSR Environmental Sustainability Group keeps track of climate change on a regular basis and submits a yearly assessment report to the Risk Management Committee through Administration & Asset department, which, if necessary, takes measures to mitigate the level of risks.

Based on the task force's feedback, the Risk Management Committee will seek ways to improve the existing risk management model to ensure that the process is consistent with our business goals. And after the Chief Audit Executive's final review, reports the assessment results to the Board of Directors. Our goal is to incorporate climate change-related risks into our existing internal risk management framework.

Aspects	Description
Organizational Aspect	<ul style="list-style-type: none"> <li>The "Risk Management Committee" was established</li> </ul>
Strategic Aspect	<ul style="list-style-type: none"> <li>The BoD established the risk management strategy and structure</li> <li>The "Risk Management Regulations" were established as a foundation and are followed by all employees engaged in business operations</li> </ul>
Management System	<ul style="list-style-type: none"> <li>The Enterprise Risk Management (ERM) system was established for the regular control of the risks from each division and business</li> </ul>
Assessment tool	<ul style="list-style-type: none"> <li>We use the "Risk Analysis Matrix" as our assessment tool to assess legal, network maintenance, market and financial operation risks, etc.</li> <li>For the major operational items and relative CSR issues, we enhance the performance of sensitivity analysis and the pressure test</li> </ul>
Audit Aspect	<ul style="list-style-type: none"> <li>The executive Secretariat helps promote the risk management activities in all company</li> <li>The Auditor reviews the risks and reports to the BoD</li> </ul>
Feedback and Improvement	<ul style="list-style-type: none"> <li>Risk status is followed up monthly and reported to the Risk Management Committee generally</li> <li>The Committee improves the current risk management mechanism based on feedback from individual units to ensure the process is up to date and satisfies the operational need</li> </ul>
Implementation outcomes in 2019	<ul style="list-style-type: none"> <li>1 meeting were convened</li> <li>Risk management implementation was included in the performance evaluation of managers; major risk incidents of network, marketing, and convergence were identified for an enhanced control</li> </ul>







## Emerging Opportunities

The 5G technology will drive intelligent technological applications. AI will be everywhere around us in the future. Completely new types of services such as AIoT (AI and IoT) will become the core of fast convergence. The rise of new industries, edge computing, the volume of the IoT, drones, AR, VR and the intelligent family will push corporations in Taiwan to move their business emphasis. We predict that the global output value of AI hardware will exceed NT\$ 5 trillion. This will inevitably become an important force in pushing global economic growth. With the advent of Industry 4.0 and the rapid emergence of new online applications, cybersecurity specialists are issuing warnings regarding the looming threat of multimodal, multifaceted attacks. However, this also creates an opportunity for companies that offer an integrated cybersecurity service package. The government has classified information security as a “matter of national security,” including it as part of the “national defense industry” in the “5+2 New and Innovative Industries Policy.”

### Opportunity Factors



#### Development of 5G

- Forecasts show that 5G technology will result in an output of US\$ 134 billion to the companies in Taiwan in 2035.



#### IoT / Big Data

- International research institute Gartner predicts that the IoT product and service providers will create a marginal benefit of US\$ 300 billion in 2020.
- The global IoT output value in 2025 will be US\$ 6 trillion.



#### Information Security Management

- Popularization of emerging technological applications (e.g. IoT, AI, and cloud services) as well as diversified attacks by hackers gradually blur the existing security perimeters and boost the challenge of protection against cybersecurity threat while create new opportunities in the cybersecurity area.
- The Executive Yuan announced the Cybersecurity Industry Development Action Plan in 2018. The gross output of the industry is expected to exceed NT\$ 78 billion dollars by 2025.
- Gartner predicts the investing amount the companies put into information security will rise to US\$ 146 billion in 2021 with a compound annual growth rate of 8.4% around the globe.



#### Climate Change (low carbon products and services)

- For 3 consecutive years, the WEF's annual risk report has cited “extreme weather events” as the top risk factor in terms of occurrence possibility.
- Businesses around the globe are investing in low carbon emission infrastructure, including green energy, electric automobiles, and smart cities to reduce reliance on electricity.
- According to the data by the Climate Bonds Initiative (CBI), the green bonds worldwide in 2019 made it through \$250 billion, which was over 60 times of those in 2013.

### Potential Business Opportunity

## Emerging Risks

CHT continues with advanced technological research and development to take advantage of the many business opportunities in this digital convergence era and reduce operational risk. We absorb, cultivate and make good use of excellent available talent to integrate Internet and marketing resources. We

### Risk Factor



#### The decrease in the voice revenue

- Market competition and VoIP have caused a slight decrease in voice revenue
- We continue to maintain our competitive edge in broadband Internet, even in the face of low-price competition from cable television.



#### The 5G business model is unclear

- The cost of our 4G investment has not been fully recovered and 5G belongs to the high-frequency spectrum. We predict that serious investment will need to be made to satisfy the requirements for new construction in the near future.



#### Energy supply stability

- The electricity supply is unstable and insufficient
- The renewable energy allocation is not efficient yet

### Potential Influences (Obstacles)

### Countermeasures (Risk Avoidance and Opportunity Seizure)

- Launching “Taiwan 5G Industry Development Alliance - CHT leading team” with the 5G office in DoIT, ITRI, and III.
- CHT Pilot Team extends laboratory testing to practical “5G Testing and Training Site.” All industries in Taiwan can take advantage of this environment to develop innovative applications and grasp the opportunities.
- We are forming a national IoT team. Through allying with the international and Taiwanese companies, we create international competitiveness for the IoT industry in Taiwan. There are now 40 first-tier companies in the alliance.
- We developed the IoT intelligent internet platform on our own, combining 5 main services, including information security, big data, the blockchain, AI, and AR.
- Our in-house developed multi-factor identity authentication technology can be incorporated into and with smart energy, smart cities, smart healthcare, and smart homes, providing a safe and reliable biometric identification system for IoT networks.
- Developing inter-disciplinary financial security solutions, we strive to become a cybersecurity service provider for digital finance.
- With our current IT solutions, we offer complex solutions for clients using ICS/OT infrastructure connected to a hybrid network.
- As a managed security service provider (MSSP), we dedicated to the provision of a wide range of cybersecurity solutions. In addition to extending our market reach within the border, we are actively seeking business opportunities overseas.
- Maintain our leading position in the industry by consolidating our advantages in internet services, distributions channels, and R&D capabilities with domestic and overseas high-quality products to provide integrated solutions to large enterprise clients.
- “Green Product and Service Program”— we provide businesses with energy-saving technology and services.
- By combining innovative green services, such as video conferencing, e-bills, and other cloud services, with our existing technology, we plan to build smart cities with lower carbon emission.
- We are building a cloud service platform that enables clients to access real time data regarding their energy usage and equipment status so that failures can be predicted and prevented.
- We began investing in the photovoltaics and Green ICT industries in 2017, establishing the Smart Energy Lab and the Smart Architecture Lab. As of 2019, we have the largest capacity, self-built or otherwise, for solar energy among all telecom companies in Taiwan.

cooperate closely with our strategic partners in the launch of new services and products that satisfy our customers. We have become “The Digital Economy Motivator and The Creative Industry Pilot,” and we create values for clients, shareholders, employees and society.

### Countermeasures (Risk Avoidance and Opportunity Seizure)

- In addition to enhancing current core business, we continue with new product research and development, as well as service and value-added applications. These include video service, information security, IoT, the cloud, mobile payment and other new business.
- We are concentrating on applications related to big data, information security, the cloud, IoT, 5G and the intelligent city. CHT is being transformed into the leading brand for information, communications and digital convergence.
- We have developed an IoT intelligent internet platform by combining five main services, which are information security, big data, blockchains, AI and AR.
- We expect IoT applications to develop rapidly with the advent of 5G and we already have 3 million phone numbers authorized by the NCC. We intend to provide IoT for both industrial and domestic applications.
- We are increasing the percentage of self-built renewable energy devices and have set up emergency power generating equipment to avoid interruption to our services in times of crisis.

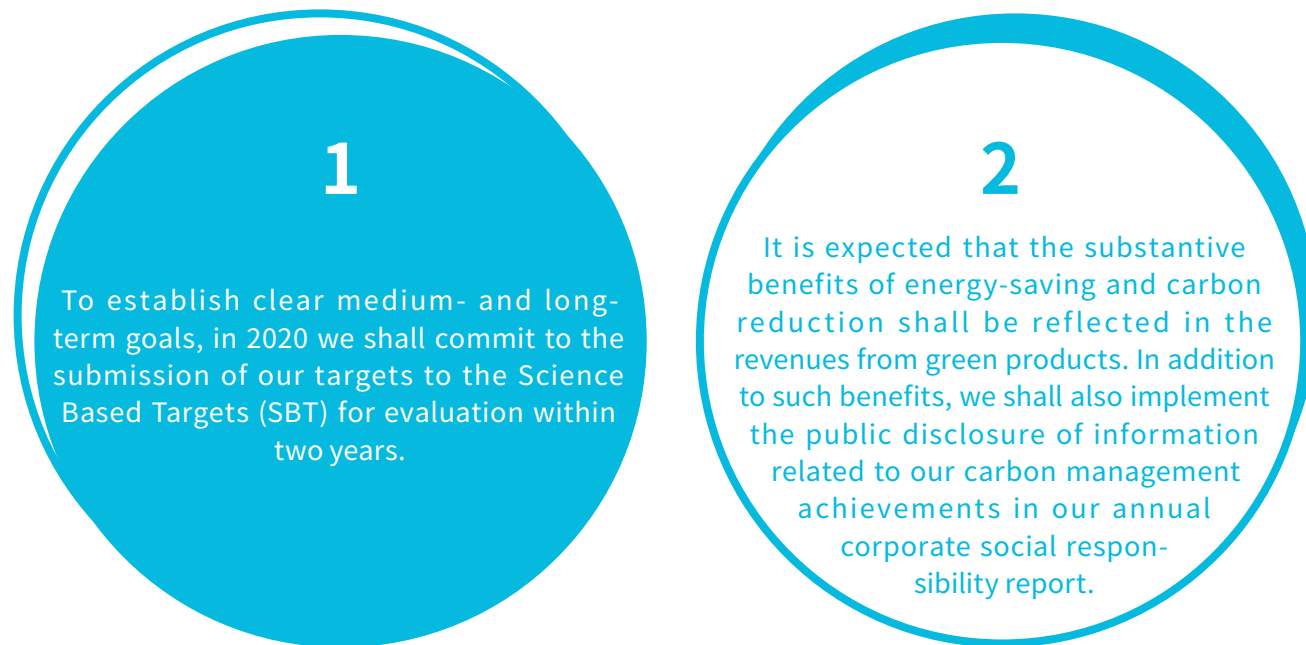
[CHT IoT Smart Platform](#)

## Climate Change Risks and Opportunities

With the current trends associated with global climate change, the mitigation of greenhouse gas emission has become a critical issue in global economic development since the Paris Agreement entering into force and the UN proposal of the Sustainable Development Goals (SDGs).

To facilitate the transparent disclosure of climate risks and opportunities, Chunghwa Telecom became the first telecom company in Taiwan to sign on as supporter of the Task Force on Climate-related Financial Disclosures (TCFD) initiative. Our 2019 Corporate Social Responsibility Report also discloses climate change-related information in accordance with the suggested frameworks of TCFD.

### Commitment to Science Based Targets and their Development



#### Chunghwa Telecom Disclosures to TCFD

Framework	Disclosures	Page
Governance	• The board's oversight of climate-related risks and opportunities	p.40
	• Management's role in assessing and managing climate-related risks and opportunities	p.40
Strategy	• The climate-related risks and opportunities the company has identified over the short, medium, and long-term	p.45
	• The impact of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning	p.45
	• The potential impact of the Company's businesses, strategy, and financial planning in different scenarios	p.46
Risk Management	• The Company's processes for identifying and assessing climate-related risks	p.41
	• The Company's processes for managing climate-related risks	p.40
Metrics and Targets	• Processes for identifying, assessing, and managing climate-related risks and how they are integrated into the Company's overall risk management	p.40
	• The metrics used by the company to assess climate-related risks and opportunities	p.48
	• Scope 1, Scope 2, and Scope 3 greenhouse gas emissions	p.49
	• The targets used by the organization to manage climate-related risks and their implementation	p.105

## Climate-related Risks, Opportunities, and Financial Impacts on CHT

As the industry leader in telecom, Chunghwa Telecom has upheld the company tagline "Always Ahead" through our contribution to society and the industry by our utilization of the industry's core value and influence. We believe that the opportunities brought about by climate change shall be reflected in our future products and services. Chunghwa Telecom shall continue to pay close attention to and seek out green technologies and targets suitable for development. We hope to gain momentum developing more innovative products, services, and businesses as well as getting ahead in the low-carbon smart economy.

Chunghwa Telecom has evaluated and analyzed climate-related risks and opportunities by looking at distinct periods of time, including short-term (2020), medium-term (2020-2030), and long-term (post 2030).

	Risk Factors	Financial Impacts on Chunghwa Telecom
	<b>Transitional Risks</b> <ol style="list-style-type: none"> <li><b>Policy &amp; Regulation:</b> Emission disclosure responsibility</li> <li><b>Policy &amp; Regulation:</b> Increased cost of GHG emissions</li> <li><b>Technology:</b> Replacement of existing products and services with low-carbon alternatives</li> <li><b>Technology:</b> Lack of investment in innovative low-carbon technologies</li> <li><b>Technology:</b> Transitional costs of low-carbon technologies</li> <li><b>Market:</b> Abrupt changes in energy (electricity) costs</li> <li><b>Reputation:</b> Appraisals by domestic/foreign investors and sustainability awards</li> <li><b>Reputation:</b> Changes in consumer preferences</li> <li><b>Reputation:</b> Stigmatization of industry</li> </ol> <b>Physical (Natural) Risks</b> <ol style="list-style-type: none"> <li><b>Acute:</b> Increased severity in extreme weather events (heavy rainfall, regional flooding)</li> <li><b>Chronic:</b> Changes in regional rainfall patterns</li> <li><b>Chronic:</b> Increased average temperature</li> </ol>	<b>Transitional Risks</b> <ol style="list-style-type: none"> <li><b>Policy &amp; Regulation:</b> Increased operational costs (e.g. increased regulatory or insurance costs)</li> <li><b>Policy &amp; Regulation:</b> Increased insurance liability caused by climate-related impacts</li> <li><b>Technology:</b> Development of new and alternative technologies and their development expenditure</li> <li><b>Technology:</b> Capital invested in technological development</li> <li><b>Market:</b> Increased insurance liability caused by climate-related impacts</li> <li><b>Market:</b> Abrupt changes in energy (electricity) costs</li> </ol> <b>Physical (Natural) Risks</b> <ol style="list-style-type: none"> <li>Decreased revenue caused by lowered manufacturing capacity (transportation difficulties, supply chain disruption)</li> <li>Decreased revenue and increased costs caused by negative effects on employees (cost of workplace absence and care due to health, safety, or medical issues)</li> </ol>
short-term 2020	1 5 7 1	1 5 2
medium-term 2020-2030	1 2 4 6 1 2	1 2 4 6 2
long-term (post 2030)	1 2 3 8 9 1 2 3	1 3 5 6 1 2



## Impacts of Climate-related Risks on Chunghwa Telecom

Chunghwa Telecom deeply understands the importance of climate change issues and knows that the inability to comply with environmental regulations may incur regulatory fines, a loss of competitive advantages within the industry, stakeholder concerns, and impact the Company's image and reputation.

### Potential Climate-related Risks on CHT's Operations

1. The rising global temperature and intensifying extreme weather due to enhanced greenhouse effect have led to the threat of severe typhoons and flooding; the industrial and residential water usage in certain regions have also been affected by water shortage crises. Therefore, more resources need to be invested in natural disaster prevention, post-disaster facility maintenance, and operational energy access.
2. The government's implementation of the Greenhouse Gas Reduction and Management Act shall result in the enforcement of greenhouse gas emission control and the liberalization of carbon rights & carbon emission trading. The corresponding increases to our operational costs, due to Chunghwa Telecom's significant reliance on energy in the maintenance of networks and computer facilities, will undoubtedly impact our finances.

### Opportunities and Strategies

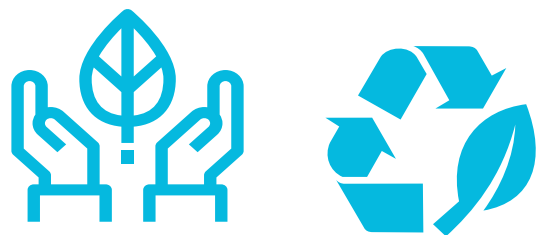
Chunghwa Telecom adopts a two-pronged strategy which is dedicated to the pursuit of a low-carbon transition and taking advantage of future business opportunities both internally and externally.

#### Internally



Establishment of the Company's "Environmental Sustainable Development Strategies and Targets" via organized, systematic methods. Effectively improving the effective management of carbon emissions and other environmental information through the use of our internally developed environmental information management system.

#### Externally



Development of green products and services to develop renewable energy and provide businesses with energy-saving technologies and services.

Chunghwa Telecom has utilized its long-established experience in the development of information & communication systems and environmental monitoring systems for electrical environments to integrate and monitor our clients' energy-consuming equipment inside their buildings. We've also adopted a cloud platform to provide clients with services such as energy-saving performance calculations, equipment operational status monitoring, and real-time notifications. These services help businesses lower carbon reduction threshold and reach their energy-saving and carbon reduction targets.

As for our development of renewable energy, Chunghwa Telecom has invested thousands of manpower to build the Zhangbin Solar Power Plant. This plant is the country's largest solar power plant, with a total capacity of 100 MW and an annual output of 130 million kWh. The power plant reduces annual CO<sub>2</sub> emissions by 70,000 metric tons, creating revenues for the Company and thus is a mutually beneficial endeavor benefitting both the environment and our operations.

## Carbon Reduction Practices and Measures

In order to adapt to the potential changes in the environmental and climate change regulations & international accords, we have developed the following strategy:



### Close Observation of Regulatory Changes both Domestically and Abroad

Establishment of the "Five-year Plan of Strategy and Goal for Environmental Sustainability Development" through active engagement with the competent authorities, related organizations, and other stakeholders to expand environmental protection efforts through the pursuit of "green corporation," "green sustainability," and "green innovation" goals. We've also implemented hazard mitigation measures for computer facilities and climate adaptation plans to strengthen emergency response measures and reduce climate risks.



### Development of Renewable Energy

In 2017, we crossed into the solar photovoltaic field with the establishment of smart energy offices and office buildings, along with the development of Green ICT. By the end of 2019, Chunghwa Telecom had topped the industry in the energy capacity of solar photovoltaic facilities, including those installed in our own facilities and those commissioned by other businesses. We have also installed solar panels on cell towers in remote mountainous areas to reduce energy consumption and carbon emission; these panels can also provide power to the cell towers in the case of a power outage to support emergency communications.



### Establishment of a Sustainable, Low-Carbon Supply Chain

In 2017, Chunghwa Telecom joined the CDP Supply Chain Program and became the first telecom company in Taiwan to participate in CDP's international platform. The official implementation of our carbon management measures with our 100 suppliers prompted them to disclose complete greenhouse gas information in a positive and proactive manner and commence planning of carbon management measures and strategies.

We incorporated the ISO 20400 Sustainable Procurement Standard in 2018 to implement our sustainable development beliefs in procurement practices; "green supply chain" was constructed in 2019 through a sustainable perspective, supplier evaluation, and classification management, with 10 suppliers passing the external third-party auditing and obtaining the "Gold-tier Certificates."



### Development of Low-Carbon Products and Services

In addition to mitigating the environmental impact caused by our operations, products, and services, we have reduced our carbon footprint via green innovative services and revolutionary technologies such as video conference, digital receipt services, and cloud products. We've also utilized the technological advantage in our primary businesses to help build smart cities; an example of such low-carbon solutions is a smart taxi dispatch system that lowers the number of empty cabs on the road and reduces fuel consumption.



### Management of Service Centers' Carbon Footprints

We carried out carbon footprint inventory for the service center in 2019, which not only is ISO 14067 and PAS 2060 verified, but attains the Environmental Protection Administration Carbon Footprint Label in Q2, 2020, making Chunghwa Telecom the first telecom company in Taiwan to acquire the label. This shall be beneficial for the "green communication" between the customers and ourselves.

## Internal Carbon Pricing

Chunghwa Telecom first introduced the concept of carbon pricing management in 2018 to enable stress testing from a risk management perspective. In 2019, we established the stress testing scenario evaluating voluntary carbon reduction targets. Although the current greenhouse gas emission reduction and management methodology has yet to establish the telecom industry's total greenhouse gas emissions, we at Chunghwa Telecom continue to follow our voluntary medium- and long-term carbon reduction targets, which serve as the basis for the calculation of internal carbon pricing and the evaluation of internal energy-saving and carbon reduction projects.

### Chunghwa Telecom Internal Carbon Pricing Analysis

Carbon Management Scenario	Carbon Pricing Adopted (Shadow Price)	Scope of GHG Emissions	Number of Operating Locations Involved
Voluntary Carbon Reduction Target	NT\$ 200/t-CO <sub>2</sub> e	Scope 1 + Scope 2	Headquarters, Business Groups and Branches

Notes: Carbon management scenarios are based on voluntary medium- and long-term carbon emission reduction targets. With 2017 as the base year, the carbon emission reduction of the Company's buildings should accumulate to a total of 10% by 2023. In other words, Chunghwa Telecom should reach an accumulated greenhouse gas emission reduction of 83,295.75 t-CO<sub>2</sub>e in its buildings by 2023.

Business Group / Branch	Emission Changes in 2019	Carbon Price Allocated (NT\$ 10,000)	Business Group / Branch	Emission Changes in 2019	Carbon Price Allocated (NT\$ 10,000)
Headquarters	(2.58)	-	Yunlin Branch	(694.17)	-
Northern Taiwan Business Group	(21,247.68)	-	Changhua Branch	(4,289.25)	-
Taipei Branch	(5,858.09)	-	Pingtung Branch	(808.90)	-
New Taipei Branch	(9,033.29)	-	Kaohsiung Branch	(3,576.24)	-
Yilan Branch	(505.63)	-	Company Data Communication Business Group	9,150.97	183.02
Hualien Branch	(644.89)	-	Corporate Business Group	95.22	1.90
Miaoli Branch	(936.66)	-	Mobile Business Group	(740.53)	-
Taoyuan Branch	(2,493.20)	-	Mobile Business Group-Taipei Branch	(1,232.21)	-
Keelung Branch	(1,306.90)	-	Mobile Business Group-Taichung Branch	(4,480.86)	-
Hsinchu Branch	(1,711.07)	-	Mobile Business Group-Kaohsiung Branch	3,387.99	67.76
Southern Taiwan Business Group	105.15	2.10	International Business Group	(1,381.08)	-
Taichung Branch	(3,552.52)	-	Chunghwa Telecom Laboratories	(752.81)	-
Taitung Branch	338.94	6.78	Institute Headquarters	(39.01)	-
Tainan Branch	(3,212.33)	-	Institute Taichung Branch	(68.41)	-
Nantou Branch	991.94	19.84	Institute Kaohsiung Branch	(250.78)	-
Company Data Communication Business Group	(898.01)	-	Total	(55,646.89)	281.4

Note: The numbers in the parentheses signify a decrease in carbon emissions compared to 2018; therefore, no carbon price is allocated.

## Greenhouse Gas Emissions Management

The total greenhouse gas emissions in 2019 were 823,751.09 t-CO<sub>2</sub>e, consisting of six types of greenhouse gases, namely, CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>.

As the operations of Chunghwa Telecom primarily use electrical power, the greenhouse gas is mainly scope 2 emissions (purchased electricity), accounting for a percentage of 96.55%. Scope 1 emissions, which account for 3.45%, are mostly generated by workplace emission sources. Through implementation of various energy-saving carbon reduction measures, the total emissions in 2019 demonstrated a slight decrease as a result.

To facilitate the decrease of greenhouse gas emissions, Chunghwa Telecom has actively built solar photovoltaic systems in recent years, reducing carbon emissions by 51,168 kg-CO<sub>2</sub>e; we also acquired 96 Taiwan Renewable Energy Certificates (T-REC) in 2019.


Unit: t-CO<sub>2</sub>e

	2017	2018	2019
Direct emissions (Scope 1)	30,873.98	30,469.89	28,455.59
Indirect emissions (Scope 2)	802,113.48	804,043.42	795,295.50
Total emissions (Scope 1 + Scope 2)	832,987.46	834,513.30	823,751.09
Emission intensity (t-CO <sub>2</sub> e/NTD million)	3.7	3.9	4.0
Percentage of scope in revenue	100%	100%	100%

Note: Greenhouse gas inventory and verification are carried out in accordance with the ISO 14064-1:2016 standard. The source of the global warming potential (GWP) is the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. All data has been verified by SGS-Taiwan.

## Scope 3 Emissions Inventory and Verification

Chunghwa Telecom conducts regular annual inventories of the organization's greenhouse gas emissions and conforms with the internationally mainstream scope 3 inventory guidance, investigating the greenhouse gas emissions of upstream and downstream activities to calculate scope 3 carbon emissions. Among these emissions, our inventory data on business travel emissions obtained the verification certificate by SGS-Taiwan. The modes of transport used by Chunghwa Telecom's employees for business travel principally consist of the following: (1) land transport (high speed rail), (2) air transport (airplanes). The total greenhouse gas emissions of business travel in 2019 was 265,159.549 kg-CO<sub>2</sub>e.

### Chunghwa Telecom Scope 3 Emissions

Unit: kg-CO<sub>2</sub>e

Product & Service Procurement	1,000,094,859
Waste Treatment	43.67
Employee Commuting	98,250
Business Travel	265,159.549
Fuel- and Energy-related Activities	217,456,260

Product Transportation	1,129,230
Leased Assets	2,734,650





## Cybersecurity Risks

Driven by the Industry 4.0 development and emerging network applied technologies (e.g. 5G application, softwareization, cloudification, IoT, and AI), cybersecurity threats have evolved into multi-faceted mixed attacks that increase challenges for enterprises in cybersecurity management. Chunghwa Telecom continues to develop risk protection countermeasures, bridges to international information security standards, and has established joint-defense mechanism with the government and international information security organizations, dedicated to the elevation of overall cybersecurity defense and response capabilities. Also, CHT proactively develops key cybersecurity technologies, besides facilitating developments of emerging businesses, and to offer its clients a secured and reliable digital environment.

In light of the open architecture and myriad vertical application integration of 5G development in the future, Chunghwa Telecom has incorporated security requirements in its 5G construction planning, in line with the cybersecurity standards of ITU and 3GPP so as to ensure the security, resilience, and reliability of its 5G mobile communication system.



### Corresponding Strategies

With the cybersecurity vision of “building the most valuable, safe, reliable, trustworthy telecom carrier in line with international standards” as the point of departure, we implement cybersecurity policy and privacy policy from the start and fuse them into the routine operations.

To ensure the security of Chunghwa Telecom’s “ICT systems” and “critical infrastructure”, we refer to the NIST Cybersecurity Framework (CSF) and follow domestic and foreign standards and regulations to establish a “Information Security and Personal Information Risk Management Framework”, to prevent potential risks and implement concrete, effective security protection and privacy protection measures.

Chunghwa Telecom has established “Cybersecurity and Privacy Protection Steering Committee”. An SEVP-level officer is appointed by the Chairman as the CISO to convene “working meetings on cybersecurity” and “work meetings on privacy protection” on a regular basis. A dedicated cybersecurity management unit is created to streamline regulations and technological development of new businesses, coordinate overall cybersecurity policy, stipulate and amend guidelines, engage centralized cybersecurity monitoring and joint defense for ICT equipment security, oversee and manage operations of cybersecurity and privacy protection, report regularly to the Board on a regular basis, and ensure the fulfillment of the objective of “zero tolerance” for major cybersecurity and privacy incident.

The Risk Management Committee keeps track of the risk monitoring process of cybersecurity and personal information protection. Any material risks identified will be reported to the audit committee of the Board of Directors, or in severe cases, directly to the Board of Directors to reduce cybersecurity risks. In light of the major cybersecurity incidents domestically over the years, apart from its preemptive deployment of defense measures such as the ban on Network Neighborhood, security monitoring for Active Directory (AD), and blocking of APT attack via email, Chunghwa Telecom utilizes a smart cybersecurity monitoring platform that not only is capable of detecting incidents of breach or risks in peacetime, but also promptly backtracks impacts of external threats on the basis of intelligence. In 2019, there were no incidents of material risks arising from cybersecurity or personal information protection.



### Opportunities and Actions

With risk management at the core, Chunghwa Telecom evaluates its maturity regarding cybersecurity governance, amends the cybersecurity policy and directions in accordance with the results of external and internal risk assessments annually, improves cybersecurity and privacy protection management on a rolling basis, organizes awareness promotion for all employees and includes such in the performance evaluation of employees, and passes government inspection and third-party verification (ISO 27001, ISO 27011, BS 10012, CSASTAR Certification, etc.), so that our clients can rest assured that their personal information will be securely safeguarded.

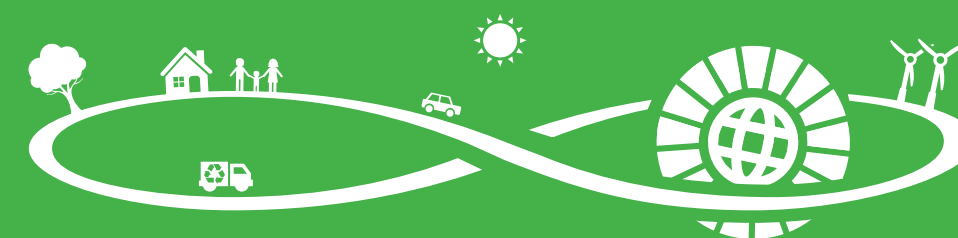
For more information of “Chunghwa Telecom Cybersecurity and Privacy Protection,” please refer to the official website [\[link\]](#)



# Chapter 5

## The Creation of Sustainable Value

In addition to the pursuit of operational value and the growth of profit for the benefit of our stakeholders, we also allocate substantial resources for the creation of sustainable value. The approach to this is five-fold: capital investment, strategy formulation, action plan, regular follow-up and performance reviews. We take all the necessary steps to ensure that each investment input has a proper sustainability result.



CHT expects to achieve its goal of commercializing the 5G network by Q3, 2020 through in-house development of an IoT (Internet of Things) platform that integrates five major services— information security, big data, cloud computing, artificial intelligence (AI), and augmented reality (AR).



CHT is the first mobile network operator to receive ISO 45001 certification.



CHT is the only telecom company in Taiwan to have a labor union.



CHT is the first telecom company to institute sustainable supply chain management:

- Working with the Sustainable Alliance for Low-carbon Economy (SALE) to audit and issue sustainability labels
- Joining the Carbon Disclosure Project (CDP) in an effort to establish a sustainable supply chain



The first telecom carrier that obtained both environment management certifications, “ISO 14067 and ISO 14046”



CHT proposed “5I SDGs”—iHelping, iSharing, iLearning, iTechnology, iProtecting—Taiwan’s first sustainable initiative that corresponds with the UN’s Sustainable Development Goals (SDGs).

The Digital Economy Motivator .....	56
The Creative Industry Pilot .....	58
The Happiness Value Protector .....	66
The Green Corporation Pioneer .....	92
The Social Value Guide .....	108



## Capital

## Impact on Value Creation

## Resource Allocated to Sustain Value Creation



### Financial

- To ensure eligibility for licensing (e.g., the 5G bands)
- Provides sufficient financial resources to support value creation
- Effective execution of commercial activities
- Generation and allocation of other forms of capital, such as distribution of shareholder equity, investments, and capital expenditure

- Contribution to the government in the form of tax revenue
- Supports the development of network infrastructure
- Improves the quality of telecom services



### Human

- Telecom knowledge and skills acquired by employees
- Human capital represents one of our major operational costs

- Introduction to compensation and incentive schemes to attract and retain talent
- Encourage high value-adding services and innovations
- Talent training and development programs



### Intellectual

- Licensing, laboratory and R&D expenses, and the acquisition and development of industry technologies
- Investment to maintain the brand

- Ongoing investment in R&D, construction, and services, and maintain service quality and customer satisfaction
- Investment in the R&D of new technologies and the setting of new protocols



### Production

- Allocate financial capital to develop and maintain infrastructure facilities
- Operation of the Internet Data Center (IDC) and the installation of wireless facilities and development of software and applications

- Ongoing new construction, maintenance, and operation of network equipment
- Procurement control and the acquisition of more cost/energy efficient network equipment
- Consolidation of idle space and the recycling and disposal of obsolete equipment



### Social

- Regular contact with the relevant authorities to ensure the conformance and legitimacy of the operations and competition
- Positive feedback from consumers and the general public helps build credibility of the Chunghwa Telecom brand, and minimizes financial outlay

- Engage with stakeholders actively to make them better understand of the Company operations
- Engage in social activities to exert influence through core activities to minimize the digital divide



### Natural

- Natural capital such as infrastructure, raw materials, and energy sources are needed to allocate and take advantage of human capital
- The use of energy-saving processes and solutions can effectively reduce the consumption of natural capital

- Purchase products that are environmental and friendly to reduce consumption of natural resources and raise energy efficiency
- Use carbon management to minimize energy consumption and apply renewable energy solutions to a greater extent
- Focus on the development of renewable energy sources, by proprietary and commissioned Photovoltaic systems





## The Digital Economy Motivator



The SDGs CHT contributes to in this section : 8,9,11



S

### Strategy

We have enhanced the current core business, and actively develop and research new products. It will bring new revenue through better and more innovative ICT products and services, becoming the leader in smart living and the agent of digital economy empowerment.

M

### Management

We have established the “Digital Convergence Business Department” (an UI team included), which is a core business unit that imports ISO standards of quality system, capable and mature integration models, project management as well as systematized R&D workflow.

A

### Action

- We have developed an IoT application platform using our own innovative technology
- “Demonstration of startup results” of the CHT 5G Accelerator
- Facilitation in the organization of a 5G standards meeting (3GPP) in Taiwan
- MOUs signed with various strategic partners to realize the pre-commercialization objectives of 5G.
- Five previously separate pursuits have now been combined, including IoT, AI, Big Data, AR/VR and self-driving cars.

R

### Response

More details of innovation business cases on page 61~65

T

### Target

#### Short-term:

The accumulation of R&D power and the launch of innovative products and services

#### Mid-long term:

- Commercialized 5G networks in Q3, 2020
- Launch of “RISE ON, TOGETHER 2021” Transformation Plan
- The client amount of MOD total exceeds 2.5 million
- Relative revenue of IoT reaches NT\$ 9.6 billion
- Relative revenue of AI exceeds NT\$ 3 billion

I

### Indicator

**GRI** 2,224 patents accumulated

**CHT** NT\$ 3.9 billion of Investment in R&D

**CHT** More than 1,500 R&D employees

## CHT 5G Testing and Training Site

To embrace the era of 5G commercialization in 2020, Chunghwa Telecom is “Always Ahead!” In its own Telecom Training Institute Green Energy Smart Park, “5G Testing and Training Site” is created, and the “5G communication experimental network” and the independent developed “5G Smart Edge Data Center” have established to build a wireless environment with broad bandwidth and low latency, and offer an open 5G testing and training site with the objective of “experience, innovative partnership and training.”

Chunghwa Telecom cordially welcomes visits and collaboration from industries, the government, academia and research communities to experience the future scenes of smart technology while “develop innovative applications of 5G and accelerate cultivation of professional talent in 5G” together, in an attempt to drive the R&D energy of partners in the domestic ecosystem and to become “Leader in Smart Living” and “Agent of Digital Economy Empowerment” that steers the development of 5G in the days to come.



Embracing the 5G era, Chunghwa Telecom, MoEA 5G Technology Program Office, ITRI, and III established Taiwan 5G Alliance—CHT Pilot Team. With over 60 institutions and enterprises across sectors in the Alliance, its goals is to commercialize Taiwan’s 5G network by 2020, promoting end-to-end 5G industrial chains and 5G deployment locally for Taiwan to stay ahead.

A commercialized 5G network is expected to launch in Q3, 2020. CHT serves as a leader in the innovative applications of AI, IoT, etc. The CHT Pilot Team extends lab experiments to field verification, as all walks of life can use this venue to develop new applications and opportunities. With a better synergy of the local industry’s hardware and telecom carriers’ software, more competitive solutions can be offered for transformation.



## The Creative Industry Pilot



The SDGs CHT contributes to in this section: 8, 9, 11



CHT's innovative strategies to cope with this situation include enhancing the current core business, active research into new product development, and generate more revenue from new and innovative ICT products and services. Chunghwa Telecom Laboratories (CHT-TL) is a designated R&D institute that has been established for research into new innovative services, core technology, and visionary applications. We strive to explore convenient and useful services from the consumers' perspective. Solutions are formulated through intricate coordination; the purpose is to find ways to "simplify tasks for consumers, and let CHT deal with the complexity."

### Overview of Chunghwa Telecom Laboratories in 2019

- There are more than 1,495 employees (nearly 6.88% of total) with 97.46% being R&D personnel.
- The funding for R&D totaled NT\$ 3.9 billion, which was 1.9% of the consolidated operating revenue.
- The laboratories secured 176 new product/technical patents (156 domestic and 20 overseas) to a total of 2,224 (2,018 domestic and 206 overseas). 1,162 of the patents are currently in force (1,063 domestic and 99 overseas).

## Innovative R&D Results in 2019

### Industrial Development Bureau, Ministry of Economic Affairs (MOEAIDB)

"Product Machine AR Collaboration" was selected as the excellent team in the 2019 Communication Competition, which is novel and the only machine tool AR collaboration product

### Taiwan Association of Information and Communication Standards (TAICS)

The Testing Center of Telecommunication Laboratories, Chunghwa Telecom obtained the mark of "Accredited testing laboratories in Internet of Things Security"

### Taiwan Contact Center Development Association (TCCDA)

TCCDA-CSEA—"Product Huabao Text Customer Service Robot" won the Best Intelligent Customer Service System Application Award for Outstanding Customer Service

### Industrial Technology Research Institute (ITRI)

"Intelligent Photovoltaic Monitoring System" won the masterpiece in solar photovoltaic innovative application product design contest

### Taiwan External trade development council (TAITRA)

Four gold, three silver and three bronze medals awarded to patents participated in "Taiwan Innovation and Technology Expo"

### Telecommunication Laboratories, Chunghwa Telecom

AI Grand Challenge

- First place: Product AI image annotation helper
- Masterpiece Award: Personal AI DJ for music magic lamp, smart speaker

### The Telecom Laboratories Human Resources Structure

Gender	Doctor	Bachelor
Male	93 6.22%	26 1.74%
Female	9 0.6%	15 1%
Gender	Master	Others
Male	1,004 67.16%	15 1%
Female	308 20.6%	25 1.68%

### CHT-TL Accredited by TAF with Its "Single-mode Fiber Testing Laboratory, First in Taiwan"

In 2019, CHT Telecom Laboratories Testing Center (TLTC) obtained the single-mode fiber testing technology accreditation from Taiwan Accreditation Foundation and became the first qualified testing laboratory in Taiwan capable of testing of light loss in single-mode fibers (the attenuation uniformity, bending loss, etc.)

Fiber testing plays an essential role in the future 5G industrial chain. We shall continue to progress in the field of advanced optical communication, establish complete testing technologies, and offer well-rounded testing service to the optical communication industry locally.

## ✦ Innovative ICT Products and Services

Chunghwa Telecom expects that 5G will give rise to IoT applied technology in the next few years. New forms of services like AI, big data, drones, AR, VR, smart home, and smart long-term care will rise along with new industries, which shall drive the economic growths worldwide. Hence, we take the lead with technological innovations and develop our own IoT application platform that combines services of cybersecurity, big data, cloud, AI, and AR. As of 2019, there are innovation users of over 400 SMEs already onboard.

In terms of AI development, we recruited 241 elites to form the R&D team, of which 200 are data scientists, and 41 AI specialists. In addition to the continuous improvement in 2019 of the five business areas, “smart security, smart cybersecurity, smart transportation, smart home, and emerging applications,” our 15 self-developed AI APIs have attained the commercialization level.

In digital convergence of film and television, upholding the service philosophy of providing a wide range of quality videos, MOD worked with Cyberon Corporation in 2019 and ushered in a new milestone for the AI speech technology in Taiwan, creating the smart voice control service available in both Mandarin and Taiwanese, first of its kind in Taiwan.

MOD promotes implementation of tier-based pricing and a reasonable profit-sharing model for operators while pays respect to consumers’ freedom in choosing TV programs to watch, thus successfully changing the way people watch TV. Among the fierce competition of film and television industry, we plan to exploit the omnimedia channels with coordinated marketing and product strategies. In 2019, through eminent cultural and sports events like CPBL All-Star Game, Asian Baseball Championship, BWF Chinese Taipei Open, and Golden Melody Awards, the number of users rocketed to 2 million above.

### 2019 MWC

Mr. Kuo Feng Lin, SEVP of Chunghwa Telecom, led the Taiwan 5G Alliance - CHT Pilot Team to the 2019 Mobile World Congress and exhibited the “5G Smart Edge Data Center” solutions developed by the CHT Telecom Laboratories at the Taiwan Pavilion. The solutions comprised applications such as “multi-view live streaming,” “Intelligent Operation Center,” and “smart agriculture.” Together with domestic ICT suppliers, we showcased Taiwan’s R&D energy and results in emerging technologies like 5G edge computing, network slicing, Artificial Intelligence (AI), Internet of Things (IoT), and big data analytics.



### No Fiber, No 5G organized jointly by CHT-TL and PIDA

“Responding to the 5G Action Plan of Taiwan – Seminar on constructing the innovative 5G application development environment in Taiwan”, organized jointly by Chunghwa Telecom Laboratories (CHT-TL) and Photonics Industry & Technology Development Association (PIDA), investigated the cross-disciplinary innovative application development over 5G x optical communication x network communication x cloud x telecommunication.

Mr. Kuo Feng Lin, SEVP of Chunghwa Telecom, stressed that the application of 5G in the vertical field is still in development; cross-disciplinary collaboration is key to the success; the co-operation of 4G with 5G in the future is expected, and that a high coverage of fiber network is a vital base for 5G to prevail. “No fiber, no 5G.” As 5G technologies and business models are still in development, an early investment for trials can gain one the opportunity of an early market entry.

## ✦ Social Innovation

### eHealth – Community Healthcare Service

In response to the needs as Taiwan marches toward an aging society, Chunghwa Telecom works with local governments to promote eHealth care service to elevate the clinic service quality in local public health centers. Among which, with the support of Smart City Taiwan of IDB, Hualien County launched the eHealth primary health institutions and long-term care program. Networked, mobile technological tools had been developed to improve the efficiency of clinic service, health checkup, and vaccination of 13 public health centers while build all the public health centers in Hualien into eHealth Centers.

### AR Smart Guided Tour – Encounter of Culture and Technology at the National Palace Museum

Chunghwa Telecom aims to explore more innovative 5G applications to enrich the lives of the general public and create novel living experiences. In 2019, it joined forces with the National Palace Museum to develop an all-new smart museum, first among the museums in Taiwan, and created an all-new digital, high-definition, on-site experience in of the 5G era. The 5G environment was created in Room 210 at the Main Building of the National Palace Museum to foster a 5G experimental space that offers AR smart guided tour service for visitors to explore through space and time with the virtual and physical realities combined and gain insights to the stories beneath the precious cultural relics.



### eHealth – CHT PHR

In response to the government’s Long-term Care Plan 2.0, we constructed the telehealth care service via ICT to improve health quality and efficiency. Also, we worked with multiple local hospitals to launch CHT Personal Health Record (CHT PHR). Users can upload their measurement results through the client terminals over landline or Bluetooth, share their health status with friends and family on the other side, and form a community that cares for each other. Children can learn about the measurements of their parents in real-time via MOD platform or cellphone, or grant authorization to share the data with medical facilities for a more comprehensive diagnosis.





## Environmental Innovation

### Smart Energy Application for Cloud Energy Storage IoT Service

Chunghwa Telecom has been utilizing its ICT and network technology prowess in recent years to expand the market of Internet of Things. Working with Eco Energy Corporation and through NB-IoT mobile communication technology, the innovative service of CHT IoT SMART PLATFORM is introduced and cloud energy IoT service is offered. The corporate clients can thus conduct monitoring of electricity quality, self-diagnosis, automatic warning, and energy-saving bill management in real time remotely as well as ensure the viability and reliability of the backup electricity system, reduce impacts of corporate management risks, and acquire multiple benefits in energy saving, carbon reduction, and cost reduction.

### Smart Aquaculture Monitoring

We worked with Taiwan Fertilizer Co., Ltd. (Taifer) and launched “smart aquaculture temperature monitoring program”. Through introduction of innovative NB-IoT technology, we offered automated monitoring solution in Taifer Hualien Deep Ocean Water Production Park. The seawater quality and temperature are monitored automatically, so that the seaweed cultivated in the Park can grow strong. The mobile IoT automatically monitors the culture environment 24/7 and helps save costs in labor and water while facilitates a more stable output.



## Financial Innovation

### NEXT BANK for Digital Life

In 2019, “NEXT BANK” composed by domestic players led by Chunghwa Telecom was approved to establish an internet-only bank that is expected to come online by 2020. Investment in internet-only bank is a vital element to seizing digital finance opportunity. “NEXT BANK” comprises various innovative enablers in financial innovation across sectors. It builds a whole-new financial innovation application platform that offers corporate clients FinTech related professional ICT services. Also, through participation in the establishment of internet-only bank, we aim to create a more convenient digital life for consumers.

## From Creation and Innovation to Startups

CHT has always encouraged creativity and innovation. Employees are encouraged to break new ground and turn their R&D creativity into real value, to drive industrial output and bring revenue to the Company. We adopted a strategy of internal and external cooperation to encourage and promote new startups in the ICT industry in Taiwan.

### AIoT Hackathon

Themed with “Smart City and Creative Life” for the first time, Chunghwa Telecom organized an AIoT Hackathon event of two days and one night for AI creation, drawing 160 contestants from 21 universities that formed 40 teams with members coming from different universities. The spirit of teamwork was fully manifested in the event by these young students.

The application event, in addition to the focus on teamwork and creative thinking, stressed more on the practicability and level of completion of works. Meanwhile, it provided ample resources for each contestant to give fully play to their talents, so that their works would not merely ideal blueprints, but practical cases for the future to realize the vision of “Smart City and Creative Life” in Taiwan.



### “Demonstration of startup results” of CHT 5G Accelerator

On “CHT 5G Accelerator –Demo Day of Startups’ Results”, apart from the selection of the startup of the year, it also serves as the matchmaking platform for enterprises and startups that helps fulfill the purpose of fostering a 5G industrial ecosystem in Taiwan.

The Startups of the Year in 2019 were presented to TMYTEK, Pumpkin Studio, and WASAI Technology. The top 3 startup teams would join us to attend 4YFN at the 2020 MWC, obtain opportunities of business partnership and reinvestment matchmaking with Chunghwa Telecom and the other corporate members on the CHT 5G Pilot Team, and win prizes valued NT\$1 million or above in total.

For the startup teams unable to secure the ticket to the 2020 MWC, we also compiled their brilliant works of creativity for the reference of the CHT 5G Pilot Team’s member enterprises and fully leveraged the role as a platform and a bridge to facilitate the rapid growth of the startups in Taiwan.





## IoT Smart Platform Competition

With surging demands for mobile services from industries, the “M-IoT Innovation Group” was introduced for the first time in the 2019 IoT Smart Platform Competition. Meanwhile, to encourage innovative talents, prizes valued up to NT\$1.8 million were offered. The Competition drew 151 teams in total. Through competition, we inspire top-notch innovative talents and explore IoT services with the potential for commercialization.

The arrival of 5G in 2020 further expedites the rapid development of IoT. The winning criteria set by the jury was “creative work with a high level of completion and commercial value”. In addition, Chunghwa Telecom offered the winning teams mentoring and introduction of industry-academia collaboration and application, so as to bestow more opportunities to bridge the outstanding works to industries. Moving forward, we shall continue to organize relevant events to inspire more creative talents to commit themselves in the development of IoT applications, while improving management efficiency via technology, creating new opportunities for industries, and guiding Taiwan into the global IoT market.



## The MOD Microfilm Contest

The “MOD Microfilm and Gold Film Creation Contest” with awards to a total of NT\$ 4.9 million in 2019 is the largest microfilm contest in Taiwan both in terms of the prize amount and the scale, which has attracted brilliant minds in film production, home and abroad, and a total of 300 entries.

Nearly 2,000 entries were cumulated over the 5-year course of the event, as the event has established a decent reputation and influence of its own. We created a dedicated section for “microfilm” on the MOD platform specifically and upload all the finalist works for our MOD customers to enjoy these exclusive contents, free of charge. A finalist film festival was especially thrown at Huashan Spot Theater. With huge screen of high quality, it screened 49 marvelous works of finalists’ in succession to showcase the creative energy of Taiwanese for more to see the original prowess of Taiwan in filmmaking.



## Taiwan Legend Championship Series, Powered by CHT

As the leader in the ICT sector, we proactively participate in various esports events and spare no effort in investment in the esports industry. Chunghwa Telecom has been the title sponsor of “Taiwan Legend Championship Series” for three consecutive years, creating a premium network environment for players and offering audience a prime watching experience.

In the duration of the 2019 Taiwan Legend Championship Series, we offered benefits such as fast track and exclusive seats for game watching on the scene, successfully attracting a crowd of 43,000 audience. Events were broadcast live on our MOD platform and Hami Video app in 4K/HD, drawing over 600,000 hits and a 20% growth compared to that of 2018.





## The Happiness Value Protector



The SDGs CHT contributes to in this section: 3, 8, 9, 10



S

### Strategy

- Chunghwa Telecom is committed to providing employees with “assurance,” including their work rights and freedom of association. The Company takes the initiative to care for the needs of employees, and implements communication channels to facilitate the exchange of opinions between the employer and employees
- Provide consumers with virtually and physically diverse, multilateral and high-quality service channels

M

### Management

- Ensures all employees sign a formal “Employment Agreement,” duly observe the Labor Standards Act and other applicable laws, and calls for labor-management meetings at regular intervals
- Accreditation of the SGS Qualicert service certification
- Comprehensive and robust personnel management

A

### Action

- The Company has specialized training facilities - Telecom Training Institute and Occupational Safety and Health Department in place
- Transparent and diverse means of communications and grievances
- Established the system of self-inspection, audit, and supervision for service quality
- Launch the personal information management and auditor certification system

R

### Response

- **The only** Taiwanese carrier with an established union
- Electromagnetic wave inspection service
- **The first** telecom carrier in Taiwan to receive ISO 45001 certificate

T

### Target

- Short-Term:**
- Fosters talents and allows all employees to share the results of the operations, in 2020, we recruit and retain talent with a 3% salary increase.
  - Make personalized high-quality products and services available to all our customers
- Mid-Term:**
- “Corporate Code of Conduct” obtained a declaration of conformity by an external third-party
  - **All areas** receive ISO 45001 certification by 2021

I

### Indicator

- GRI** Basic salary offered by Chunghwa Telecom is 1.3 times the minimum wage in Taiwan.
- GRI** No violation of GRI laws concern personal information, health, safety or product labeling
- GRI** Per Capita Training Hours: 44 hours
- GRI** “Collective Agreement” employee coverage of 99%

## ✂ Ensuring Employees’ Happiness

### Protecting the Rights of Workers

Chunghwa Telecom treats employees as their most important business partners. To ensure the best protection for the work rights of the employees, Chunghwa Telecom signs an “Employment Contract” with each employee and undertakes to notify them of any changes in terms of employment in compliance with the Labor Standards Act. Furthermore, CHT uses several different channels, including seminars and labor-management meetings, to maintain harmony and a mutually beneficial working relationship with employees.

### A Competitive Compensation System

We have a “Compensation Committee” in place to ensure that compensation for the best talent is competitive. In addition, the Company has a transparent system for sharing business performance with its employees. Compensation for executive management has been standardized and details are disclosed publicly in the annual reports. The Company offers equal compensation for all entry-level employees of the same grade. Those who possess relevant skills and work experience may have compensation evaluated based on educational background, career experience, expertise, and professional qualifications. Under no circumstances will compensation ever be determined by gender or racial differences.

2019 Base Salary  
in Taiwan  
NT\$ 23,100

Base Salary  
NT\$ 31,730

Average Salary  
in the Telecom Industry  
NT\$ 68,974

Average Salary  
NT\$ 72,000

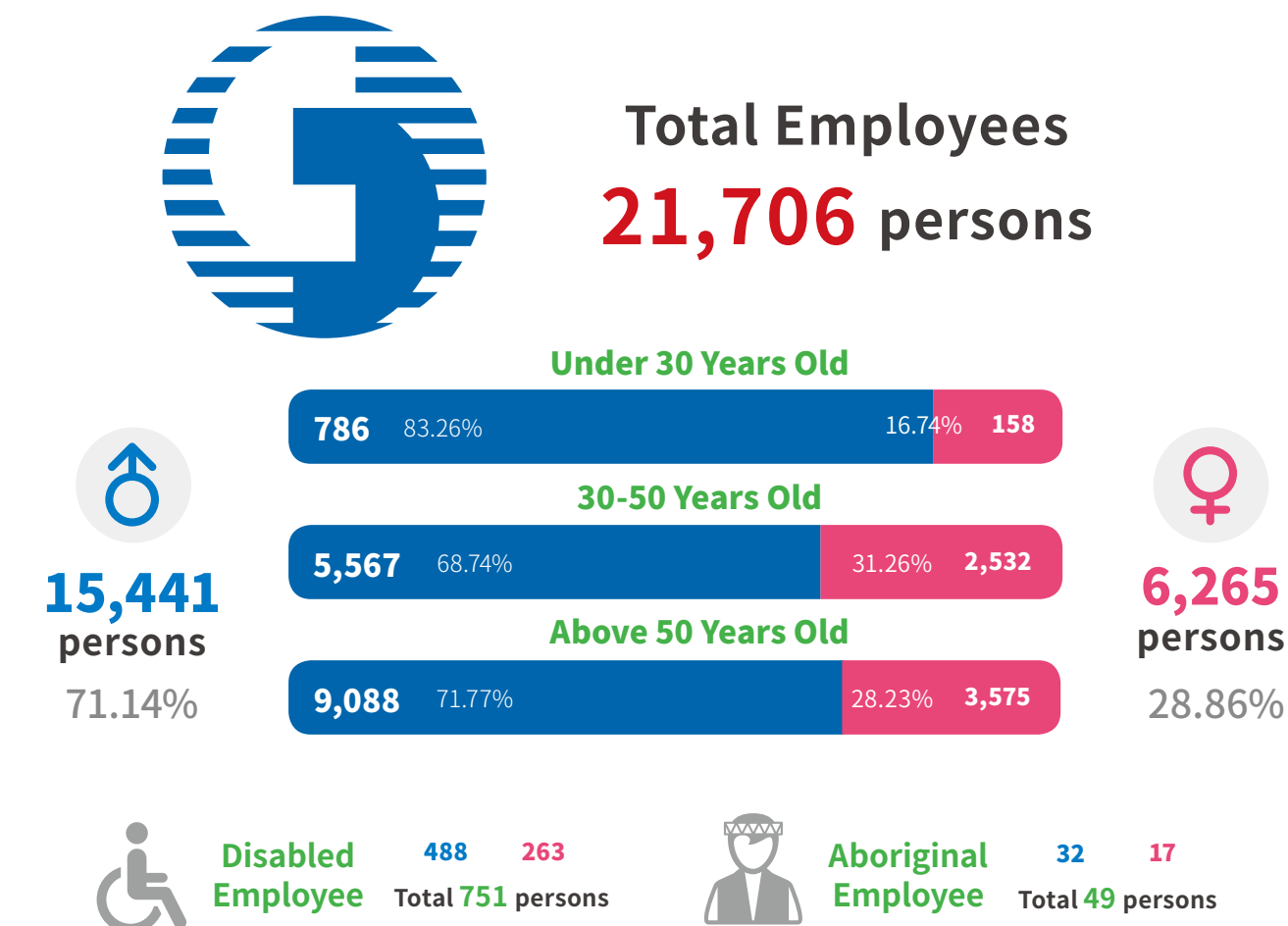
1. Average Salary in the Telecom Industry: According to the “Monthly Wage and Productivity Report, December 2019” published by the Directorate General of Budget, Accounting, and Statistics.
2. Base Salary of CHT: The average salary level in December 2019.

### Benefits Expense of Full-time Non-supervisory Employees

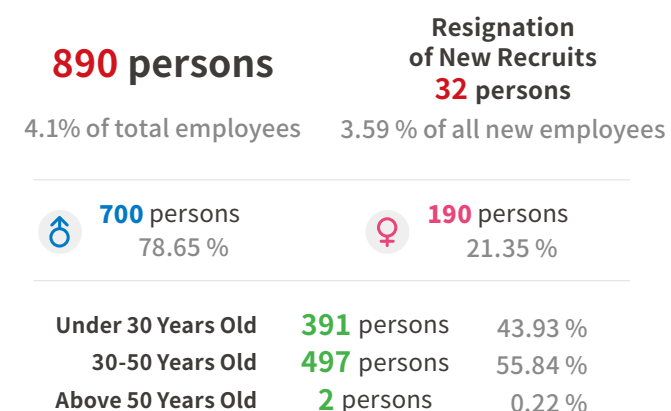
Item	Unit	2018	2019	YoY
Full-time Employees	Person	21,981	21,473	-2.31%
Average Salary	NTD Thousand	1,493	1,483	-0.67%
Median Salary	NTD Thousand	1,479	1,466	-0.88%

## Human Resources Structure at CHT

In 2019, CHT has more than 20 thousand employees with an average age of more than 50.8 years old. There will be more than 5 thousand employees retiring over the next 5 years, and 50% of the employees will be eligible for retirement over the next 10 years. Current senior management is included in this retirement tide. To cope with this problem, CHT is actively cultivating new talents to ensure that knowledge is passed down, filling the manpower gap of new generations.

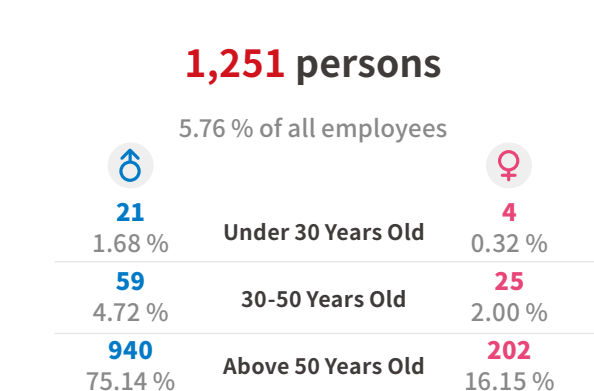


## + 2019 New Recruitments



Note: New recruits' rate = Number of new employees / [(Number of people at the beginning + number of people at the end) / 2]

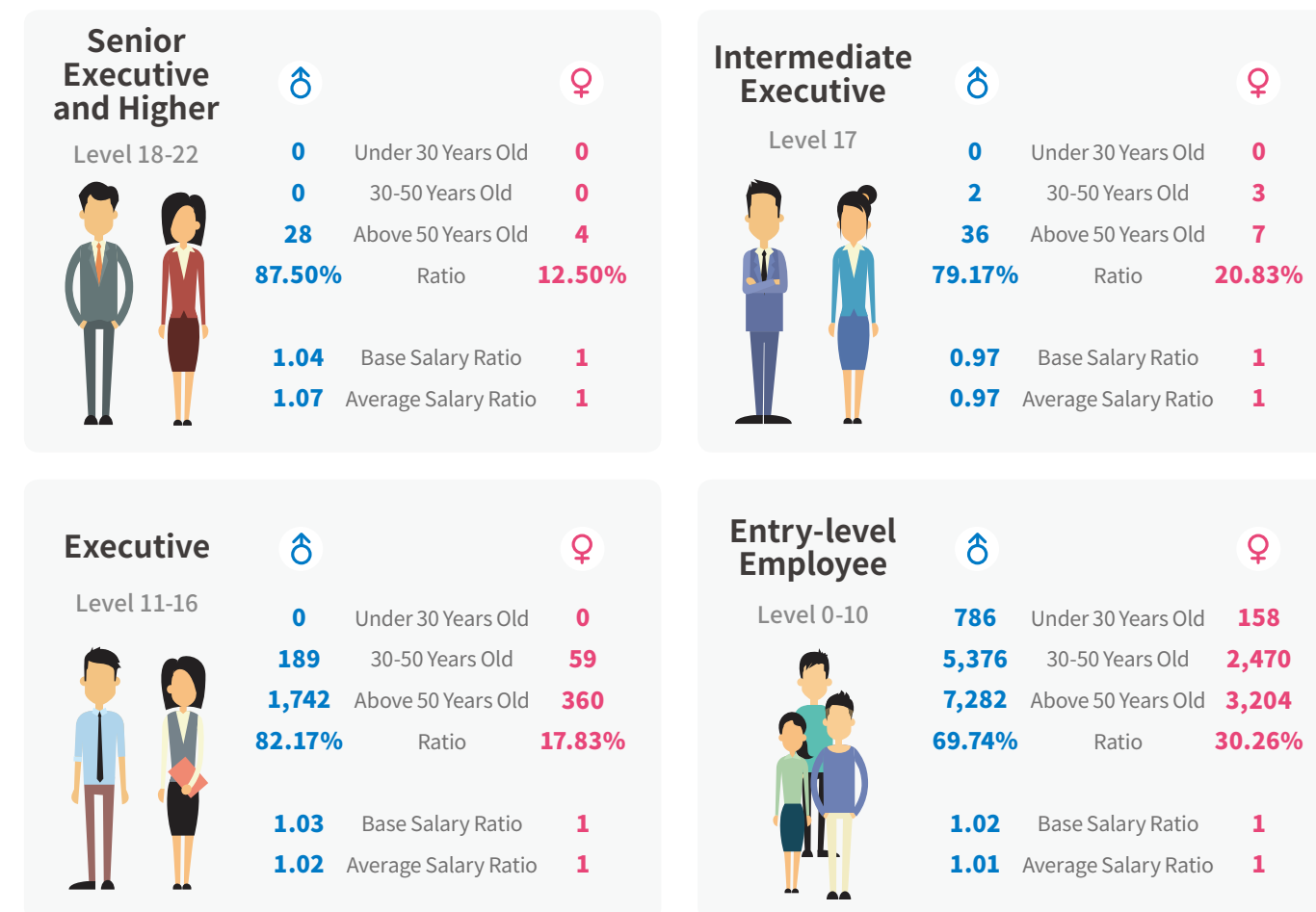
## — 2019 Employee Turnover



Notes:

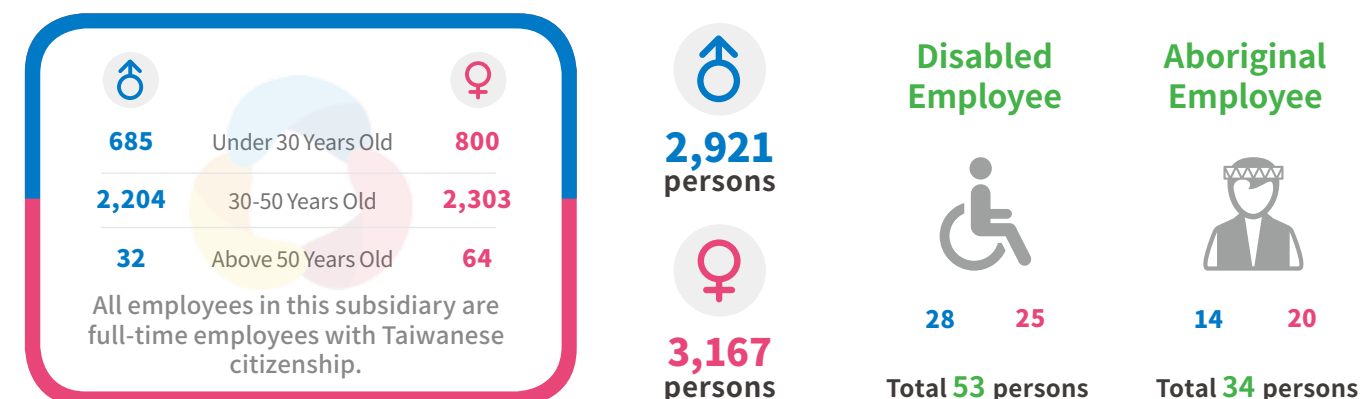
- New recruits' rate = Number of turnover employees / [(Number of people at the beginning + number of people at the end) / 2]
- The turnover rate in 2017 and 2018 are 4.2% and 3.97%

Chunghwa Telecom understands that the industry competition we are facing now is not only the telecommunications industry, but the changing information and communication industry chain. In the future, the recruitment direction of talents will be based on the large-scale public recruitment method which focuses on various professional fields. We will adopt an external network approach to transform Chunghwa Telecom's talents into an important kinetic energy for the continuous improvement of the next stage.



- All employees are Taiwanese and mainly full-time. Due to the needs of industrial management, we hire 1 contract-based employee.
- For all grades, basic salary is defined as the fixed salary (monthly).
- For all grades, average salary includes fixed salaries and variable portions (including the monthly salary, bonus, etc.)
- Levels of all grades: Basic 0-10; Executive 11-16; Intermediate Executive 17; Senior Executive 18-22.

## Human Resource Structure of Honghwa International Subsidiary in 2019





## Gender Equality and Diversity

Chunghwa Telecom places great value on human rights and gender equality. In 2019, female staff accounted for 28.86% of the total, and 27.16% of the managers were women. To conform to the essence of the Gender Equality in the Employment Act, the Company has outlined its sexual harassment prevention policy and established a “Complaint Investigation Committee” that specializes in the handling of employee complaints about work-related discrimination and improper behavior. The investigation committee has 5 members, 3 of whom are female. Our effective control has resulted in no incident of discrimination being reported in 2019.

CHT has done more than comply with the quota required by Article 38 of the Persons with Disabilities Rights Protection Act and have hired more than the required number. In 2019, the number of persons with disabilities hired was 3.74 times of the statutory quota. (quota: 201; actual hire: 751. Where a department or institution employs a seriously disabled person in accordance with the act, the disabled person shall be calculated as two.) We had 49 aboriginal employees on board in 2019. We fully respect their cultures and no violation of work or human rights was reported during the year.

## The Only Telecom Carrier in Taiwan with a Union

Chunghwa Telecom is the only telecom carrier in Taiwan with a union established. We have signed a collective bargaining agreement with them which covers an extensive range of issues from redundancy, reward, discipline, promotion to health and safety. This initiative not only complies with local laws and international human rights conventions, but is also a show of our commitment to the protection of employee interests. In addition to the union established by Chunghwa Telecom, employees have also assembled 14 other unions under the organization. In 2019, 99% of employees were union members. A labor director is appointed to sit on the Board of Directors for a workers’ representative, through whom workers can more freely express opinions.

Notes: Chunghwa Telecom complies with Article 16 of the group agreement about transfers. If there is a need to transfer a union member due to changes in the organization such as establishment, alteration, merger, and/or closure of a department, the Company will do so only if necessary and will respect the wishes of the member. In addition, all transfers must comply with the “Five Principles” of the Labor Standards Act.



## Open Communication and Grievance Channels

We have open communication channels in place to ensure that employees’ needs or suggestions are heard. Any violation or misconduct in the workplace can be reported to the relevant department using the channels provided. There were 25 complaints in 2019, including behavior as disrespect of the CHT system, principles, administrative management, and violation of the employee code of conduct or other misconduct. There were no human rights related cases in 2019.

We hold regular labor-management meetings to maintain contact between employees and the employer. There are 9 representatives from each side, employer and employees. The chair is held by each side in turn. The Chairman and President of Chunghwa Telecom engage regularly with the Chairman of the Union, Directors, and Supervisors in meetings, in person and by telephone. The Chairman of the Chunghwa Telecom Workers Union is entitled to participate in disciplinary review meetings, performance appraisals, and business report meetings to ensure that workers are kept up to date on Company news. In 2019, the Company held 6 nationwide labor-management meetings and 1 extraordinary meeting during which employees and the employer were able to reach consensus on many issues. Meetings for the discussion of particular matters can be convened, or if any change to work conditions is necessary.



### The Employee Grievance Channels

- CHT intranet portal: <http://eip.cht.com.tw>
- Accountable department: Human Resource Division, Head Office (Room 503, No. 21-3, Section 1, Xinyi Road, Taipei City 100)
- Hotline: 0800-080998
- Fax: (02) 2357-0007
- Email: [chthr@cht.com.tw](mailto:chthr@cht.com.tw)



## ✦ Focusing on Employee Training and Development

Our fundamental business focus is “core competitiveness, professionalism, efficiency, and service” and we seek to develop innovative talent through a combination of internal and external training.

We have a comprehensive training system to assist employee development in all dimensions. The system starts with the incorporation of “needs analysis” and “in-depth planning” and is followed by performance assessment and review after the program ends. This systematic approach enhances professional skill and work efficiency, and helps the Company improve its coordination of human resources.



### Human Resource Development Strategies

The Chunghwa Telecom Training Institute has devised human resource development strategies based on business focus and talent requirements between 2017 and 2019.



Alignment of training and business development



Alignment of training targets and courses



Mobilization of digital learning



Government-industry-university-institute platform



Innovation and Benefits

#### Digital Classroom

Chunghwa Telecom has introduced an online learning social network (the Digital Classroom) with an e-Learning approach quite unlike that of conventional classroom teaching. In this new learning social network where users may share and transfer knowledge at a lower cost, and with a far better yield of good results. The broadband installation college, for example, is a platform where information such as technical documents, cases, video tutorials, and technical discussions can be exchanged and learned.

#### Online Broadcast

Online broadcasts can be used to teach topics related to specific work. They are delivered over the internal UC platform, and offer employees a fast and convenient way to gain knowledge and observe new trends. Online broadcasts transmit the experiences of experts to all employees without limit and boost business growth. The topics in 2019 included core business, ICT extended business, business in the new field and new knowledge of management and health care. There were 115 classes with 11,021 participants.

#### Results

##### 1. Provide International public cloud certification training

- In line with the corporate cloud strategy, training and certification mentoring for AWS, Azure, and GCP certificates were organized in 2019 to facilitate different institutes to acquire a total of 194 international public cloud certificates.

##### 2. Improve management cap

- “Manager management seminar” was organized to effectively resolve management issues and promote business development and profit and revenue growths. Quality of communication was enhanced in the seminar to promptly respond to clients’ pain points and accurately promote the focused businesses of Chunghwa Telecom. A total of 171 senior managers participated in 2019.

##### 3. New business potentials

- Courses on AI certification and AIoT to strengthen the core competitiveness in AIoT were organized three times in 2018-2019 and cultivated 92 individuals.
- 46 important professional seminars were organized with 3,444 participants, including seminars respectively on 5G wireless technology, IoT development trend and service application, and big data application, etc. Courses of photovoltaic technical training series, business promotion, planning and design, construction and maintenance manpower are totaling 30 classes and 833 individuals.

## Dedicated Training Units

Chunghwa Telecom has founded the “Telecom Training Institute” that specializes in training technical as well as managerial talent in the telecom field to gain more core competitive advantages. A “Talent Development Team” has also been established, with the President as convener, to conduct regular reviews of the planning and outcome of training. This is important to ensure that the training outcome is closely aligned with the operational policy to achieve a “seamless combination of training and practice.”

## Diverse Learning Channels

To meet the needs of the organization, and the personal interest and even the personality traits of employees, the Telecom Training Institute provides a diversity of learning channels. These help employees develop new in-depth professional ability as well as a renewal of their management skills to bring about growth and proper career development. Employees can attend training at the Telecommunication Training Institute during regular hours, in the evening or on holidays. The institute can also dispatch tutors to relevant business units for organized training sessions. The institute offers 8 learning channels: class teaching, distance education, digital learning, mobilization digital learning, direct-broadcast courses, external programs, on-site tutoring, and the digital library.

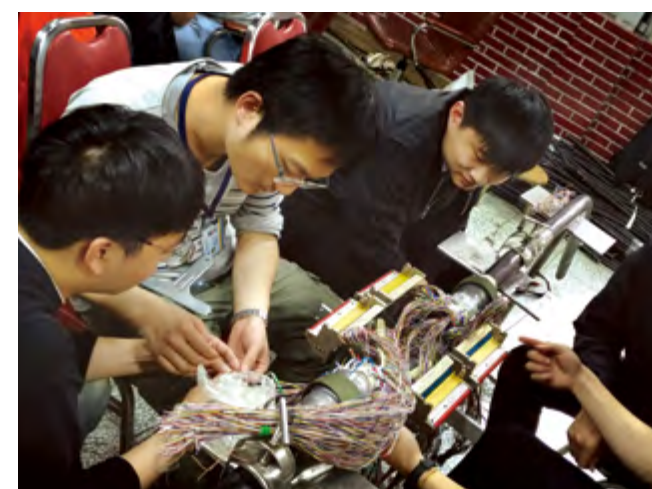
## New Employee Orientation

To provide new recruits with a general understanding of company vision, values and culture and help them adapt to the new criteria and work environment, the “New Recruit Counseling Guidelines for Chunghwa Telecom and Subordinate Institutions” was introduced in 2014 as well as a counselor system and e-Learning audio courses to accelerate the new employees blended into new work.

### Recruitment and Development of the New-Generation Talents

Chunghwa Telecom will encounter a wave of senior management retirements. Therefore, in response to business expansion and the rapid development of emerging technologies, CHT is actively recruiting new employees—we plan to hire 1,600 new recruits in 2019. The recruited talents are 1,025 individuals with a 64% of achievement rate. The recruitment objective for 2020 is 1,800 talents. The following measures have been developed as a response to reduce disruption in the transfer of knowledge:

- Recruiting professional talent** in ICT, AIoT, 5G application, technology innovation, and other new business opportunities.
- The nurturing of the next-generation talent:** The Company introduces new talent-training programs on a yearly basis. It provides employees with professional and diverse training options, and certifies the development of skill.
- Emerging businesses:** new ICT technologies are being infused with knowledge from other fields. The Company will focus on training professionals who can adapt and apply their knowledge across several different fields of expertise such as cloud computing, big data, and product packaging to actual practices.





## Fair Evaluation

Chunghwa Telecom now applies “Employees Performance Evaluation Guidelines” which are used in the appraisal of employee performance to develop the corporate culture where employees, customers, shareholders, and the Company will all be winners. Supervision will be provided for underperforming employees who will be guided until the appropriate improvement has been made and they are back on track.

CHT conducts performance appraisal at two levels: general staffs and senior managers. Performance appraisal involves a series of face-to-face discussions between employees and line managers at the beginning of a year to set personal goals, and also at mid-year and years end to evaluate the degree of employee contribution to the Company. Performance bonuses and employee remuneration are tied to individual performance.

In addition to linking employees’ salary bonus to their annual performance, CHT has established a reward of senior employees, which is payable on a one-year deferred basis and apply to all employees, provided that the employee has a certain standard of continuous service and recent performance appraisal results.

## Nurturing of Professional Talents

Chunghwa Telecom is dedicated to providing employees with a diverse learning environment. In 2019, Chunghwa Telecom training expenses exceeded NT\$ 497 million and employee training sessions totaled 960 thousand hours. We encourage employees to commit themselves to long-term learning and we offer education subsidies as much as NT\$ 30,000 per semester. Subsidies were given to 381 employees in 2019 and the Company compensation amounted to NT\$ 5.173 million.

	2017	2018	2019
<b>Total Training Expense (NT\$ thousand)</b>	514,082	502,370	<b>497,901</b>
<b>Per Capita Training (NT\$)</b>	22,889	22,707	<b>22,938</b>
<b>Total Training Hours</b>	974,712	908,316	<b>961,234</b>
<b>Per Capita Training Hours</b>	43	41	<b>44</b>



## The Happiness at Work Survey

Since 2011, we have been engaging outside agencies to carry out annual “Chunghwa Telecom Happiness at Work Surveys” on an anonymous basis. This helps us to understand how employees feel about their work and their working status, and are used as a reference for the improvement of management. The survey topics include individual opinions about the working environment, welfare and corporate transformation. By listening to the opinions of the employee, we get to understand their feelings and expectations.

The 2019 “Happiness at Work” survey is in a hundred-mark system. In total, 4,641 questionnaires were returned (21.9% response rate), 4,533 of which were determined to be valid (97.67%). The “Happiness at Work” averaged 83.63, and “Employee Engagement” 91.25. We will continue these surveys and respond to employee opinions.

## Health and Safety Management

Chunghwa Telecom was the first telecom service provider in Taiwan to adopt the OHSAS 18000 Occupational Health and Safety Management System.

In response to the renaming of and migration from OHSAS 18000 to ISO 45001, as of the end of 2019, a total of 15 branches completed the certification of ISO 45001. It is scheduled to complete the migration to ISO 45001 certification of the 27 branches that are liable to establish an occupational health and safety management system throughout the branches by 2021.

In addition to identifying hazards and assessing the risks associated with telecom operations, the Company has also applied restrictions and enhanced risk control for high-risk tasks, while taking effective precautions to reduce occupational hazards. In addition to complying with safety and health regulations, the Company has also been active in the improvement of the current work environment and takes regular action with regard to safety and health facilities and measures.

We take part in all government initiatives and actively promote a healthy workplace. 21 divisions within the Company have received awards under the “National Workplace Safety and Health Campaign” organized by the Health Promotion Administration, Ministry of Health and Welfare.





## The Dedicated Occupational Health and Safety Management Unit

There is “Labor Safety and Health Committee” in institutions at all levels in CHT, the average proportion of labor representatives is 35.64%. Meetings are held quarterly to deliberate, coordinate and make suggestions on labor safety and health issues. There is also “Labor Safety and Health Department”, which is responsible for the planning and implementation of labor safety and health matters.

The head office’s Labor Safety and Health Committee has 29 members, 10 members are from the labor union, accounting for 34%. 4 meetings were held in 2019 and 8 proposals were presented by the labor representatives, one were related to the improvement of health and safety facilities, three to the refinement of safety and health management, and four was related to employee benefits. All of the above are solved.

### The First Telecom Carrier in Taiwan to Receive ISO 45001 Certification

Since its establishment, CHT has always put great emphasis on occupational safety. We implement corporate level health & safety by providing adequate training, instituting control measures, performing internal audits, and conducting on-site inspections, fully implanting corporate’s occupational health and safety management. In 2018, CHT’s mobile business group receive OHSAS 18001 and TOSHMS certifications, and also receive the ISO 45001 occupational health and safety certification, being the first cellular service provider in Taiwan to obtain international certification!



## Full-Time Physicians and Nurses to Improve Employee’s Health Management

To better provide immediate medical assistance and attend to worker health, we engaged 23 full-time nurses and contracted 22 physicians in 2019 for this specific purpose. They were assigned to locations at Xinyi, Aiguo, the Da’an Industrial Park, New Taipei City, Taoyuan, Hsinchu, Miaoli, Central Taiwan, Chiayi, Tainan, Kaohsiung and Pingtung.

The Company has deployed 6 i-med Systems at local customer centers for employees involved in high-risk activities. Blood pressure is measured and employees are given careful health checks before they engage in any high-risk work. This reduces the risk of accidents in high-risk situations.

### Critical Issue – COVID-19 Pandemic

In response to the COVID-19 pandemic in the early 2020, an epidemic prevention and response command center was established with the Chairman & CEO as the commander, and external supporting response units and internal epidemic prevention response units were created thereunder. Different levels were laid out with corresponding epidemic prevention measures in accordance with the pandemic’s development. To ensure a continual provision of services, all branches stipulated operation plans to maintain services to clients, network system operation continuity plans, and information system operation continuity plans, and other plans for epidemic response.

#### Epidemic Prevention Measures

- The Occupational Safety and Health Department created materials regarding the latest updates of the epidemic, travel advisories, and epidemic prevention promotion following the epidemic development, which are distributed across the enterprise via multiple channels, including, email, MMS, and announcement on EIP.

#### Epidemic Prevention Subsidy

- Employees returning from abroad out of the epidemic prevention needs (except for employees traveling to areas that have been declared as travel advisory level 3) are granted with epidemic prevention leave in the duration of home quarantine. As of the end of April 2020, the number of employees granted with epidemic prevention leave for home quarantine is 52, totaled 4,160 hours.
- In compliance with the government’s necessary measures for COVID-19 response, which postponed the opening of senior high schools or below, in the event of any employee with the need of caring for school children at age 12 or below, the employee or the spouse may apply for “epidemic prevention childcare leave” in the duration of 11th to 24th of February. The leave is available without pay and would not affect the full attendance and bonus thereof, nor did it count as personal leave/sick leave thereof. The number of employees applied for such leave is 123 with a total of 3,510 leave hours.

## Reducing Occupational Hazards

The Chunghwa Telecom “Work Accident Guidelines” contain detailed procedures for assessing occupational illness. Employees suspected of having become ill as a result of their occupation are assisted with an application for verification at the local municipal/county/city authority, in accordance with the “Protecting Workers from Occupational Accidents Act.” We manage risks at the source, by making sure that construction risks are under control from the early design stages of a project. The line construction management system has been amended with respect to highlighting high-risk operations as well as risk assessment information to ensure operators are able to identify potential risk in advance.



All high-risk operations are subject to approval by the ICT. Workers are also required to take site pictures with handheld devices and upload them to the monitoring system so that precautionary measures can be identified and taken to prevent such accidents as falls, oxygen deprivation, etc. To promote employee awareness and safety and health skills, we organized 132 training sessions in 2019 and there were 7,597 enrollments. Among which, the enrollment for first aider training is 615 with a total of 5,745 hours, and that for AED training of Taipei City is 838 with a total of 1,676 hours.

The Company encountered 19 cases of occupational hazard in 2019 (incidents occurred on the way to and from work not included), 10 in traffic accidents, 3 trips, 2 falls, 2 collisions, 1 clamp, and 1 struck by falling objects. To raise employee awareness of traffic safety and reduce the occurrence of traffic accidents, Telecom Training Institute is tasked with the preparation of e-learning materials concerning traffic safety for employees to learn and take tests online. Employees are constantly being reminded at the Occupational Safety and Health Committee meetings, work safety meetings, and training sessions to exercise greater attention to personal safety and safe driving. Throughout 2019, a total of 4 major occupational accidents occurred to contractors of Chunghwa Telecom, of which 3 cases were falling and 1 case electrification, leading to a total of 4 individuals injured.

### Health Promotions for Senior Employees

- Health checkups:** The Company provided checkup services specifically targeted at senior employees, including carotid duplex and echocardiography for the risk of ischemic stroke, coronary artery narrowing and incomplete heart valve closure, as well as fundus photography for checking macular degeneration, retinal vessels and glaucoma.
- Health promotion lectures:** A health manager was invited to talk on “osteoporosis” for physical health maintenance. The Company also invited a dietitian from Chi-Hsin Health Clinic to talk about “eating correctly to prevent cardiovascular diseases,” and “maintain your bone and muscle – the elegant figure for middle-aged individuals,” emphasizing the importance of health planning towards the maintenance of bodily functions.
- Others:** As a countermeasure to influenza outbreaks, Chunghwa Telecom subsidized influenza vaccination for 1,821 employees.

### National Fitness Program

In 2019, the Sports Administration of the Ministry of Education cooperate with Global Views Monthly to organize National Fitness Program, 177 employees from CHT Xinyi Park signed up to learn more about fitness. The program included body measurements (height, weight, waist line, hip line, muscle mass, body fat, protein/mineral levels, and degree of obesity), muscle strength training (grips), flexibility training (forward flexion exercise), and cardiorespiratory fitness (knee-ups), designed to help employees learn more about their health and absorb new knowledge about sports.



## The “eSafe Wizard” App

As part of our effort to mobilize management, the “eSafe Wizard” app allows employees and contractors to report safety violations, apply for operation permits, and acquire knowledge of occupational safety and health. The app also allows us to remotely perform spot checks on safety compliance, moving the entire management process onto the cloud. It is completely paperless, instantaneous, and highly effective. The app is currently promoted across all institutions of Chunghwa Telecom, while the technology is shared to other domestic enterprises as a gesture of goodwill in exercising our corporate social responsibility.

In 2019, with the “eSafe Wizard” app, combined with the mobile management via cloud technology, we achieved 100% in required permit application and hazard notification for operations such as hot work, work aloft, excavation, power and fire protection interruption, etc.

	2017			2018			2019		
<b>Injury Rate (IR)</b>	0.12	0.16	0.13	0.13	0.25	0.16	0.13	0.05	0.18
<b>Occupational Disease Rate (ODR)</b>	0	0	0	0	0	0	0	0	0
<b>Loss Day Rate (LDR)</b>	40.41	3.31	29.86	80.27	7.9	59.64	31.45	2.32	33.77
<b>Absence Rate (AR)</b>	0.30	0.70	0.41	0.37	0.79	0.49	0.31	0.75	0.44

1. Injury Rate (IR) = (Total number of injuries/Number of hours worked by all employees) x 200,000
2. Occupational Diseases Rate (ODR) = (Number of occupational diseases/Total work hours) x 200,000
3. Lost Day Rate (LDR) = (Total loss of work days/Total work hours) x 200,000
4. Absentee Rate (AR) = (Total number of absent days/Total number of man-days) x 100%
5. Days absent: paid and unpaid personal leave and sick or extended sick leave, excluding official leave or leave due to workplace injuries.
6. Total working hours: number of employees across branches × working days × 8 hours – leave hours + overtime hours
7. Including traffic accidents during commute.



## A Safe and Healthy Workplace










CHT considers its employees’ health to be a valuable company asset. Providing a safe and healthy workplace is a basic requirement to our employees. Apart from a wide range of benefits, including health checkup, keynote speeches, and promotional activities, we also commit ourselves in the promotion of sports in workplace and in the support to sports industry. In 2019, we were recognized by the 4th Exercise Enterprise Certification and by the first prize of the 1st “CHR Awards” of Common Health Magazine. In 2019, we spent NT\$ 80,313 thousand on employee health care.



Item		2019 Contributions		Item		2019 Contributions	
Health Examination of Employees and Dependents		<ul style="list-style-type: none"><li>The Company offers much better care than required by law and employees are given the choice of various health checkup packages. A total of 20,962 (99.02%) employees had checkups in 2019.</li><li>Family members are also entitled to checkups at the same rate, and a total of 4,150 persons participated in 2019.</li></ul>		Employee Health Service		<ul style="list-style-type: none"><li>Provide employees health consultation via online or phone appointment. Physicians visited the plants 35 times a month. Sessions were for 3 hours and each patient was allocated 30 minutes.</li><li>Healthcare personnel use the “Employee Health Management System” for the analysis and evaluation of health records. Where necessary, extra consultations can be arranged between the physicians and the employees for proper guidance and healthcare.</li></ul>	
		Free Influenza Vaccination <ul style="list-style-type: none"><li>Free influenza vaccination is available for all employees who fit the requirements for vaccination at public expense. Registration can be done online and 1,711 employees were vaccinated.</li></ul>				Thirty-minute medical consultation with a physician (30 minutes / per person) <b>2,792</b> <div>On-site visits by physicians <b>420</b><div>consultation with a nurse <b>6,305</b></div></div>	
Employee Assistance Program (EAP)		<ul style="list-style-type: none"><li>CHT was one of the largest corporations in Taiwan to start promoting the Employee Assistance Program (EAP) since 2007.</li><li>The EAP carries out 5 consultation sessions each year, in which outside experts are contracted to help employees resolve their legal, medical, family, workplace, and stress problems.</li><li>Case managers made 25 visits and completed 375 service sessions in 2019.</li></ul>		Healthy Workplace		<ul style="list-style-type: none"><li>The noise level, lighting, temperature, humidity and air quality of our offices is tested regularly. The offices are also cleaned and maintained on a regular basis to ensure workers have a comfortable working environment.</li><li>Furthermore, all offices feature ergonomic chairs, natural ventilation, indoor plants and other elements of a healthy work environment.</li></ul>	
Employee Health Promotion		<ul style="list-style-type: none"><li>A total of 9,583 employees participated in 149 health seminars. 79 employees participated 2 sports competitions, and 8,607 employees attended 79 educational trips. Health examinations were given to 1,510 employees in 16 sessions and 18,437 employees participated in 258 large-scale events.</li><li>The Company published two health-related articles each month about the concept of disease prevention.</li></ul>				Flexible Working Hours	
Employee Cafeteria		<ul style="list-style-type: none"><li>Our employee cafeteria offers a diverse range of nutritionally balanced meals to choose from.</li><li>All food suppliers are subjected to rigorous review to ensure the safety of food served to our employees.</li></ul>		Epidemic Prevention Leave		<ul style="list-style-type: none"><li>During the 2020 COVID-19 epidemic prevention period, 52 employees granted with epidemic prevention leave for home quarantine, totaled 4,160 hours.</li><li>The “epidemic prevention childcare leave” is available without pay and would not affect the full attendance and bonus, nor did it count as personal leave/sick leave . 123 employees applied for such leave with a total of 3,510 leave hours.</li></ul>	
				Balancing Work and Life		<ul style="list-style-type: none"><li>Chunghwa Telecom has 30 hostels that provide travel accommodation. An annual travel subsidy of NT\$ 8,000 encourages employees to achieve a balance between work and life.</li></ul>	

## ✦ Building a Happy Business

CHT regard employees as important assets. We offer a commitment to “Peace of mind” to our employees, and refrain from making layoffs and salary reductions.

Item	Activities and Description	Number of Participant / Beneficiaries	Contribution / Supplement
 <b>Maternity Allowance (Company Issued)</b>	We offer a 6-month maternity allowance in compliance with the Employment Insurance Act. CHT also offers additional monthly allowances totaling half the sum assured under the Labor Insurance Scheme.	129 persons	NT\$ 17,069 Thousand
 <b>Childcare Allowance (Company Issued)</b>	Employees with children aged 0-6 years old will automatically receive a childcare allowance of NT\$ 5,000 per year.	3,475 persons	NT\$ 14,432 Thousand
 <b>Sports Activity</b>	Regional activities include 98 road running events, 164 hiking activities, 116 ball sports activities and 1,648 other activities (e.g. stair-climbing, health exercise, strolling, and fun competitions).	67 thousand persons	NT\$ 11,691 Thousand
 <b>ESOT</b>	Improvement of employee welfare, enhancement of employee coherence, sharing company achievements and the establishment of an employee stock ownership committee to guarantee the quality of life after retirement or resignation.	About 18 thousand persons	NT\$ 2.3 Thousand/month per person
 <b>Dependent Education Subsidy</b>	Twice a year (two semesters).	25,224 persons	NT\$ 145,400 Thousand
 <b>Wedding Subsidy</b>	A wedding subsidy is available for employees who are to be lawfully married.	224 persons	NT\$ 560 Thousand
 <b>Childbirth Subsidy</b>	Employees or their spouses are eligible for a childbirth subsidy.	381 persons	NT\$ 953 Thousand
 <b>Funeral Subsidy</b>	A funeral subsidy is available in the event of the death of a parent, foster parent, step-parent, the spouse or a child of an employee.	832 persons	NT\$ 4,160 Thousand
 <b>Recreation and Sports Space</b>	Includes an integrated stadium, swimming pool, tennis, badminton, basketball, and table tennis courts, multi-functional event space, karaoke room, and employee dormitories.	Total 13,103 square meters	

Note: Welfare is provided for employees of Chunghwa Telecom, but not for those of subsidiaries.

## Retirement Benefits

Employee requests for retirement are processed in accordance with the “Chunghwa Telecom Employee Retirement Pension and Separation Guidelines,” the “Labor Standards Act,” and the “Labor Pensions Act.”

- The Labor Standards Act: The Company makes monthly pension contributions of up to 15% of an employees' monthly salary to the pension fund. This fund is held under the auspices of the Labor Pension Supervisory Committee. The current balance of the pension fund account is 39.6 billion.
- The Labor Pension Act: The Company makes monthly contributions of no less than 6% of an employees' monthly salary. These contributions are deposited in the employees' pension account held by the Bureau of Labor Insurance of the Ministry of Labor, in accordance with the Contribution Rate Sheet approved by the Executive Yuan.  
Note: Monthly pension contributions were made in accordance with the “Monthly Contribution Wages Classification Scheme” published by the Ministry of Labor, subject to biannual adjustments.

## Better Maternity Benefits than the Legal Requisites

We have been implementing an unpaid childcare leave system since 2006 to help employees juggle their attention between work and family. Chunghwa Telecom is required, under the Employment Insurance Act, to pay a six months maternity allowance to employees who give birth. Female employees who have taken this leave are further entitled, under company policy, to receive an additional monthly allowance of half the sum assured under the Labor Insurance Scheme during child-care leave, for a period up to two years. Employees of Chunghwa Telecom are also entitled to other privileges such as family care leave, paternity leave, menstrual leave, and a nursery room service, as well as epidemic prevention childcare leave pursuant to the government's epidemic prevention policy. In 2019, 88 employees applied for unpaid child-care leave; 129 employees applied for child-care leave allowances. NT\$ 17,069 thousand was paid out as child-care leave allowances, an increase of NT\$ 2,085 thousand over 2018.

Year	Item	Male	Female	Total
2019	<b>The Number Qualified for UPL for Raising Children 2019 (A)</b>	<b>887</b>	<b>414</b>	<b>1,301</b>
	<b>Number of Applications for UPL 2019 (B)</b>	<b>14</b>	<b>74</b>	<b>88</b>
	<b>Application Rate for UPL (B/A)</b>	<b>2%</b>	<b>18%</b>	<b>7%</b>
	<b>Number of Expected Reinstatement 2019 (C)</b>	<b>17</b>	<b>56</b>	<b>73</b>
	<b>Number of Applications for Reinstatement 2019 (D)</b>	<b>17</b>	<b>65</b>	<b>82</b>
	<b>Reinstatement 2019 (D/C)</b>	<b>100%</b>	<b>116%</b>	<b>112%</b>
2018	Number of Reinstatement 2018 (E)	22	52	74
	One Year Retention after Reinstatement 2018 (F)	20	50	70
	Retention Rate 2018 (F/E)	91%	96%	95%

1. The number of employees entitled to apply for a parental leave of absence in 2019 (A): calculated as employees who had applied for maternity leave and parental leave in 2017-2019.
2. The number of expected reinstatements 2019 (C): The number of employees who applied from 2017 to 2019 and should be reinstated in 2019.
3. The number of actual reinstatements 2019 (D): The number of employees who applied from 2017 to 2019 and were reinstated in 2019.
4. Reinstatement rate: (actual number of reinstated employees that year/number of employees who should have been reinstated that year) × 100%
5. Retention rate: (the number who continued working after reinstatement/reinstated number for the previous year) × 100%

To help employees adapt to life after retirement, the Telecom Training Institute organized a series of “Retiree Adaptation Courses.” 13 sessions were held in 2019 for audiences totaling 636. Furthermore, a donation of NT\$ 4.5 million was made to the “Chunghwa Telecom Retirees Association” for various activities, and NT\$ 1.5 million for the organization of travel events. A further NT\$ 300,000 was donated for a Chinese New Year banquet held for volunteers.

To facilitate the transfer of knowledge and experience, we have established a set of “Consultant Recruitment Guidelines” and retired employees engage in our endeavors to maintain continuous growth. Consultants can have a paid or honorary role. Executive vice presidents and above, and heads of first-grade institutions, may be hired by Chunghwa Telecom as paid consultants after retirement. Paid consultants shall serve a term of no more than one year, and assume honorary roles from the day after the one-year period has expired.





## Human Rights Value Protection

We proactively monitor and protect human rights. We respond to the UN Declaration of Human Rights and the ILO Convention on the elimination of all forms of discrimination and the prohibition of forced and child labor. We also respond to the UN International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights, dedicating to promote human rights awareness and assure respect and fair treatment to all stakeholders.

CHT is a member of the International Telecom Union and we fully comply with International Radio Regulations. The regulation concerning: freedom of communication, transparency in global roaming charges and competition, support of Telecoms in developing nations, telecom services for persons with disabilities and the freedom of speech over telecom networks.

In addition, we support the UN Guiding Principles on Business and Human Rights by conducting a human rights due diligence investigation and make sure that each human rights issue in the operational value chain is evaluated and we maintain all risk at a minimum level.

Note: Human rights issues include anti-discrimination, gender equality, freedom of association, collective bargaining, child labor, forced or compulsory labor, and aboriginal rights.

### 2019 Value Chain Human Rights Evaluation Results

Subjects of the Value Chain	Location / Amount	Evaluation Mechanism	Evaluation Percentage	Percentage at Risk	Description / Boosting Mechanism
 CHT owned institutes at 1 to 2 lower levels	28	<ul style="list-style-type: none"> <li>Labor-management meeting</li> <li>Collective agreement</li> <li>Workers' Union meeting</li> <li>Annual human rights event inspection</li> </ul>	100%	2.1%	<ul style="list-style-type: none"> <li>Some institutes were in violation of regulations and legislation and corrective measures had to be taken.</li> <li>We continue to protect human rights through the Workers' Union and Collective Agreements.</li> </ul>
 Subsidiaries	19	<ul style="list-style-type: none"> <li>Annual CSR implementation inspection</li> </ul>	100%		
 Re-investment Companies	7	<ul style="list-style-type: none"> <li>Annual CSR implementation inspection</li> </ul>	100%	7.6%	Some institutes were in violation of regulations. Suggestions for improvement have been provided and will be tracked and managed continuously.
 Upstream and Downstream Suppliers	Tier 1	1,573	100%	0%	<ul style="list-style-type: none"> <li>Some suppliers had violated the labor laws and regulations.</li> <li>Continue to follow-up of suppliers with identified risk to see if improvements have been made through Supplier Conference and other channels.</li> </ul>
	Critical Tier 1	133			
	Critical Tier 2	28			
 The Public	All consumers	<ul style="list-style-type: none"> <li>Diverse compliant channels (including discrimination and harassment)</li> <li>Satisfaction survey</li> <li>Personal information and privacy protection inspection</li> <li>Minority group service mechanism</li> </ul>	100%	0%	<ul style="list-style-type: none"> <li>No discrimination or harassment, or any invasion of CHT customer privacy or misuse of personal information in 2019.</li> <li>Continue to promote the 5I SDGs Initiative to ensure information equality among the groups.</li> </ul>

## Human Rights Material Risk Issues



### Local Human Rights

To fulfill the concept of anti-forced labor and appropriate working environment, we required the bidders to sign a "Declaration of Minerals as Conflict-Free" during procurement. We evaluated the suppliers to determine if raw materials derived from human rights high-risk areas like the Democratic Republic of the Congo were being utilized to avoid harm to the basic human rights of local residents in places where we provided ICT products and services. We depend on demand and require the suppliers to provide certification of material resources, third-party verification or accepted auditing to confirm no related violations.

We also required that all suppliers complied with the "Restriction of Hazardous Substances Directive" (RoHS) to prevent hazardous substances from the source endangering local employees, the environment or customers.



### Information Equality

CHT is creating a free and open information sharing environment without technological boundaries that can be shared by everyone. Such a system inherits culture, extends education, promotes industry, and upgrading art with a connection to the universe of the Internet. Digital technology can be beneficial to everyone irrespective of age, social standing, wealth, geographical location, or education.

We base our approach on the characteristics of the ICT industry and the spirit of "value is where the responsibility lies," in our work with the communities in Taiwan. Our main objective is to "minimize the digital divide and create digital opportunities," CHT watches the trends of this digital divide and offer solutions that facilitate social innovation and digital inclusion. We spare no effort in "corporate volunteer," participate in community services, and proactively assist communities in the creation of digital opportunities.



### Employment Human Rights

We use the Occupational Health and Safety Management System (OHSAS 18000/ISO 45001) to avoid potential risk and have systematically fulfilled employee safety and health management. In addition to compliance with the safety and health-related regulations toward high-risk tasks, we have also enhanced risk control. We continue to improve the working environment and act in regards to safety and health facilities and measures to actively ensure employee protection.

Sometimes customer service personnel encounter irrational requests and even personal abuse from customers in the provision of our services. We established an SOP for employee response and acted at a critical level in certain circumstances. Legal assistance can be authorized to aid in the event of serious offenses and to prevent illegal practices. CHT adopted the ISO 10002 quality management system in 2011 and have a certified and flawless customer service procedure and management mechanism in place. We regularly offer pertinent training courses in customer relations, the management of emotional stress, and occupational hazard prevention. While building up professional capability, we positively avoid pressure to mental and physical health problems on customer service personnel. 9 courses were given, totaled 2,176 hours in 2019.



### Customer Human Rights

Due to the nature of our industry, in addition to establishing information security management applicable to the enterprise operation, we also implement measures to safeguard our customer's personal information. We implemented information security in compliance with the international standards ISO 27001 and BS 10012 and carried out regular supplier auditing and supervision through employees or a third party. We also carried out vulnerability scanning and the testing of all equipment and software from outside suppliers to ensure there were no back-doors or malware.

Besides acquiring the customer's agreement before the collection of any personal information, we established the internal "Security and Safety Principle of Customer Information Re-use." Personnel need to make formal application and receive managerial approval before accessing to the advanced information security system. The system itself not only supervises and records employee operations but also only reveals the number of customers under certain conditions without touching detailed information. Related information also complies with the principle of "no names are revealed" to prevent the downloading of personal information and avoid leakage or disclosure.

## ✦ Safeguarding Consumer Rights and Interests

### Digital Transformation of Diverse Virtual and Physical Channel Services

Chunghwa Telecom values consumers' opinion. In addition to conveying technical features of the products and services we offer; we look at the matter from the point of view of the consumer. We provide consumers with the most comprehensive, high quality and efficient services putting a wide and diverse range of service channels at their disposal. By the end of 2019, we had 459 direct physical channel service stores, and 255 franchised stores, a total of 714 service outlets that provide convenient service for all consumers in cities, or even in remote areas in Taiwan.

### Ethical Marketing and Information Transparency and Friendliness

We provide a handbook about products and services for consumers that details product characteristics and applications, consider the negative aspect of overuse, and has friendly reminders provided while marketing. In addition, Chunghwa Telecom has set up the "Channel Sale Support Items Management Guideline" and "Channel Sales Support Items Management Implementation Procedures" to make the display of sales support items and operation management consistent throughout all the service and business locations. This ensures a positive service environment for consumers. These are vital for maintaining a superior and professional image as well as the service quality at Chunghwa Telecom. No violations of health and safety and product labeling was reported in 2019.

### Green Services with Environmental Protection and Innovation Combined

In 2018, telecom combinative stores were established in Zhongli, Miaoli and Hsinchu, including cafe, 3C and an experimental display. The green stores' capabilities were also developed and energy-saving household appliances such as electric scooter, TV, refrigerators, and air purifiers, promoting green business development and offering customers the one-stop shopping and whole-new store service experience.



Category	Description
Customer service Kiosks	These serve as the "Database" for business and engineering-related information. When new information is received, it will be verified according to an SOP. Afterward, an FAQ will be further drafted and uploaded to the customer information station for use by the Chunghwa Telecom customer service personnel (at service outlets and call centers) and the Internet counter.
Consumer Hotline	Provides complete information on the features of products and services, and related special offers.

## Proper Management of Personal Information

Pursuant to the pertaining laws, regulations, and international standards, the management system for personal and private data protection and "Privacy Policy" are established. Meanwhile, incorporating the "Privacy by Design" in the EU GDPR, SOPs and dedicated departments are in place. Rigid protection measures and secure environment are created to avoid theft, tampering, or illegal use of clients' data in line with the strict requirements of competent authorities. In addition, trainings on relevant regards are organized for our personnel.

We continue to better our operating procedures to ensure privacy protection security measures across all elements. All KPIs are reviewed regularly. We are open to auditing, internal and external, and pass the administrative inspection by competent authorities annually, offering our consumers a better cybersecurity and privacy protection. In 2019, there were 3 complaints about alleged information leak, 9 cases fewer than those in 2018. Such cases accounted for only 0.000085% of our customer service hotline. After checked through all available channels, none of them were proved to be of a violation of relevant regulations.

### Chunghwa Telecom Management Mechanism for Personal Information

Category	Description
 Collection / Processing / Usage	<ul style="list-style-type: none"> <li>Personal data inventory and privacy impact analysis will be conducted prior to launch of a business. "Personal Data Collection Notice" is communicated explicitly via service websites, apps, stores, and Customer Service Hotline to individuals. The data collected are used in line with the specified purposes while users have right to access categories and methods of collection, processing, and use of the data thereof and the disclosure of such to a third party by Chunghwa Telecom as well as rights exercised by clients.</li> <li>Collection, storage, processing, and use of privacy and personal data are conducted within the scope of specified purposes and managed by Chunghwa Telecom itself, which shall not disclose such to a third party via exchange, lease, or any other means.</li> <li>In the event of working with a third-party service provider, technologies such as deidentification and pseudonymization, or statistics or tendency that renders deidentified results are employed in data exchange.</li> <li>Where it is stipulated by the laws or regulations (e.g. to further public interest or to prevent material harm on the rights and interests of others), we shall provide necessary information accordingly in cooperation with the government and law enforcement agencies as follows:             <ol style="list-style-type: none"> <li>In response to the COVID-19 pandemic and the epidemic prevention needs of the government since January 26, 2020, Chunghwa Telecom acts in compliance with "Communicable Disease Control Act" and "Special Act for Prevention, Relief and Revitalization Measures for Severe Pneumonia with Novel Pathogens." To advance the public interests, the telecom service providers in Taiwan are liable to provide necessary information in line with the regulations to facilitate enforcement of home isolation policy and prevent disease spread. With a rigid data security, Chunghwa Telecom deletes and keeps no record of data upon case closure for the privacy of its clients.</li> <li>Where the government or a law enforcement agency requests or inquires access to information of clients for the protection of public safety and against crimes, in compliance with the "Directions Governing Telecommunication Enterprise's Handling of Inquiries about Data of Telecommunication Users by Relevant Agencies (Institutes)" and "Directions Governing Telecommunication Enterprise's Handling of Inquiries of Telecommunication Records by Relevant Agencies", Chunghwa Telecom shall provide information accordingly to the government or law enforcement agency after a rigid examination.</li> </ol> </li> </ul>
 Personal Rights	<ul style="list-style-type: none"> <li>Pursuant to the Personal Information Protection Act, customers are entitled to request copies of their personal information, opt out of marketing communications, terminate contracts, and request deletion of their personal information.</li> </ul>
 Customer Service Control	<ul style="list-style-type: none"> <li>Chunghwa Telecom member services, all customer service hotlines and digital mobile products have been certified under BS 10012.</li> <li>Customer service operations are carried out according to the "Customer Service Department Personal Information Protection Manual." Proper awareness is promoted regularly and detailed records are kept for future reference.</li> <li>A personal information incident procedure has been in place that requires the customer service center to handle all leaks of personal information in line with the "Customer Service Department Personal Information Incident Procedure Handbook."</li> </ul>



## Refined Customer Service

Chunghwa Telecom provides services which are refined, thoughtful and professional to build warm atmosphere around customer relations. We use big data analysis to learn the true needs of customers so that we can offer thoughtful and customized services and products. In 2019, CHT was crowned the “Top Prize in the Telecom Category” of the 2019 Five-Star Service Awards presented by Global Views Monthly, “Best Smart Customer Service System Application” and “Best Enterprise in Service Innovation” from the 2019 Customer Service Excellence Awards (CSEA) of TCCDA, and Honghua Subsidiary was given the “Best Telemarketing Team” award and the “Best Training team.” We also ranked as the No. 1 “4G service provider” in Next Magazine’s 16th Annual Outstanding Service List in the same year.

CHT’s positive approach cultivates both favorable impressions and brand loyalty. We set high standards for our customer service hotline. To ensure quality service, we sought multiple international certifications, including ISO 9001, ISO 10002, BS 10012, and ISO/IEC 27001. In recent years, we have been using big data analytics to identify customers’ concerns and to improve the overall user experience. Through sincere communication and system improvements, we are able to create additional value for our customers.



### Chunghwa Telecom Customer Service Mechanism Overview

Item	Description
Customer Service Location / Size	<ul style="list-style-type: none"><li>• The Company has 15 customer service centers</li><li>• The number of customer service personnel averages 2,700</li></ul>
Multi-Channel Customer Services	<ul style="list-style-type: none"><li>• Webchat</li><li>• Social media, “Chunghwa Telecom Dr. Q Fan Page”</li><li>• Web customer service center</li><li>• Mobile customer service center</li><li>• Mobile App</li><li>• SMS</li></ul>
Training Result	We use customer service training workshops to refine our customer-centric approach and devotion to the provision of the most thoughtful services. In 2019, Customer Journey and Service Improvement Class” and “Customer Service Philosophy Class,” 10 sessions in total, cultivating approximately 315 seeding personnel in the Chunghwa Telecom training facilities in Banqiao, Taichung, and Kaohsiung, have effectively inspired the employees for customer services. CHT holds a very high standard for customer representatives. Besides the basic requirement of tone and manners of speech, we place even more emphasis on professional knowledge and competence. In 2019 alone, 5,885 employees received 128,000 hours of training combined.
	YearTotal ParticipantsTotal Training HoursAverage Training Hours
	20195,885127,51121.7
	20185,684141,20724.8
	20176,832161,91123.7

## Commendation for Best Customer Service Personnel

To inspire passion and professionalism among customer service officers, we reward customer service personnel who receive praise from customers, and accept these credits as part of their performance appraisal as an excellent service quality. Meanwhile, a “Service Excellence” section has been created on the Intranet to publish cases of excellent service for personnel to share, learn and download.



### KPIs for Customer Service Hotline

In 2011, Chunghwa Telecom became the telecom carrier to have all its centers certified for the “ISO 10002:2004 Customer Complaint Management System.” The Company views customer complaints as opportunities to make ongoing improvements. The resolution of customer complaints and dissatisfaction is rule-based and they must be settled within 3 working days. This approach ensures the continuous improvement of service quality. In addition to the customer service hotline, consumers may also use the corporate website or Representative Line authorized by the President (02-23446789) to raise complaints directly to the assistance of the senior executive.

KPI	2017	2018	2019
<b>Customer Service Response within 20 Seconds</b>	72.26%	73.42%	73.37%
<b>Service Satisfaction (5-point scale)</b>	4.68	4.71	4.74

### Customer Satisfaction Survey

We conduct a broad variety of satisfaction surveys to identify the issues of most concern to consumers and their expectations. We use these findings to guide future improvements. After each survey, the opinions and suggestions are conveyed promptly to product or business personnel (including Risk Management and the Public Relations Departments) using the consumer feedback system. Furthermore, consumers’ opinions are brought to the attention of the senior manager of the product and customer service departments for discussion at monthly meetings to ensure that the consumers’ expectations receive proper consideration.

Regarding the IPA (Importance-Performance Analysis) items belonging to the fourth quadrant (high importance and low performance) after a review of the results of the annual satisfaction survey, we will request that the relevant functional units conduct further analysis and propose measures for concrete improvement every year. There will also be a follow-up in the next quarter to keep track of the progress of any corrective action found necessary.



Designate an **external market survey company** to conduct consumer satisfaction survey

Survey Result (10-point scale)

<b>Large Enterprise</b>	<b>8.98</b>
<b>Small and Medium Enterprise</b>	<b>8.68</b>
<b>General Customer</b>	<b>7.79</b>

## AI Customer Service Chatbot

In 2017, we created the “AI Customer Service Chatbot,” which is 100 % in-house developed by CHT Telecommunication Laboratories. Customer representatives took on the role of “robot trainers,” transforming massive yet disorganized customer data into useful and systematic information in the AI knowledge base. Developers also designed various customer interaction scenarios to fine-tune the chatbot’s machine learning process. The goal is to offer 24/7 real-time customer service, providing users with useful information and solving basic issues that might arise.

A preliminary version of the chatbot was launched in 2018. The text-based customer service robots for fixed line and for data broadband business came online in succession in 2019, offering innovative functions like replies rich in texts and graphs, OTP authentication module, inquiry of personal information, tips for business opportunity referral, batch phrase import, and CHT App simultaneous authentication interface. The incoming calls for customer service in 2019 totaled 410,000 calls, of which service completion by robots were 290,000 calls, achieving a significant result of a 70% completion rate and a 97% AI recognition rate.

## Total Coverage of Free 4G Telecommunication in Remote Areas

We are constantly expanding our mobile network. We have the most 4G cell towers and the highest 4G signal coverage in Taiwan. According to test results published by the government, our network speed is the fastest across all 22 administrative districts in Taiwan. Our network quality has been unanimously commended by domestic and international mobile analytics organizations, including OpenSignal “top 4G download speed” and “best overall download speed” and Speedtest “fastest mobile Internet speed in Taiwan”.

As always, customer satisfaction is our top priority. We will continue to improve our mobile network to provide customers with top-notch services. To ensure the equal sharing of information, in addition to a positive strengthening of mobile Internet quality in populous metropolitan areas, we have paid more attention to signal coverage in remote areas. We have achieved 100% total 4G coverage in all towns, and continue to go deep into the mountain areas and off-shore islands. Specifically, the coverage in rural areas has reached 98.06%.

To promote equal digital rights, we support the “DIGI+ Program” initiative introduced by the Executive Yuan. We plan to increase 1Gbps network coverage to 90% by 2020, 2Gbps network coverage to 90% by 2025. Providing ultra-broadband Internet in remote areas to balance urban-rural development, encouraging innovation in the digital economy, creating value added in the industry, and, in turn, stimulating overall economic growth. In 2019, we invested NT\$ 160 million in 102 network improvement projects, and the following projects were successfully completed: 1Gbps network speed across all townships, 100 Mbps across all villages, increasing Wi-Fi hotspot bandwidths, improving 4G cell towers in rural areas, etc.

### “Pinnacle of Mobile Communication for Mountaineering” – Yushan North Peak Cell Site Online

To enhance the quality of mobile communication coverage in the region of Yushan National Park and along the mountaineering routes for the purpose of elevating the efficiency emergency rescue as well as the safety for climbers and conservation rangers, Chunghwa Telecom has been proactively set up a co-constructed mobile communication cell site at the Yushan North Peak pursuant to the policy of NCC since 2012.

After the Yushan North Peak Cell Site came online, the signal coverage along the Yushan mountaineering trails, including the important spots such as the trailhead, the Main Peak, and the North Peak, is strengthened while beneficial to the communication quality in 5 emergency shelters across peaks of Yushan, the Batongguan Historical Trail, and Paiyun Lodge. Thus, it not only provides cellphone positioning and emergency calls needed during emergency rescue, but also makes available the Public Warning Cell Broadcast Service (CBS) and “112” emergency call service.

In addition, Chunghwa Telecom, together with Yushan National Park Headquarters, plans to set up 250 mobile communication service signs along the Yushan mountaineering routes and important spots, so as to fulfill the needs of cellphone communication of mountaineers and emergency relief and rescue, which is a testimony of Chunghwa Telecom sparing no effort in network construction and its commitment to elevate the mobile communication quality in the mountains.

[Video](#)



### Expand Wireless Hotspots

We have also supported the government initiative for the promotion of free wireless Internet services nationally. Through a reasonable Wi-Fi rental package available, as well as a robust user authentication platform and a nationwide maintenance/monitoring system, we have helped the government deploy free Wi-Fi hotspots nationwide. By the end of 2019, we had installed more than 53,000 public Wi-Fi hotspots, giving users access to stable broad-bandwidth in a densely covered Wi-Fi service.

Our contributions to social events in 2019 included working with local county and city governments to provide Wi-Fi hotspots and enable Internet access at festive gatherings and international sports events. We installed 15 hotspots for the 2019 Sea of Flowers in Xinshe, 58 hotspots for New Year’s Eve festivity, 116 for the Lantern Festival and about 48 for other activities. The Company participated in 19 festive occasions, built 237 hotspots in total, and spent more than NT\$ 2 million.

## Enhanced Disaster Response and Communication Coverage

Chunghwa Telecom continues to install repeaters, backup wireless routers, and backup power supplies to increase reliable transmission capacity in remote areas. By increasing the capacity of backup batteries to more than 72 hours, the Company ensures that residents in remote locations can stay connected even when main power has been disrupted by a natural disaster.

Item	Description
<b>Responses Measure</b>	We conduct annual emergency drills for a wide number of different events, from the coordination of network resources and equipment to emergency repairs. Our base stations have been deployed in a diversified manner and are covered by robust backup plans so that failure of circuitry, power or equipment at any base station will not disrupt the operation of other nearby base stations.
<b>Occurrence of Disaster</b>	If communication is severely disrupted in the unfortunate event of a natural disaster, we take contingency measures, that depends on the actual circumstances, to maintain communication between the disaster locations and the outside world. These can include microwave radio, satellite transmission, portable base stations, etc.
<b>Special Cases</b>	Basic communication service is key to emergency rescue in the mountains. To meet mountaineers’ need for emergency communication, we have launched the “Skynet Project” jointly with the Forestry Bureau in 2017, constructing nearly 3,500 cell sites across 149 popular mountaineering trails in the 15 cities/counties in Taiwan to better the communication quality in rural areas and as the most steadfast backing for mountain rescue.

### Disaster Report and Upgraded Safety

In efforts to minimize the impact of disasters by prompt messaging, the Chunghwa Telecom self-developed “Emergency Response SMS System” sent out more than 420,000 SMS alerts in 2019, and apply to Directorate General of Highways’ “Traffic Conditions Alert System,” and Atomic Energy Council’s periodic “Nuclear Safety Drills,” and the National Fire Agency’s disaster prevention exercises, successfully playing its part in disaster prevention information notification.

In addition, a “Public Warning System” (PWS) has been established to support the national policy of emergency message dissemination about typhoons, earthquakes, thunderstorms, landslides, roadblocks, reservoir discharge or an outbreak of disease, fast and correctly to specific regions simultaneously, assisting government agencies and the general public improving their disaster prevention awareness and capabilities. As long as a mobile phone is open to the PWS function, all our customers will receive messages about disasters.

The PWS issued over 8,000 times of emergency warnings across Taiwan in 2019. In the event of Nanfang'ao Bridge Collapse, emergency evacuation notice was broadcasted via the PWS, thus effectively assisting the government agencies in the major tasks of emergency notification for disaster relief.

## Major Service Interruptions in 2019 and Countermeasures

- Description of the interruption:** The obstacle with 5ESS switch system of Madou, Tainan affected the local call service of 18,000 households.
- Reason for the Interruption:** The obstacle with the hard drive of the switch system led to an anomaly in the system operation.
- Improvement measures:**
  - Faithful execution of monthly backup of the switch system in case of emergency
  - Improvement of the maintenance mechanism with the switch system to shorten the time for obstacle removal
  - Utilization of decommissioned IDC for on-the-job training to improve personnel’s emergency response
- Implementation status:**
  - The switch system of Madou, Tainan replaced
  - Continuous enhancement of maintenance measures and promotion for preventive centralized monitoring
- Outcomes:**
  - Average annual interruption frequency lowered from 0.0016 per user in 2018 to 0.0007 per user in 2019.
  - Average annual interruption duration lowered from 0.63 minutes in 2018 to 0.138 minutes in 2019.



## The Alleviation of Public Concern about Electromagnetic Waves

According to a report by the World Health Organization (WHO) and related scientific research, exposure to base stations and Wi-Fi signals does not affect human health. For this issue, Chunghwa Telecom ensures strict compliance with the authority's safety standards when constructing telecom infrastructure. The Specific Absorption Rate (SAR) of all mobile communication products we purchased have complied with the restrictions of the National Communications Commission (NCC).

Given the scarcity of suitable base station locations and the need to assure consumer rights to quality communication, we will strive to comply with regulations by taking the approved precautions at all stages of installation. In 2019, Chunghwa Telecom incurred NT\$ 2.62 million in fines and administrative penalties on 6 counts of violations associated with base stations. These violations occurred as we sought to address consumer demand for "good reception" and concern towards "negative health impacts from base stations."

The measurement of the electromagnetic radiation in the environment conforms to the standard of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which must be lower than  $0.45 \mu\text{W}/\text{cm}^2$  at 900MHz and less than  $0.9 \mu\text{W}/\text{cm}^2$  at 1,800MHz. Any resident who has concerns regarding base stations near their home can request a free complimentary measurement of the strength of the nearby electromagnetic waves by calling 0800-580-010.

### Types of Base Stations Installed by CHT



Notes: Installed on existing buildings

## Telecom Services and Promotions

### Fraud Prevention

In 2007, Chunghwa Telecom assisted the government in establishing the 165 Anti-Fraud Consultation Hotline to support the police and authorities in the defiance against fraud.

Item	Description
<b>Resources Committed</b>	<ul style="list-style-type: none"> <li>An average of 7 customer service personnel joined the service every month to work with the Criminal Investigation Bureau in a concerted front-line duty effort from Monday to Friday.</li> <li>"Disconnection Service Fraud Prevention System" offers information on some suspected telephone gimmicks used for cheating customers and a timely settlement of the problem. An average of 2 customer service person participated in the program each month.</li> </ul>
<b>Prevention of Fraud on Network / Mobile Devices</b>	<ul style="list-style-type: none"> <li>A two-way, SMS-based authentication system was introduced for small payments.</li> <li>A scam alert was added to all two-way SMS authentication messages.</li> </ul>
<b>Progress Description in 2019</b>	<ul style="list-style-type: none"> <li>The hotline received 134,000 calls, and 14,000 cases of fraud were referred to the authorities.</li> <li>The Company assisted the Criminal Investigation Bureau, National Policy Agency in disconnecting 2,138 phone numbers, and successfully stopped 1,631 scams.</li> </ul>



### Advocate the Accurate Understanding of Electromagnetic Waves

Chunghwa Telecom has been working closely with the Taiwan Telecom Industry Development Association to convey to the public the correct information about electromagnetic waves, by organizing conferences and issuing promotional materials.

- The Company joined NCC and 15 county/city governments nationwide in hosting 15 seminars on the topic of electromagnetic waves, 9 local infrastructure promotion forums, and 122 free complimentary electromagnetic wave measurements have been completed to date.
- Local government bodies were issued some promotional material and pamphlets about electromagnetic radiation, which were distributed to the public during various activities to promote proper understanding.

### Reducing Negative Impact of the Internet

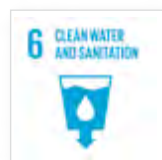
We continue to minimize negative material circulating on the Internet through diverse action plans, and endeavor to provide consumers with a healthy, trouble-free network environment.

Item	Description
<b>Anti-Virus and Anti-Hacker</b>	A HiNet mailbox gives customers access to a free webmail service. A simple setup, allows users to decide if questionable e-mail will be automatically deleted in the future. We continue to monitor the formulation of the regulatory obligations of the "Regulations for Commercial Electronic Spam Mail" and management obligations of the Internet Service Provider (ISP).
<b>Adult Content</b>	Provides "K12 Mailbox Forced Isolation," the "HiNet Adult Content Gatekeeper," and the "Mobile Adult Content Security Guard," keeps children and teenagers out of harmful websites.
<b>Usage Time Control</b>	The "HiNet Online Time Management Service" and mobile phone "3G Talk Without Worries" programs, giving parents effective control of the mobile phone and Internet use.
<b>MOD Parental Lock</b>	The Parental Lock can be set at "protected" or "parental guidance." Settings are in effect immediately once the password has been entered. The parental lock can be used to protect children from harmful or bad content.

## The Green Corporation Pioneer



The SDGs CHT contributes to in this section: 6, 7, 12, 13



S

### Strategy

- Facilitation of greenness in the ICT industry (Green of ICT) and overall greenness of society through ICT (Green by ICT)

M

### Management

- Instituted the “Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd.”
- Instituted the “Chunghwa Telecom Co., Ltd. Procurement Grievance Procedures”
- Establishment of the “Environmental Sustainability Development Strategies and 5-Year Plan”

A

### Action

- Efficient energy management using “EARTH”
- The launch of the 5G initiative in pursuit of profit, environmental sustainability, and social responsibility
- Became the first telecom service provider in Taiwan to implement:
  - Collaboration with the Sustainable Alliance for Low-carbon Economy (SALE) to issue the “Sustainable Partnership Certificate”
  - Signed on as a supporter of the Task Force on Climate-related Financial Disclosures (TCFD) initiative
  - Incorporation of the ISO 20400 Sustainable Procurement Standard
  - Joined the Carbon Disclosure Project (CDP) Supply Chain

R

### Response

- CHT CSR Supplier Conference / Sustainable Environmental Visit
- Targets low-carbon industries and promotes solar power

T

### Target

- Promises to Reach the Following Targets in 2020:
- COD of the solar power plant of Taichung Materials Warehouse with a capacity of **1,200kW**
  - 100%** “Tier 1 suppliers” CSR current status assessment
  - 100%** “Critical tier 1 suppliers” educational training of carbon management knowledge and ESG on-site audits
- Completion of the first smart green-energy staff dormitory in Taiwan by 2021
- Promises to Reach the Following Targets in 2023:
- The capacity for renewable energy constructed from proprietary was **750 kWp**
  - Taking 2017 as the base year, a **10%** reduction of greenhouse gas emissions in our buildings
  - Taking 2017 as the base year to cumulatively save **10%** of the energy by 2023 pursuant to the generator room energy-saving program
  - Collect the suppliers’ information on climate change and carbon emission at least once a year

I

### Indicator

- |   |  |
|---|--|
| <b>GRI</b> GHG Emissions <b>823,751.09</b> t-CO <sub>2</sub> e                | <b>CHT</b> Implement the “Suppliers CSR second party audit” on <b>20</b> suppliers |
| <b>CHT</b> A CHT photovoltaic system with a total capacity <b>600.745</b> kWp | <b>CHT</b> <b>96</b> Taiwan Renewable Energy Certificates (T-REC) acquired         |

## The First Smart Green-Energy Staff Dormitory in Taiwan

To attract talents of advanced technology, we invested an amount of nearly NT\$300 million to construct a new staff dormitory of 6-story high and 1-story below at the Chunghwa Telecom Laboratories in Yangmei District of Taoyuan City. It shall come with integrated services of CT and IT, embedding advanced ICT applications into the building to strengthen the building management efficiency and improve the living quality in the dormitory. We construct a forward-looking smart building fused with energy-efficiency and ICT in line with the standards of both national certifications for green building and for smart building.

Upon completion of the main building, highlight services such as AI smart home, smart accommodation, facial recognition, IoT sensing, MOD service, Intelligent Operation Center (IOC), Building Information Modeling (BIM), home health, and the circular economy shall be introduced in succession to build a quality living environment of next generation with 5 elements of green, intelligence, health, innovation, and circulation incorporated.



## 5G Green Enterprise

Although telecom is regarded as a low-polluting industry, Chunghwa Telecom is well aware of the environmental impacts associated with energy, resources, waste, maintenance, purchasing and other aspects of our operation.

We have devised a new set of “Sustainable Environment Development Strategy and Target Plan” that outlines our overall strategy and roadmap for sustainable environmental development. In addition, budgets will be provided in each year to support action plans.



Carbon Footprint Label  
No. 2014832001  
per person served  
<http://www.epa.gov.tw>

### 1G Green Operations

- A self-developed EARTH system for **100%** control of environmental information
- Received ISO 14001/ISO 50001 and ISO 14064-1 certification at **all** our business locations
- The sole telecom carrier** that has obtained the ISO 14046 certification in the industry of Taiwan

### 2G Green Energy

- Self-constructed photovoltaic systems reached a total capacity of **600.745 kWp**
- A self-constructed renewable energy generating capacity of **760,000 kwh**
- Acquired **96** Taiwan Renewable Energy Certificates

### 3G Green Stores

- Transformed **458** service centers into “Green Stores”
- Syntrend Store in Taipei as the **sole** “net-zero carbon store” in the industry of Taiwan that obtained “ISO 14067, EPA’s Service Carbon Label, and PAS 2060 carbon neutrality certification”
- Promoted paperless services and accumulated a saving of **580 million** sheets of paper per year

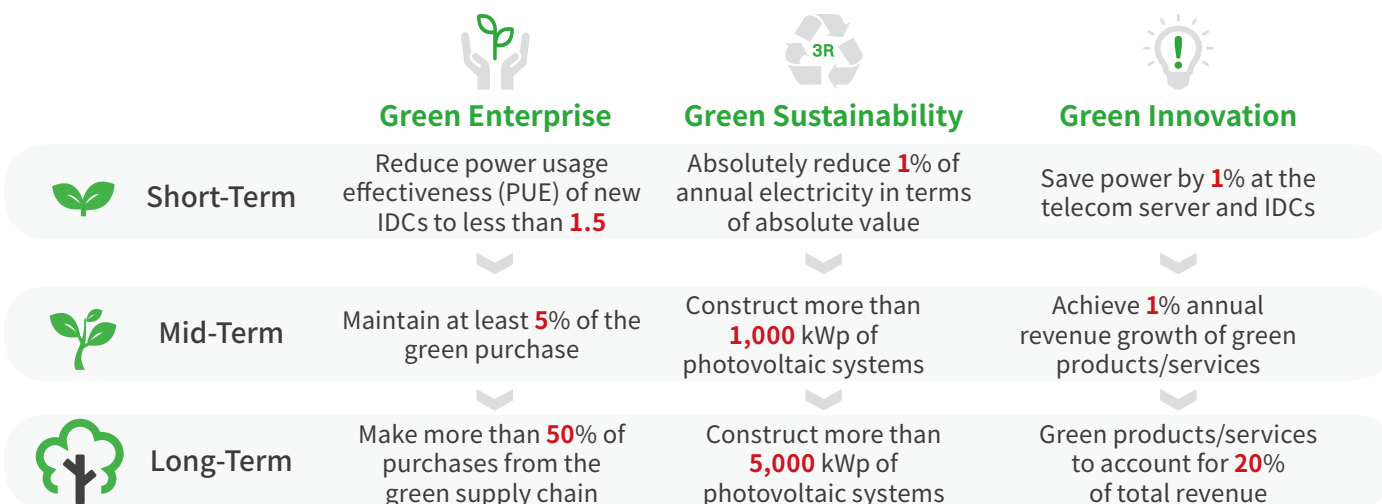
### 4G Green Supply Chain

- Became **the first telecom carrier** to promote supply chain sustainability management
- Formally incorporated the ISO 20400 Sustainable Procurement Standard
- Participated in the CDP Supply Chain Project to expand the efficiency of carbon management

### 5G Green Procurement

- Reached a total of NT\$ **1.024 billion** in green procurement in 2019
- Reached **5%** of total procurement as green procurement every year

To fulfill our green commitment and embrace the world’s green challenge, Chunghwa Telecom has adopted a “Green Enterprise, Sustainability and Innovation Strategy” with the introduction of 5G (Green): Green Operation, Green Energy, Green Stores, Green Supply Chain, and Green Procurement, aiming to address financial success, sustainability and social responsibility.



## 1G Green Operations

Chunghwa Telecom has set a goal to become a sustainable “Green enterprise,” and has made environmental issues an incorporated part of business operation and management. We hope to play a more proactive role in issues such as energy and climate change. By improving energy efficiency and exploring eco-friendly products and services, we are confident of our potential to inspire a new generation of low-carbon industries.

### Environment ARTificer THEurgy (EARTH)

We developed the Environment ARTificer THEurgy (EARTH) system in 2008 to manage resources and protect the environment more efficiently as well as to reduce spending on energy consumption. EARTH system features include:

#### Energy Saving and Innovation

Energy savings and innovation initiatives have been uploaded and implemented in all departments to encourage employees to learn from each other.

#### Carbon Emission Management:

This provides a carbon verification form and the results were greatly enhanced as 300 man-day operations saved.

#### Performance Evaluation

Performance evaluation is conducted systematically to encourage employees to contribute to environmental sustainability actions.

#### Power Management

Request centralized payment of electricity bill; there are more than 63,791 electricity accounts and 2,581,268 units of electricity payment data under management.

#### Water Management

Request centralized payment of water bill; there are more than 1,295 water accounts and 118,843 units of water payment data under management.

#### Fuel Management

Fuel use data for hybrid and ordinary vehicles were analyzed to improve energy efficiency and reduce carbon emission.

#### Corporate Tree Planting

Document type, number, management department and location of trees. There are over 251 varieties of tree and 67,357 tree data points saved in the EARTH database.

#### Recycling Management

Document type, volume of recycled material and the recycling management department. We have recorded 22 types of recycling and there have been 18,026,950 entries made.

### The sole telecom operator in Taiwan that passed water footprint certification

To accurately capture the water resource risks and in response to the UN SDG 6 “Clean Water and Sanitation,” we chose the most representative “Rated 4 IDC of the Greater China region – Banqiao IDC and Cloud Data Center” of Chunghwa Telecom for ISO 14046 certification on water footprint inventory and certification. As a result, it passed the verification by the SGS-Taiwan and obtained the assurance statement, making Chunghwa Telecom the sole telecom operator in Taiwan that passed water footprint certification. The benefits achieved are as follows:

- Water resource management strategy established:** establishment of the SOP for organization’s water footprint helps in the attainment of water resource management targets.
- Enterprise’s water usage management enhanced:** the water usage distribution in the enterprise is captured effectively via water footprint inventory in order to create a complete water resource management system and stipulate proper measures to achieve the target of water conservation.



## Green Environmental Hostels

Chunghwa Telecom Hostels provide accommodation for employee business or leisure travel. In response to environmental protection and personal hygiene, the hostels do not provide disposable, or consumable items or towels. They also take energy-saving measures such as solar water heating, air conditioning using heat pumps and LED lighting. 19 hostels had been certified as Environmentally Friendly Accommodation by 2019.

## Ecotourism

Chunghwa Telecom hopes to provide eco-tours that are both educational and entertaining for our employees, so that they understand concepts of extreme weather, responsible tourism, respect for nature and the rights of local residents. We hold regular company eco-tours with the hopes of incorporating environmental education into traveling and daily life. We held 105 tours in 2019, costing a total of NT\$ 87,186 thousand with 18,935 participants.

Video [↗](#)



## Environmental Management Expenses

Item	2017	2018	2019
Environmental management expense (NT\$ thousand)	300,722	319,637	328,558
Accounted percentage of turnover (%)	0.15	0.15	0.16

# 2G Green Energy

Chunghwa Telecom has been positively supporting the government policy and applying its extensive ICT background knowledge in the construction of solar power stations. By the end of 2019, the Company had 62 solar power stations around Taiwan with a total capacity of 600.745 kWp.

Unit: 10,000kWh

Year	Total Electricity Consumption (A)	General Consumption (B)	Business Consumption – Meter Rate Lighting Service (C)	Business Consumption – Flat Rate Lighting Service (D)	Business Consumption Increment (E)	Business Consumption Increment Rate (F)
2007	135,180	9,420	125,151	609	NA	NA
2017	136,269	108,525	22,289	5,455	-3,103	-11.18%
2018	137,191	106,264	24,107	6,819	3,182	2.32%
2019	135,066	103,338	25,497	6,231	802	0.59%

- The method of calculation was modified in 2016 to more efficiently present power usage.
- B: office buildings and employee dormitories; C: base stations, depot, and public telephone, which are not CHT-owned property.
- A=B+C+D, General consumption mainly includes the power consumption of office building. Business consumption increment includes flat and meter rate lighting service.
- E=Business consumption this year - Business consumption last year; F=E/A
- This table presents electricity consumption with customer ID, other consumption without customer ID is covered by greenhouse gas inventory.

## Energy Savings for Data Centers

Chunghwa Telecom places great emphasis on the energy efficiency of our data centers, and is currently implementing energy conservation measures for telecom data centers (including IDCs). The efficient application of our proprietary iEN smart energy management system and Power Operation Supervisory System (POSS) for IDCs are our scientific approach to reducing energy, carbon emission and protection of the environment.

## Electricity Consumption of IDCs

Year	2017	2018	2019
Unit: 10,000 kWh	16,065	16,440	16,600

## Renewable energy usage in IDC in Banqiao

Unit: kWh

Year	2018	2019
Solar power generation(A)	95,624	100,896
Total power consumption(B)	21,411,200	24,470,132
Energy-saving ratio(A/[A+B])	0.44%	0.41%

## Water Resource Management

Water usage at Chunghwa Telecom is mostly domestic. Apart from bathroom use, air conditioner cooling accounts for another major water use. Given the ongoing increase in business activities and manpower, there is limited room for water reduction besides the recovery of rainwater and cooling water.

We benchmarked the 2012 water usage as the standard, and now control the annual growth of water usage to no more than 2%. In addition to a new water leakage detection feature in products, we have also included Company water consumption in the EARTH system. Centralized water bill payment is done through the EARTH “water bill management” function to reduce the printing of water bills. Managers can use the system to search, generate trend charts and report forms, and provide exception reports to avoid mistakes in billing and meter reading. Managers can also review the situation of water usage according to trend charts and reports, reduce expenses in water, and improve the efficiency of management.

The management and analysis information interface can be used to promote water conservation measures and set concrete management goals. We also promote water-saving measures to increase efficiency in water use:

- Install sink faucet sprayers to reduce waste
- Install dual flush toilets to reduce waste
- Use collected rainwater for watering office plants
- Encourage the installation of water reclamation equipment in new buildings, so that physically separated and treated sewage water can be reused for non-potable purposes after it has reached a certain quality standard

To enhance the effectiveness of water recycling and reuse, we have set up raft foundation water collection systems underground to collect clean rainwater from rooftops and the ground surface. We have also initiated the recycling of cooled and condensed water from office air-conditioners and promoted a recycling and reuse plan for rainwater, bathwater and air conditioner water. The recycled water is reused for watering plants and cleaning sidewalks, being utilized to its fullest extent.



Unit: tonnes

Year	2017	2018	2019
Tap Water	776,377	753,023	691,954
Air-conditioner water	1,742,680	1,624,419	1,590,716
Recycled water	7,614	7,398	3,776

Note: Starting from 2018, the amount of resource and energy consumed by Honghwa International in its rented areas are excluded.



## Waste Management

Chunghwa Telecom understands the importance of resources reduction, recycling and reuse and has combined related reduction plans into the EARTH system. This is used to manage the use of resources and control energy efficiency, as well as to conduct systematic management of recyclables and waste treatment. We contracted a professional waste treatment company to transport our daily waste to landfills or incinerators for disposal. Recyclable waste is handled by a contracted cleaning company that is responsible for classification, treatment and proper disposal.

Unit: tonnes

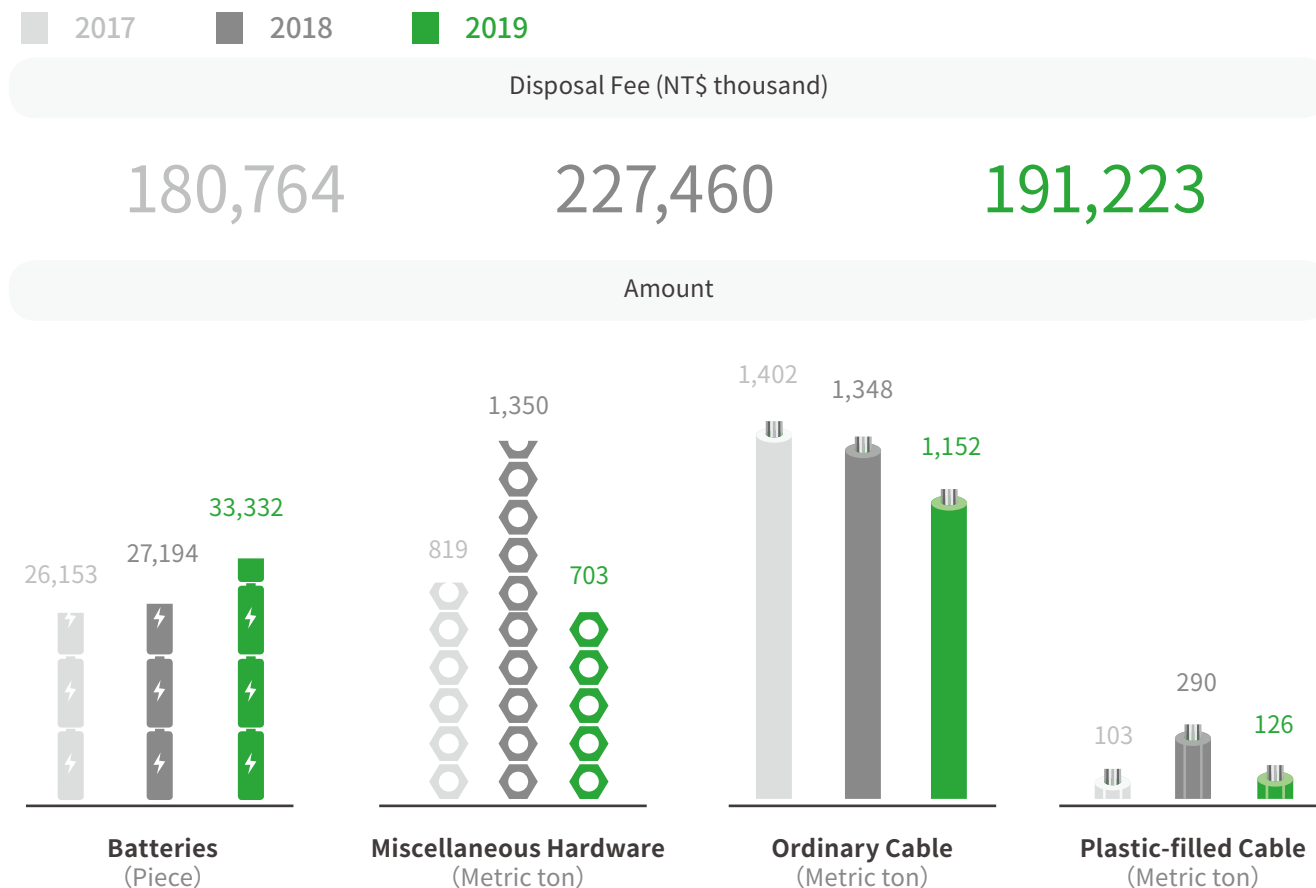
Year	2017	2018	2019
<b>Weight of daily waste</b>	4,389	3,505	2,881

Note: Starting from 2018, the amount of resource and energy consumed by Honghwa International in its rented areas are excluded.

## Industrial Waste

Scrapped lead-acid batteries are recyclable industrial waste regulated by the EPA. Business organizations are responsible for the reduction of pollution, disposal of toxic substances and simple waste disposal. All recycling and disposal operations are outsourced by joint contract based on the public auction. The contractor must be a qualified service provider listed on the website of the Recycling Fund Management Board of the EPA to ensure legitimate management and disposal and to reduce negative environmental impact.

Scrapped lead-acid batteries from each business unit are auctioned on site, and the “Announcement and Delivery Slip for Removal and Disposal of Waste Lead-Acid Batteries” is retained for reference. The gradual rise in raw material prices has also caused the recycling and reuse value of scrapped lead-acid batteries to increase. A total of 54,398 lead-acid batteries with a total weight of 3,592,131 kg were scrapped and sold for NT\$ 61,867 thousand in 2019. In fulfilling our responsibility for environmental protection, we also increased Company revenue. The public and private waste clearance and disposal companies recognized by environmental institutions are designated to handle the treatment of other industrial waste such as cables and miscellaneous hardware.



## 3G Green Stores

Chunghwa Telecom is a highly-localized telecom carrier, a generous contributor to community development, and one of the most important partners to other telecom carriers around the world. As technologies progressed and improved, we began some operations that were outside the conventional telecom boundaries, “corporate social responsibility” concepts were introduced into products and services research, development, applications, and into the Company management strategies.



## Green Revenue

In addition to developing products friendly to the environment, we have been promoting Green Stores and were the first telecom carrier in Taiwan to fully turn service centers into Green Stores. In 2019, green revenue was NT\$ 106.61 million, which was 5.4% of the commercial products revenue.

## Paperless Receipt Service

We have been promoting electronic billing since 2001, and reduce carbon emission by eliminating the use of paper bills. In 2017, we offered paperless receipt service. At the end of 2019, the percentage of paperless receipts exceeded 70%. The service saved 580 million sheets of paper and an estimated 52,722 trees, reducing carbon emission by 10,439 metric tons.

Year	2017	2018	2019
<b>Customer applying for e-bills (10 thousand)</b>	1,609	1,869	1,933
<b>Ratio of customers applying for e-bills</b>	59%	68%	70%
<b>Quantity of paper saved (1,000 sheets)</b>	482,630	560,700	579,946
<b>Number of trees saved</b>	43,876	50,973	52,722
<b>Reduction of carbon emission volume (metric ton)</b>	8,678	10,093	10,439

- The data of paper saved and reduction of carbon emission is by e-bills (including SMS) and combined bills.
- Each e-bill reducing the use of envelopes and paper are 2.5 sheets of A4 paper. Total amount of paper saved: number customers applying for e-bill × 2.5 × 12 (month)
- 1 sheet of A4 paper generates 18 grams of CO<sub>2</sub>; Carbon emission reduced: number of paper saved (1,000 sheets) × 18 grams
- The number of trees saved: each ton of paper pulp produced = 20 trees; one ton of paper pulp = 220 thousand sheets of A4 paper. Therefore, the number of trees saved = number of paper saved ÷ 220 thousand × 20

## The sole net-zero carbon emission store in the industry of Taiwan

We have connected tightly eco-friendliness and green energy with network services. While offering premium services to the general public, we further aim to achieve a “green communication” with our consumers for them to capture the eco-friendliness and low-carbon nature in products and services precisely.

In 2019, the Syntrend store of Chunghwa Telecom completed the service center’s carbon footprint calculation and obtained the “ISO 14067 Assurance Statement” issued by the SGS-Taiwan. To better adhere to the corporate philosophy “Always Ahead,” we further applied for the EPA’s Carbon Label for Services and purchased 50 tons of carbon right, securing the carbon neutrality certification PAS 2060 and achieving the standard of zero carbon emission.

Through certification and verification domestically and internationally (ISO 14067, PAS 2060, and EPA’s Carbon Label), we successfully became the first telecom operator that obtained carbon label for service center in Q2 of 2020 with the sole net-zero carbon emission store in the industry of Taiwan!

[Chunghwa Telecom Carbon Label Information](#)



## 4G Green Supply Chain

The responsibilities and mission of Chunghwa Telecom, as the leader of the telecom industry, are “Green of ICT and Green by ICT.” This implies facilitation of the greenness of the ICT industry (Green of ICT) and overall greenness of society through ICT (Green by ICT). From 2008 onwards, Chunghwa Telecom developed measures year by year to improve the sustainability of the supply chain, and we accomplished two pioneering achievements:

**We were the first telecom company to propose the “Sustainable Supply Chain Initiative”**

Effectively connecting with internationally prominent sustainability organizations and partners, also connecting the supply chain to respond to the United Nations Sustainable Development Goals (SDGs).

**We were the first in the industry to join the CDP “Supply Chain Project”**

We invited 100 suppliers to participate in an international platform to submit carbon management information and improve their ability in managing carbon emissions with scientific and quantification mechanisms.

Future green supply chains will entail more than just supplier commitment to environmental protection and the life cycle of green products. Chunghwa Telecom will continue to explore value-added applications of ICT, and introduce robust systems to facilitate better coordination and management, as well as complete monitoring of the supply chain.



## 5G Green Procurement

Chunghwa Telecom supports government policy and prepares annual budgets for the purchase of green products that are either environmental-certified (less polluting, recyclable, resource-saving or green building material) or self-declared to be of less environmental impact throughout the product lifecycle (from raw material to disposal). The Company also actively participates in green procurement programs and activities to inspire green purchases amongst others in the industry and the public.

Our goals and policies concerning green procurement, as we hope to maintain green purchases at more than 5% of the total purchases per year over the mid-term, and increase this percentage to more than 50% over the long term. To achieve this goal, we incorporated the ISO 20400 Sustainable Procurement Standard at the end of 2018. The implementation of the ISO management system helped reinforce the idea of green procurement.

Year	2017	2018	2019
<b>Green procurement total (NT\$ million)</b>	1,223	1,487	1,024
<b>Accounted percentage of total procurement</b>	4.45%	3.36 %	2.47%

Note: For more information about Green Supply Chain and Green Procurement, please refer to p.102-107.

## 2019 Environmental Performance

Item	Description
<b>Environmental Information Disclosures</b>	<ul style="list-style-type: none"> <li>Published CSR reports and the disclosure of environmental data to respond to the Dow Jones Sustainability Index (DJSI) every year</li> <li>Execution of an annual greenhouse gas inventory and acquisition of ISO 14064-1 verification and certifications</li> <li>Responded to the annual Carbon Disclosure Project (CDP) questionnaire</li> <li>Responded to related national rating questionnaires (including CommonWealth and Global Views Magazines)</li> <li>Signed on as a supporter of the Task Force on Climate-related Financial Disclosures (TCFD) initiative</li> </ul>
<b>Improve Energy Use Efficiency</b>	<ul style="list-style-type: none"> <li>Merged and exploited data center spaces</li> <li>Saved cooling energy: implemented some energy saving with 130 HP inverter module, sensible heat air conditioners of 1720 RT, 900 highly efficient air conditioners, 140 RT ventilation air conditioners and 90 natural ventilation air conditioners by the end of 2019</li> <li>Used green materials for newly constructed data centers and buildings</li> <li>Set up rainwater, underground, and condensed cooling water recycling systems for the reuse of water resources</li> <li>Replaced lamps in the public areas and internal office buildings with environmentally friendly LED bulbs</li> </ul>
<b>Implement Green Energy</b>	<ul style="list-style-type: none"> <li>Constructed 600.745 kWp of photovoltaic systems by the end of 2019</li> <li>Constructed a total capacity of 12.6 kW wind power plan</li> <li>Acquired 96 Taiwan Renewable Energy Certificate</li> </ul>
<b>Autonomous Environmental Protection</b>	<ul style="list-style-type: none"> <li>One and only in the industry of Taiwan: Banqiao IDC passed ISO 14046 certification</li> <li>Replaced old vehicles with environmentally friendly ones, and used electric vehicles in trials</li> <li>Sponsored the construction of the YouBike station at the corner of Xinyi Road and Hangzhou South Road</li> <li>Promoted clean homes, energy-saving offices, car-free days, and paperless Office Document Automation System (ODAS)</li> <li>The Taiwan Energy Conservation Patrol: focus on increasing energy efficiency within small and medium enterprises and vulnerable social institutions</li> <li>Set waste reduction and recycling goals</li> </ul>
<b>Value-Added Products and Services</b>	<ul style="list-style-type: none"> <li>One and only in the industry of Taiwan: net-zero emission Syntrend store acquired both the EPA's Carbon Label for Services domestically as well as the ISO 14067 and PAS 2060 internationally</li> <li>Promoted e-bill with a marketing section</li> <li>Electronic invoicing: invoice data were prepared for permanent cloud storage to save material, human resources, and receive preferential tax treatment as an incentive and exemption from fines by the government</li> <li>iEN smart energy-saving services and promotion of 8 energy-saving products</li> <li>Mobile device recycling: recycle bins are available at all service centers in line with the promotion of waste recycling</li> <li>Green Stores: transform 458 service centers nationwide into “Green Stores”</li> <li>Collaboration with the Sustainable Alliance for Low-carbon Economy (SALE) to issue the Sustainable Partnership (products, services, and organizations) Certificate</li> </ul>



## ✦ Sustainable Supply Chain

Every year Chunghwa Telecom purchases the software, hardware and services necessary for operations from international and domestic suppliers. This includes networking and data equipment, cables, marketing, design and waste disposal services. Our enormous purchasing power gives us a profound influence over the supply chain, hence the responsibility to guide our suppliers in the fulfillment of their CSR. This is achieved by implementing conduct that complies with the international supply chain ESG standards to guide the ICT industry towards sustainability.

We were the first telecom enterprise in Taiwan to join the CDP Supply Chain Project in 2017 when the industry was confronted by the critical issues of global climate change and its effect on corporate development. In 2018, we again became the first telecom company to incorporate the ISO 20400 Sustainable Procurement Standard. We strive to establish a better connection to the world on our path towards the development of sustainability. We officially launched “Sustainable Partner Certification” mechanism in 2019.

From earlier on we have encouraged suppliers to disclose their carbon emissions and reduce them gradually. We plan to incorporate “low-carbon emissions” into our tender regulations: only groups with carbon emissions under a certain level can participate in our tendering process. Through sustainable planning, supplier evaluation and a green supply chain constructed on a hierarchical management system, we hope to achieve the following goals of sustainability: environmental protection, effective operations and management, robust labor rights, as well as safety and health.



### CHT's Sustainable Supply Chain Initiative – Sustainable Partner Certification

Chunghwa Telecom upholds its company motto and its mission as a Digital Economy Motivator and a Creative Industry Pilot, formally adopting the ISO 20400 Sustainable Procurement Standard. We officially launched “CHT Sustainable Partner Certification” mechanism in 2019.

We examine suppliers by SGS second party audit results as well as their type and level of importance, and rate them as 4 tiers of “Gold, Silver, Bronze and Participation” accordingly. If a supplier fails to pass the certification process, it is granted a limited period of time to implement corrective measures. Rated suppliers shall receive a mark that corresponds to their rating, and an excellent mark will be seen as a favorable term when submitting a tender.

We hope to compile a “Chunghwa Telecom Sustainable Supply Chain” list through evaluation, training, audit and certification; we'd also like to lead our suppliers toward a sustainable future, improve the sustainability of telecom companies, business, and society as a whole, as well as keep abreast with the international trends of low-carbon economy.

## Supply Chain ESG Management Strategy

Strategy	Management Target	2019 Results
<b>Integrate ESG Principles to Chunghwa telecom supplier assessment</b>	<ul style="list-style-type: none"> <li>Complete 100% of “tier 1 suppliers” CSR current status assessment in 2020</li> </ul>	<ul style="list-style-type: none"> <li>100% of suppliers completed the CSR survey questionnaire</li> </ul>
<b>Ensure ESG conduct of the suppliers complies with “Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd.”</b>	<ul style="list-style-type: none"> <li>Complete 100% of “critical tier 1 suppliers” ESG on-site visits and audits in 2023</li> </ul>	<ul style="list-style-type: none"> <li>CSR on-site visits and audit rate reached 77.02%</li> </ul>
<b>Continue communication activities to promote supplier climate change adaptation measures and emissions data management</b>	<ul style="list-style-type: none"> <li>Complete 100% of “critical tier 1 suppliers” carbon management knowledge and education in 2020</li> <li>Collect information on climate change and carbon emission from suppliers at least once a year</li> <li>The number of suppliers who respond to Chunghwa Telecom’s CDP Supply Chain Project questionnaire reaches 200</li> </ul>	<ul style="list-style-type: none"> <li>The first Taiwan telecom carrier to participate in the CDP Supply Chain Project</li> <li>The suppliers’ response rate to the questionnaire was 67%</li> </ul>

The Chunghwa Telecom suppliers fall into three categories: property, labor and engineering. Apart from professional network communication equipment which is mainly purchased overseas, we buy as much from local suppliers as possible to promote local economic development. The domestic procurement percentage was 95% in 2019. Our target is to reach 96% by 2023.

### Suppliers Analysis

Item	Number of Suppliers	Accounted Percentage of Turnover
<b>Tier 1 Suppliers</b>	1,573	98.11%
<b>Critical tier 1 suppliers</b>	133	77.97%
<b>Critical non-tier 1 suppliers</b>	28	-

1. Tier 1 suppliers are those that provide products or services directly to Chunghwa Telecom with an annual procurement of  $\geq$  NT\$ 100 thousand.
2. Critical tier 1 suppliers are those that provide products or services directly to Chunghwa Telecom with an annual procurement of  $\geq$  NT\$ 50 million.
3. Critical non-tier 1 suppliers are those that provide critical products and services to CHT tier 1 suppliers, but are not CHT tier 1 suppliers.

### CSR On-Site Audits and Capacity Promotion

To promote awareness of CSR and ESG management in supply chain partners, SGS-Taiwan has been granted to tier 1 supplier on-site audits since 2010 in accordance with ESG principles of supply chain of Chunghwa Telecom. In 2019, we increased the number of suppliers for second-party audit to 20 with an additional review process. We commit ourselves to 100% completion of ESG second-party audit for our key tier 1 suppliers by 2023. To make sure all our supply chain partners will be in compliance with ESG management requirements, our goal is to complete the sustainability rating of 140 suppliers and issue the certification mark by 2025.

CHT Management Indicator	Method	Ratio
<b>Supplier ESG auditing ratio per year</b>	<ul style="list-style-type: none"> <li>Occupational health and safety on-site audits / engineering and cable audits</li> </ul>	77.02%
<b>Percentage of suppliers assessed in ESG in the last 3 years</b>	<ul style="list-style-type: none"> <li>Second-party audit by the SGS-Taiwan</li> <li>Critical non-tier-1 suppliers audits</li> </ul>	22.98%

## Overview of the Supply Chain ESG Management Results

Item	Description	2019 Goal	2019 Outcome	2020 Goal
Completion of Online Supplier CSR Survey	Suppliers with a procurement amount of NT\$5 million or above is liable to fill out the "Supplier CSR Survey" that covers items of corporate ethics, labor rights, environmental management, and occupational safety and health.	90%	100%	95%
Procurement staff that received CSR-related training	It is to ensure all CHT procurement staff understand and execute faithfully the "Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd."	100%	100%	100%
Supplier contracts containing CSR-related terms	Suppliers are explicitly required to abide by the "Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd." in their procurement contracts.	100%	100%	100%
"CSR self-assessment form for suppliers" included in the documentation necessary in the tendering process	Tendering documentation stipulates that all bidders to fill out "CSR self-assessment form for suppliers"; additional elaboration on improvement is required in the event of breach of laws or regulations by suppliers.	100%	100%	100%
Suppliers without violations against environmental protection laws	The environmental management status by suppliers is captured via online questionnaires.	100%	100 %	100%
Supplier CSR second-party audit	Through second-party audit, key suppliers are ensured free from environmental and human right risks such as forced labor.	100%	100%	100%
Audits on civil engineering/cable contractors	A total of 191 audits were carried out on 74 contractors. As of the end of 2019, 34 suppliers were found with incidents of violation and the fines amounted to NT\$712 thousand.			
On-site safety and health inspections	Occupational safety and health officers under the Northern and Southern Taiwan Business Groups and the Mobile Business Group conduct at least three on-site safety and health inspections per week. Upon discovery of non-conformities, relevant departments will be notified for corrective action tracking. A total of 22,734 inspections were conducted on 1,044 contractors in 2019.			

## The first Taiwan telecom carrier to participate in the CDP Supply Chain Project Connecting Low-Carbon Supply Chain

After "The Paris Agreement" took effect, we entered an age of low-carbon economy. Chunghwa Telecom is a carrier in the information and communications industry, and this is a crucial issue of great urgency. We need to understand and respond to the impact of climate change and plan appropriate response strategies and actions at once.

In 2017, CHT first joined the "Carbon Disclosure Project (CDP) Supply Chain Project." We are promoting an understanding of climate change among our suppliers and will make every effort to increase their efficiency in carbon management. CHT is going to put an encouragement mechanism in place that will help suppliers with the research and development of products and services that have less impact on climate and environment. Our three goals for the supply chain carbon management are:

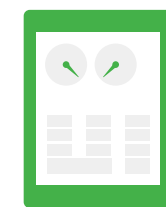
### Goal 1

Increase supplier awareness and knowledge of climate change



### Goal 2

Collect greenhouse gas emission information



### Goal 3

Communicate and encourage changes in the behavior of suppliers



## Abstract of the Results of Chunghwa Telecom's 2019 "CDP Supply Chain Project"

67 %

of suppliers responded to Chunghwa Telecom's questionnaire (70% globally)

Chunghwa Telecom's supply chain reduced carbon emissions

around 2,330 thousand t-CO<sub>2</sub>e

57 %

of suppliers have taken energy-saving and carbon reduction measures

63 %

of supplies incorporated climate change into long-term business strategic planning (on average 81% globally)

63 %

of suppliers have set emission reduction goals

69 %

of suppliers have established procedures for evaluating climate-related risks

## The Achievements of CHT's 2019 Supplier Energy Conservation Project

Types of Projects	The amount of Carbon Emission Reduced (t-CO <sub>2</sub> e)	Estimated Amount of Money Saved Each Year (USD)
Energy efficiency: construction material	23	2,198
Energy efficiency: construction service	35,571	8,644,100
Energy efficiency: manufacturing process	61,307	15,649,137
Establishment/installation of a low-carbon energy source	15,269	266,370
Procurement of low-carbon energy	2,171,799	1,133,764
Reduction of carbon emissions during the manufacturing process	30,561	163,207
Others	16,071	1,631,342
Total	2,330,601	27,490,118



## Mutual Benefits with Business Partners

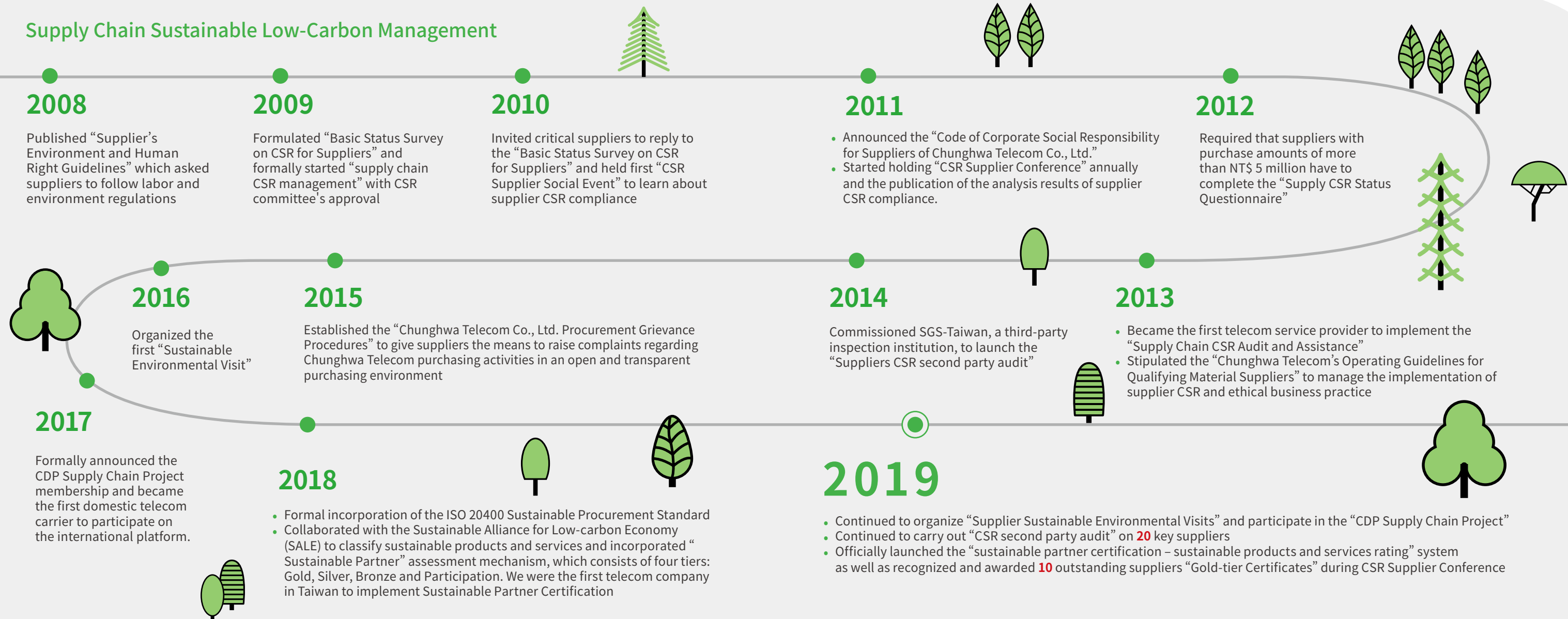
We published “Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co Ltd” in 2011, and it clearly outlines the Company’s expectations in terms of “business, ethics, labor, environment safety and health.” The guidelines apply to all suppliers that provide products or services to Chunghwa Telecom or its subsidiaries or joint ventures, and extend to other participants of the supply chain to which the supplier is directly or indirectly related. We hope that suppliers will commit to our values and take more proactive steps towards maintaining a sustainable business ecosphere.

CHT shares resources with suppliers to help them develop R&D capabilities and future technologies. We also devote ourselves to the creation of a friendly and innovative environment. We engage suppliers in R&D projects, reward their contributions, and make arrangements for the transfer of acquired technology and licenses fairly. Regarding hardware, we continue to support the development of telecom facilities and testing environments; in terms of software, we utilize open platforms to share our benefits with suppliers.



Type	Description
<b>Rewards top-performing suppliers</b>	To reward top-performing suppliers, Chunghwa Telecom conducted a trial in southern Taiwan, offering qualified suppliers the privilege of “tender bond waiver when submitting tenders, as well as a reduction of the performance bond to 5% of the value of the contract won.” This was an attempt to exert influence as an industry leader and bring more attention to corporate social responsibility.
<b>Training of professional skills</b>	Our Telecom Training Institute has been providing suppliers with relevant training and certification courses to satisfy their requirements. Some of the popular courses include: cabling contractor certification, telecom line construction quality assurance certification, and fiber optic contractor training. In 2019, the institute organized 35 classes and trained 636 workers; 360 of whom had obtained certification.

## Supply Chain Sustainable Low-Carbon Management



# The Social Value Guide



The SDGs CHT contributes to in this section: 4, 8, 10, 11



# S

## Strategy

- Minimize the digital divide and create digital opportunities

# M

## Management

- The LBG assessment of investment in the community
- Social Return on Investment (SROI) calculation

# A

## Action

- 5I SDGs digital inclusion initiative
- Telecom universal service
- Digital Good Neighbors
- “Read with You”—Community Network Tutoring

# R

## Response

- I Helping - Training volunteers for the visually impaired
- Corporate volunteer action
- “5I SDGs” strategies and goals

# T

## Target

### Short-Term:

- Effort to make telecom services more accessible continually
- Adjust the Digital Good Neighbors sites resiliently

### Mid-Term and Long-Term:

- Social investment will reach 1% of revenues by 2025
- To support the installation of access points for large-scale national festivals or sporting events that provide **10 million** tourists with a high-quality internet service every year
- The Chunghwa Telecom Foundation funds NT\$ **36 million** in the creation of digital opportunities in local communities

# I

## Indicator

- GRI** Social investment: NT\$ 760,701 thousand
- GRI** Telecom subsidy for underprivileged groups: NT\$ 172,682 thousand

**CHT** Digital Good Neighbors: 89 locations

## ✦ Chunghwa Telecom “5I SDGs” Initiative

As the pilot of CSR, Chunghwa Telecom has developed its core competence to positively minimize the digital divide and devote itself to the creation of digital opportunities. Since 2015, we have chosen to connect with the 2030 Sustainable Development Goals (SDGs) of the United Nations. Through real action, we have demonstrated our determination to develop and implement global sustainability.

On the basis of complete digital inclusion strategy and bridging our years of experience in social inclusion, we promoted the “5I SDGs” initiative. The “5I” in the initiative, apart from being a homonym to the phrase “I Love” in Chinese, the “I” here also suggests “to achieve the SDGs via “ICT” that effectively connects the SDGs with the objectives of the DIGI+ locally. By expanding partnerships in collaboration with NPO/NGO, supporting the sharing of knowledge and technology resources, creating a connection between the underprivileged and other diverse groups in this digital era, and realizing a win-win situation for digital human rights and an innovative economy, technology allows us to link to the good cycle.

CHT’s “5I SDGs” initiative: “I Helping, I Sharing, I Learning, I Technology and I Protecting,” as the first real initiative in Taiwan that connects Sustainable Development Goals (SDGs) with the “Digital Country Innovative Economy Development Program” (DIGI+) from the Executive Yuan. The goals of the “5I SDGs” are:



1

Embrace the world from Taiwan, officially responding and implementing the UN SDGs



2

Respond to the objectives of the DIGI+ of the Executive Yuan, widening the scope of digital inclusion and ensuring Information Equality in the networked digital era



3

Leverage the core functions, connect expertise across branches and corporate volunteer resources, and work with professional communities to deepen the impacts of socially inclusive actions.

[Videos](#)





## I Technology

Corporate Volunteer	Technology Education Team
Core Competence	Utilize digital technology to promote digital equality
Action Plan	Cellphone expert program in service center

### 2030 Goals

1. Cultivate **2,000** technology education volunteers
2. Technology education services for over **5** million

### UN SDGs



## I Protecting

Corporate Volunteer	Green Service Team
Core Competence	Save energy and reduce carbon emission to treasure Earth with green actions
Action Plan	<ul style="list-style-type: none"> <li>• Reduce marine debris</li> <li>• Energy-saving volunteering</li> </ul>

### 2030 Goals

1. Over **10** million t-CO<sub>2</sub>e carbon emission of suppliers
2. Help reduce energy and carbon emissions of communities over **1** million t-CO<sub>2</sub>e
3. Cleaning the marine debris for over **100** t

### UN SDGs



## I Helping

Corporate Volunteer	Visually-impaired Service Team
Core Competence	Assist the visually-impaired in bridging to digital technology and services
Action Plan	<ul style="list-style-type: none"> <li>• Beacon case</li> <li>• Blind aid courses</li> </ul>

### 2030 Goals

1. Benefits over **60,000** visually impaired people in Taiwan
2. Helping in lives and entertainment of over **200** thousand visually impaired people

### UN SDGs



## I Learning

Corporate Volunteer	Love in Learning Team
Core Competence	Bridging the rural-urban gap and flip education in rural areas
Action Plan	<ul style="list-style-type: none"> <li>• Read with You</li> <li>• Foundation's projects</li> </ul>

### 2030 Goals

1. Over **4,000** university students as tutors
2. Schoolchildren who have been tutored for over **80,000** hours

### UN SDGs



## I Sharing

Corporate Volunteer	Community Service Team
Core Competence	Promote local services as a friendly significant neighbor
Action Plan	Taiwan telecom digital collection guided tour

### 2030 Goals

1. Over **50,000** Corporate Volunteer Services
2. Over **3** million communities stakeholders being helped

### UN SDGs



### I Technology – Corporate volunteer activity

In 2019, we utilized our technology strength and recruited several professional corporate volunteers as instructors to mentor about 60 grandpas and grandmas in the Sulfur Valley community in Beitou on how to use smartphones, including how to use LINE, download and use apps, play music, take photos, and create albums for senior citizens to enjoy the convenience and fun a digital life can bring.



### I Helping + I Learning – Helping the visually-impaired to see museum

We and Resource Center for the Visually Impaired of Tamkang University launched the first “Integrated Solution of In-depth Museum Guided Tour for the Visually Impaired” in Taiwan in 2019. 30 visually-impaired individuals were invited to “look around” in the National Museum of Marine Science and Technology in Keelung via tactile aids along with audio introduction. Hence, we lived up to the spirit of the Convention of the Rights of Persons with Disabilities (CRPD) and proactively implemented cultural equality.



Through the innovative visually-impaired friendly voice-based personal assistance app, the visually-impaired individuals could access relevant information of the museum prior to their departure. During the tour on site, they could learn more detailed information about the exhibits via push message. Together with the audio guide, they embarked on the journey to explore the mysteries of ocean with auditory, tactile, and olfactory senses combined.



In this activity, we called on corporate volunteers to join forces in helping the visually-impaired individuals with professional blind aid courses prior to the tour to ensure our service quality and the fulfillment of “I Helping” and “I Sharing” initiative!

[Video](#)

### I Protecting – Coastal cleanup campaign that saves the planet with actions

As the substantial response to the target of “reduce marine debris” in the SDG 14 and to avoid marine creatures dying from ingestion of plastic debris and reduce the environmental impact caused by plastic wastes, we organized 4 coastal cleanup activities in New Taipei City, Taichung, Taitung, and Changhua in 2019 with an attendance of 297 and a total of 7,350 kgs of debris removed.



The coastal cleanup activities fully leveraged the core competence of Chunghwa Telecom in “connection.” Led by the top executives, Chunghwa Telecom also rallied the corporate volunteers throughout the branches in Taiwan to clean up coasts and produce outcome statistics as a response to and in compliance with the international Coastal Cleanup (ICC) Operation Guidelines.

In addition, to infuse fun in education, the activities were organized in a form of eco-tourism manner. Through the 3-phase procedures of “basic training, environmental education, and actions in the field,” led by trained volunteers and specialist eco guides, the corporate volunteers took their eco-chopsticks, cups, bowls, bottles, and handkerchiefs with them and carried out eco-friendly conducts that left no waste behind. Thus, the knowledge and idea of environmental sustainability took root deeply in each and every participant’s DNA. Meanwhile, to ensure the safety of all participants, health-manager corporate volunteer was invited to join the company to fully implement the protection of employees’ safety and health.

[Video](#)

## Description of CHT's responses to the UN SDGs

## Description of CHT's responses to the UN SDGs



- To bridge the gap of communication and information quality between the rural and urban areas, we go into the mountains and offshore islands to construct 4G cell sites. The 4G coverage throughout the 747 rural villages/boroughs in Taiwan is 99%.
- In response to the objectives of “Digital Nation & Innovative Economy Development Program” and “Forward-looking Infrastructure Development Program - Digital Infrastructure,” actions are taken as the testimony to CHT's capacity in social inclusiveness.
- Over NT\$440 million is allocated to construction and maintenance of universal telecommunication service to realize “4G in every town and village” and “100% coverage in towns and villages” in an endeavor to fulfill the visions of “promote social innovation and information equality” and “realize the win-win of digital human rights and innovative economy.”
- Responding to SDG 1 ensures that all men and women, the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services.



- CHT develops AI agricultural analysis model. Agricultural sensors are deployed catered to the needs of farmland to collect data of growth environment and weather for compilation and analysis to produce forecast of the farmland's conditions in the following days. Also, the data is uploaded to a smart agriculture cloud platform via NB-IoT technology, with which farmers can arrange their farming schedule accordingly.
- Through NB-IoT technology, technology is introduced to agriculture, analyzing key environmental monitoring parameters of produce. The optimum environment for produce's growth is built and risks of agricultural disaster are reduced via forecast of the future tendency of data changes, which facilitate the improvement of yield and quality of produce and achieve the goal of a smart quality agriculture.



- As the first telecom service provider that introduced OHSAS 18001 and TOSHMS as well as obtained certification of “ISO 45001 – occupational health and safety management systems,” CHT implements the management of its employees' safety and health in an “institutionalized” and “systematic” manner.
- Health checkup for employees is conducted annually, together with Employee Assistance Programs, health lectures, hiking, tours, and sports competition for employees; professional medical doctors and health managers are invited to offer health advisory to employees, so as to build well-rounded caring measures for employees.
- The Mobile management tool “eSafe Wizard” app for occupational safety and health developed to allow personnel to manage the operation on-site via cellphone introduces cloud, paperless, real-time, and effectiveness into the safety and health management.



- “Read with You” Network tutoring program has been promoted joint forces with Fu Jen Catholic University since 2009, assisting disadvantaged students in primary and middle school students in the rural areas in their schoolwork while keeping the students company for their psychological need for companionship, which substantially facilitate school children in the rural areas in overcoming rural-urban gap and flipping their lives.
- “CHT Digital Good Neighbor” program executed for over a decade set up digital centers in 89 towns and villages across the country to promote digital applications joint forces with CHT, CHT Foundation, and local organizations and teams.
- CHT's ICT expertise is fully leveraged to assist local organizations in rural areas or in need to establish a stable network environment and ensure the rights to digital technology in local community.



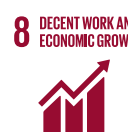
- We value right to work and gender equality; the pay to female employees, management level or not, is equal to that of a male employee.
- “Directions for Chunghwa Telecom Sexual Harassment Prevention and Grievance Management” has been stipulated to put the Act of Gender Equality in Employment into practice.
- “Appeal Review Committee” has been established to handle appeals concerning discrimination against employees and other inappropriate conducts. There are 5 members on the committee, including 3 female members, which is over a half of the seats.



- Our water usage is primarily domestic purpose; apart from water for washing, water for cooling air-conditioning accounts for the majority of water usage.
- The water resource management nationwide is included in the EARTH system of CHT's own device, as the innovative “water bill management” in the system can achieve a centralized management of water bills and water usage throughout the branches in Taiwan with ease that not only reduces the waste of water bill printing, but also analyzes and controls the consumption of water resource via big data.
- In 2019, the water footprint inventory for the IDC at Banqiao, the eco-friendliest IDC in the Greater China region, was promoted, introducing ISO 14046 water footprint standard and having obtained the assurance statement upon passing the SGS certification.
- Through the water footprint inventory of the IDC, the water usage and water pollution throughout the life cycle of the IDC are taken into consideration to identify the environmental risks concerning water resource and as the critical reference to the planning for water management policy and measures in the future.



- Renewable energy has been actively developed to bridge ourselves to green energy. As of the end of 2019, CHT has installed 62 solar PV systems throughout Taiwan with a total capacity of 600.745 kWp.
- Marching into the green energy industry, the solar power stations we assisted in building have generated power over 150 MW. CHT was contracted with the construction of Taipower's solar power plant at Zhangbin Industrial Park, which has supplied electricity in full capacity of 100 MW by the end of 2019.
- There are also construction projects from a subsidiary of Taiwan Cement and Taipower as well. The subsidiary of Taiwan Cement commissioned Chunghwa Telecom for the construction of solar power plant with a capacity of 12 MW, which makes it the largest construction project of solar power plant commissioned by the private sector.



- CHT is the only telecom carrier with a labor union established and a collective bargaining agreement with it. The agreement covers issues pertaining to layoff, reward/punishment, promotion, health and safety, etc. In 2019, the employees covered by the agreement reached 99%. Meanwhile, a labor director is appointed to sit on the Board of Directors to voice the needs of employees to the top level.
- Complete education, reasonable remuneration, and a dignified environment allow our employees to commit themselves at work while reducing the disturbance in mind owing to a high turnover rate.
- In 2011, EYE Social Innovative Call Center was established and the first “comprehensive solution” in Taiwan was released, training the visually-impaired individuals into call center personnel and offering work opportunities.



- High-speed broadband network is deployed continuously to improve the network speed for clients; ultra-speed broadband network of 1Gbps is being deployed pursuant to the DIGI+ of the Executive Yuan, which is expected to reach a 90% coverage by 2020 to meet the demands from the video streaming services in the age of digital convergence.
- Upholding the spirit of digital equality, we are actively deploying mobile network in rural areas and improving network infrastructure and communication coverage in the rural areas in addition to being the No. 1 in the number of cell sites both across Taiwan and of counties/cities deployed; the mobile broadband coverage in the rural areas is above 90%.



## Description of CHT's responses to the UN SDGs

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- We value human right issues (including anti-discrimination, gender equality, freedom of association, collective bargaining, child labor, forced and coerced labor, as well as rights of the indigenous peoples), proactively safeguard the values of human rights, respond to the core spirits of the Universal Declaration of Human Rights and the International Labor Convention, and forbid any form of discrimination.
- We prohibit forced labor and use of child labor, responding to UN's incorporation of the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights into domestic legislation; human right awareness is strengthened to allow a respectful and fair treatment to any stakeholder.
- Regarding the issue of information equality, we joined the World Conference on International Telecommunications, abide by the provisions of the International Telecommunication Regulations, ensure a free flow of information globally, make transparent the information with regard to international roaming service charges and competitions, support the telecommunication development in the developing countries, provide the physical-challenged individuals convenient access to telecommunication services, and protect the freedom of speech and other rights of the general public over the telecommunication network.



- The life in the sea at Wanghaixiang in Keelung was once covered by discarded fishnet and debris; hence, the Keelung City Government set up the "Wanghaixiang Chaojing Bay Resource Conservation Area."
- In the aforementioned area, fishing is prohibited; species are restored; debris are removed; citizens are encouraged to get close to the ocean and treat ocean with respect; and that ecotourism is developed to usher industrial transition opportunities into the local community.
- CHT Foundation took Keelung as the base for "Little Environmental Directors" course as a response to Earth Day; the environmental protection course combined with documentary course, bestowing in-depth knowledge of the rich marine and ecological resources at home upon the participants.



- Following the development of IoT, 5G, big data analysis, and AI, as the "Leader in Smart Living and Agent of Digital Economy Empowerment," we assist Taiwan in constructing smart sustainable cities via smart solutions.
- Utilization of "Intelligent Operation Center" (IOC) on the foundation of technologies such as IoT is at the core of a smart city.
- Local governments can integrate individual systems of different departments, collect and analyze municipal information, present it in an intelligent, systematic, and visual fashion, gain information of appeals from citizens, air quality, fire disasters, traffic safety, and medical resources, and construct sustainable, safe, health cities with the IOC platform.



- We worked with Dr. Jane Goodall in 2006 and formed an alliance to participate and care for environmental education and conservation issues and sponsored the Jane Goodall Institute in planning, producing, and publishing the "Roots & Shoots Environmental Education Newsletter for Children."
- "Sustainable Environmental Education" initiative, firstly created in 2016, takes 100 supplier partners to the environmental education venue to engage "Sustainable Environmental Education" training on a yearly basis.
- As of 2019, over 300 supplier partners in total have participated in the initiative.



- The first edition of CSR report was released in 2007 and has been disclosing the non-financial information of the corporation for 13 years consecutively.
- A green procurement strategy is fully implemented with over NT\$1.02 billion of green procurement amount in 2019 and the green procurement amount accounting for 5% in the total procurement amount every year.
- We took the initiative to take "supplier CSR management actions" in 2008, which made us the first telecom carrier that promotes CSR management for supply chain in Taiwan.
- From Code of Corporate Social Responsibility to questionnaire survey, annual CSR Supplier Conference, sustainability education, and on-site audits of over 100 suppliers in cooperation with the SGS, we improve the sustainability capacity of our supplier partners step by step.
- Through accumulation of a decade, apart from introduction of ISO 20400 sustainable procurement guidance, "sustainable rating label" was implemented in 2019, realizing the idea of sustainability in our products and services while maximizing the influence of procurement to create new green business opportunities.



- To ensure that all employees engage operation activities with the highest ethical standards, we have stipulated "Ethical Corporate Management Best Practice Principles", "Code of Ethics", and "Procedures for Ethical Management and Guidelines for Conduct" to lay out the required ethics and responsibilities when employees engage business conducts while comprehensively promote and deepen the corporate culture of ethics and integrity.
- "Guidelines for Personnel Evaluation" and "Standards Governing the Administrative Rewards and Discipline of Chunghwa Telecom Personnel" have been stipulated for personnel evaluation; rewards and disciplines are to be given in a timely manner pursuant to the regulations upon deeds worthy of rewards and conducts to be disciplined.
- Safe and rigorous whistleblowing mechanism is established; the employee grievance hotline is made available in the "Employee Section" on the EIP.



- The dedicated "Environmental Sustainability Task Force" has been established under the CSR Committee, tasked with stipulation of environmental sustainable development goals and incorporation of issues of carbon management in the operation plan.
- In 2008, we introduced ISO 14064-1 greenhouse gases management system to inventory the carbon emissions with over 1,800 buildings and cell sites and pass the SGS certification each year.
- We further connect to the external supply chains to promote sustainable, low-carbon supply chain practices and develop green products and services. Since 2016, approximately 100 supplier partners are led to environmental education venue to engage carbon management education to elevate their environmental protection awareness every year.
- We joined the CDP in 2018, promote whole supply chain carbon management actions, and are the first telecom carrier in Taiwan that signed and responded to the initiative of Task Force on Climate-Related Financial Disclosures (TCFD).



- We connect organizations, global and local, with the corporate resources and core competences to serve specific stakeholders, stakeholders in the rural areas, and disadvantaged stakeholders, so as to create a digitally inclusive society.
- Since 1988, we have been working with the Center of Resources for Visual Impairment of Tamkang University and dedicating ourselves to aiding the visually-impaired with telecom technologies and development of a voice-based assistance app for the convenience of their lives.
- Since 2009, we have been promoting "Read with You" network tutoring for over a decade joint forces with Fu Jen Catholic University, replacing roads with networks to offer schoolchildren in rural areas a hand on their schoolwork.
- Since 2015, working with the NTU Hackathon and establishing the network environment in the venue for the participants to retrieve data to produce innovative solutions.
- With a long-term partnership with social enterprises, we set up Children Are Us bakery on the premises of CHT, procure good food products from the "BUYNEARBY" social enterprise, and put products of social enterprises including Comfortable and Blueseeds on the CHT Employee Purchase Net for sale to help them to expand their channels and promote sustainability ideas.

## ✦ 360 Degree of Digital Inclusion Actions

Chunghwa Telecom focuses its social investment in “minimizing the digital divide” and the “creating of digital opportunities,” given the specific nature and the core competence of information and communication in the ICT industry. We also spare no effort in the advocacy of “corporate volunteers” to participate in local community services, and proactively assist the communities in creating digital opportunities. We promote all aspects of digital inclusion using 360-degree vision.

### Chunghwa Telecom Digital Inclusion Strategy



#### Minimize the Digital Divide



##### Chunghwa Telecom Foundation Digital Good Neighbors

- The Digital Good Neighbors was located in **89** places



##### The annual investment of Telecom universal service is approximately **4.4** hundred million

- Telephone services for more than **230,000** homes in **86** rural communities in Taiwan
- Data communication service for more than **120,000** households
- Data connection service for more than **600** high schools, primary schools, and public libraries.
- More than **41,000** public telephones installed across **22** counties/cities



##### Preferential subsidies for the disadvantaged groups

- Care for **62,387** households of the disadvantaged groups, with subsidies amounting to NT\$ **172,682** thousand



##### Equipment supports for major events

- Broadband circuit, MOD platform promotion, mobile base station vehicles, SMS, Wi-Fi AP, temporary data circuit
- The coverage rate of the 12Mbps popularization broadband service is over **97.6%**



#### Create Digital Opportunities



##### Chunghwa Telecom Foundation “Click Taiwan”

- The 11th Click Taiwan: videos totaling **60** school students went deep into **27** different villages



##### PC education Network tutoring

- Read with You “Community Network Tutoring” has tutored near **2,875** students over **11** years and the tutorial hours has now reached **91,187**
- iPhone usage training courses for the visually impaired were regularly held in support of the visually impaired assistance plan



##### The CHT Digital Innovative Application Series

- The CHT Digital Innovative Application Series has been running for **12** years to promote digital development in Taiwan



##### Assistance application development / Employment

- Development of accessible assistance – the Assistance App for the Visually Impaired has been downloaded **54,270** times since 2013
- We established the EYE Social Innovative Call Center where the visually impaired can become paid service personnel and earn their own living

## Social Investment Management

Chunghwa Telecom refers to the community investment evaluation mechanism of the LBG (London Benchmark Group), to conduct evaluations on the possible community benefits and business benefits before an investment is made. The quantification of the contribution of social investment allows us to make reasonable resources allocation while avoiding repetition. It helps the decision-making and promotion of charities as well as future sponsorship.

### Social Investment Statistics for 2019

Cash Donations	NT\$ <b>216,189</b> thousand
Management Expenditures	NT\$ <b>10,834</b> thousand
Product or Service Donations	NT\$ <b>527,543</b> thousand
Corporate Volunteer Services	NT\$ <b>6,135</b> thousand
<b>Total</b>	NT\$ <b>760,701</b> thousand



Hours of Corporate Volunteer Services  
**21,375** hours



Percentage of Revenue  
**0.37%**

## Telecom Trip to Realize Schoolchildren's Dreams

Chunghwa Telecom cares for the disadvantaged children in rural areas and aims to utilize social resources to make amend to the educational deficiency and improvement school education efficacy. The National Science and Technology Museum in Kaohsiung and the Taiwan Telecom Industry Development Association have been working together with CHT since 2011, organizing two informative trips to the National Science and Technology Museum for the disadvantaged students in rural areas from the schools and children/juvenile social welfare groups located in the rural areas of the southern region. It presents opportunities of popular science education and realization of “timely fun in learning.” As of 2019, a total of 5,214 students in rural areas have paid the visit with a sponsoring amount up to NT\$4.2 million.



Video [🔗](#)





## Minimizing the Digital Divide

Chunghwa Telecom Foundation was founded in 2006. Through long-term cultivation of our core competence to communities, tribes, urban fringe, and areas with relatively lack of resources, the Foundation is a resource platform for connecting and arranging the “good” material, and further share to needed locations. It has become the strength that supports and assists the advancement of these local areas.



## Chunghwa Telecom Foundation Cultivates and Works with Communities for the Common Good

Chunghwa Telecom and Chunghwa Telecom Foundation have joined hands cultivating communities for 13 years, establishing “digital good neighbors” across Taiwan to bridge the rural-urban gaps in resources, serve as the platform to connect resources, offer resources such as community digital learning, youth volunteering, sports/cultural/art activities, and local industries promotion, as well as discover moving stories and local industries unique to local communities.

Today, the partnering bases have been set up across all corners of Taiwan Island and offshore islands, covering ethnic groups of Minnan, Hakka, indigenous peoples, and the new immigrants. Additional 8 bases of “digital good neighbors” were established in Chiayi County and Keelung City in 2019. With the unity and connection of good neighbors, we expect a variety of residents different in ethnicity and ages can all gain opportunities and energy from them while bridging the gap between cities and towns/villages in resources.

## “The Digital Good Neighbors” Get Close to and Make Good use of Digitalization

- Course Series I:** “Little Environmental Directors” eco-actions with digital documentaries
- Participants:** Students of elementary to junior high levels
- Course Highlight:** With digital documentary and environmental education combined, students are encouraged to open up their senses in the process of field researches and practices to gain new knowledge of their hometown.



On the basis of “make good use of computer for a good cause,” in 2019, we keep on holding “Little Environmental Directors” video-making courses. Focusing on the rich marine culture and eagle biology of Keelung in the northern Taiwan, together with the Keelung City Government, Keelung City Marine Education Advisory Group, and local teachers and students, we organized “Little Environmental Directors: cherish the seashore of Keelung” course, inviting renown documentary director to guide the little directors at the elementary and junior high levels to document environmental protection issues digitally and recount the stories of their hometown from the perspective of children.

The course cultivated 30 little directors at age 12 on average, producing 10 environmental short films. The filmmaking fully demonstrates the creativity and delicate observation of the children. The video reached 20,000 hits within merely 2 weeks. In addition, through the regular screening at the National Museum of Marine Science and Technology, it allows more tourists visiting Keelung to learn at close the local ecological environment via the lighthearted, fun videos while directing their attention once again to the environmental education.



For more videos, please refer to the webpage [🔗](#)

- Course Series II:** Senior Citizens to play and learn on cellphones
- Participants:** Senior citizens
- Course Highlight:** With life and fun at the core, senior citizens are encouraged to share their life experiences, acquire new knowledge, and step out from their homes to have more interpersonal interactions and fun in their lives.

The digital good neighbor’s bases are mostly situated in villages where children and senior citizens account for the majority. To care for the target audience at different ages, “digital good neighbors for senior citizens to play and learn” app course was organized specifically for senior citizens in 2019. According to the digital divide survey by the press, senior citizens at age 50-69 were relatively more interested in courses on healthcare, social networking, and information. Therefore, the course was designed to cater to the interests of these students while in combination with the convenient software promoted by local governments to encourage the students to use digital technologies for more convenience in life.

The course series were made available to 5 digital good neighbor bases, including Sansia Revival Lutheran Church, DongHouSai Taiwan Presbyterian Church in Chiayi, YongYang Community in Taoyuan, LiMing Community Development Association in Pingtung, and ChiShan Community Development Association in Pingtung. They may be located either in the outskirts of cities or in the villages. Through guidance by the lecturers and TAs, these mature citizens were finally given a chance to learn about the digital devices in their hands and to understand the language spoken by their grandchildren. The once-in-a-week course and interaction allowed more topics for conversation and better bonds among the members in the communities. As a result, digitalization became more than just tools, but an alternative companion for the elderly.





## “Click Taiwan” Tapping into the Energy of Youth

- “Click Taiwan”: To serve and document
- Participants: Youth in college nationwide
- Venue: CHT Digital Good Neighbors

Since 2009, Chunghwa Telecom Foundation accepts applications from youth in college with 2 people in a group disregard the gender, department, or age, each year. A total of 25 groups (50 people in total) are selected to go to the “Digital Good Neighbors” across Taiwan to engage “Click Taiwan” residency program. The students are required to have a prior knowledge of the needs in the community, combine their expertise, design, and implement services catered to the local needs, while documenting the processes in texts and images. In 2019, students from 37 departments across 18 universities carried out services in communities with the respective expertise and talents, including the promotion of oral hygiene, art painting, English courses, computer and cellphone courses, digital marketing, aromatherapy and rehabilitation, placemaking design, image creation, farming, reading and writing, and community affair assistance, so as to engage communities from diverse angles and bridge the urban-rural gap.

In 2019, it further cooperated with the third-party team “5% Design Action” to go into the “Click Taiwan” communities “Hsichou Chingzai Canal Industrial Culture Association in Changhua,” “LiMing Community Pintung,” and “Gaoshih Village in Pingtung.” Not only did they mentor the university students to utilize their design thinking to produce community design proposals, but also exchange new ideas and new methods with community partners to revitalize the local communities.

- “Click Taiwan, Hearty Southbound”: The root-seeking trip for the new second generations
- Participants: the new lady immigrants of digital good neighbor, their second generation, and Taiwanese college students
- Venue: the hometown of the new second generation—Vietnam

The Foundation has been working in the local communities for over a decade, bearing witness of the ample energy the new immigrants have brought to the land of Taiwan. We want to extend the spirit of Click Taiwan to these ladies of new immigrants. Through the experience with Click Taiwan, it allows the new second generation to understand more about their moms’ culture of their hometown and at the same time understand the advantage of having two different cultural backgrounds. We hope to help the new immigrants and their children to integrate into the Taiwanese society, so after holding the “Click Taiwan, Hearty Southbound” program in 2018, we continued to organize on the second year.

With digital good neighbors as the target for recruitment, three teams were selected from New Taipei City, Tainan, and Kaohsiung to execute the program. Apart from documentary in texts and images, students lived up the spirit of “to serve” and taught the elderly in the hometown how to use digital tools, so that they might get their memories of hometowns across via networks without distance after they were apart.



2019 “Click Taiwan” Outcome [🔗](#)

2019 “Click Taiwan”  
28 communities documentaries [🔗](#)

### Reflection from the Participating Student in Click Taiwan

Not until I became the farmer bending over in the field at work under the sun did I truly appreciate the notion of “each grain is the fruit of hardship in the field.” That was my first time stepping out of my comfort zone and venturing into an unknown place to utilize my strength to bring the beauty of village to everyone. That’s really a new landmark in my life.



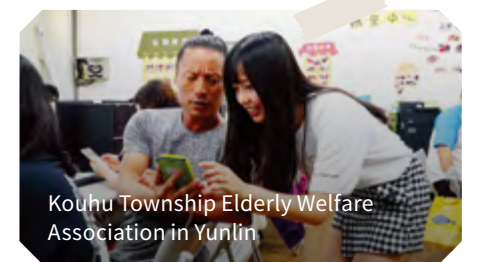
Fuxing Tribe in Hualien



South-Link Health Promotion and Care Services Association in Taitung

I recall the night before departure. I sat on the floor in front of the Ark Classroom. The oath we all swore as students in the Nursing Department resounded in my mind. I will bring with me the energy charged in Tjuabal and become a better nurse in the hospital.

I realized I have plenty. Not just feeling satisfied for what I have, but also realizing what I’m capable of. I’m more powerful, courageous, and even full of potential than I thought I was.



Kouhu Township Elderly Welfare Association in Yunlin



Mailiao Cultural Association in Yunlin

I hope by the end of the journey, I could get to appreciate more the land that nurtured me and give back to my homeland. I think it’s also the core value critical to Click Taiwan. Only when you are truly down to earth, can you embrace the land and listen to the voice down there in the local community.

### 2019 Social Contribution of the Foundation



Unit: NT\$	
Youth Empowerment	4,746,671
Digital Empowerments	7,642,808
Local Empowerment	3,473,614
Social Marketing	5,484,038
CHT Women’s Basketball Team	21,976,834



## Preferential Subsidies for the Disadvantaged Groups

Chunghwa Telecom has long been subsidizing telecom services for the socially disadvantaged, and assuring their access to basic communications. The following are the main preferential plan and amount in 2019.

Preferential Plan	Preferential Content	Preferential Amount (NT\$ thousand)	Beneficiaries (persons)
<b>Caring Series Rate Plan (Mobile)</b>	<ul style="list-style-type: none"> <li>Double communication hours from the original rate plan for the visually impaired, hearing impaired and speech impaired.</li> <li>300 free SMS intra-network and 100 free SMS extra-network for the hearing and speech impaired. The “intra-network image telephone” rate is the same for 3G customers.</li> </ul>	653	218
<b>Broadband Preferential Plan for Low-income Households</b>	<ul style="list-style-type: none"> <li>50% off on 16M/3M, 35M/6M, 60M/20M, 100M/40M, ADSL 2M/64K &amp; ADSL 5M/384K monthly rate.</li> </ul>	42,349	8,928
<b>4G Mobile Data Plan for the Disabled</b>	<ul style="list-style-type: none"> <li>Disabled persons are entitled to an NT\$ 100 discounts for limited 399/436/499 plan, NT\$ 200 discounts on monthly subscriptions when subscribing to the 4G 599 plan and above plus Wi-Fi hotspots for free during the term of the contract.</li> </ul>	114,438	44,827
<b>Broadband Preferential Plan for the Disabled</b>	<ul style="list-style-type: none"> <li>5% off on HiNet 16M/3M, 35M/6M, 60M/20M and 100M/40M monthly rate.</li> <li>15% off on ADSL 5M /384K monthly rate. 5% off for other speed rates.</li> </ul>	10,468	5,607
<b>MOD Caring Project and Project for the Socially Unfortunate</b>	<ul style="list-style-type: none"> <li>Platform charges: A 50% discount (NT\$45 / month) from the work completion date.</li> <li>Subscribers of the family premium package, family advance package, family advance package B, family high-quality package, family special package, family popular package are entitled to 10% discount, and the normal rate after the discount period expires.</li> <li>The above projects all apply to the socially unfortunate and the caring project has no time limitation, the project for the socially unfortunate provides discounts for the first 24 months after the work completion date.</li> </ul>	4,761 (calculated on the basis of the 2-year preferential discount)	Average 2,794 / year
<b>Healthy Net Plan</b>	HiNet Adult Content Gatekeeper protects children from harmful websites such as pornography, violence, suicide, weapons, gambling, and drugs. The service in the first year is rendered to low-income households for free.	13	13
<b>Welfare Public Telephone</b>	<ul style="list-style-type: none"> <li>Installed 110 cm from the floor in public areas for the convenience of the disabled.</li> <li>The keyboard was designed with embossing on the “5” key for the visually impaired, and a voice adjustment function (from 3db to 6db) was provided exclusively for people with hearing aids.</li> <li>A slot for inserting is designed on the side of an IC card for the convenience of the visually impaired.</li> </ul>		
<b>Message Relay Service for the Hearing and Speech Impaired</b>	All telephone messages will be translated and faxed to the service hotline 0800 – 080885 (Help Me in Chinese homonym). The service personnel will then relay the message in voice and return the message to the hearing and speech impaired caller (up to 80 words for the relay and up to 30 words for reply). Those who are not hearing and speech impaired may also call the hotline (0800-080880) for the relay of messages via fax to the hearing and speech impaired. The service hours are 08:00 to 21:00 daily.		



## The Creation of Digital Opportunities

By utilizing our expertise in telecom technology, we will ensure that everyone shares the advantage of technology despite financial or social standing, or geographical location. In this way we hope to quickly achieve the objective of minimizing the digital divide and creating digital opportunity. In addition to previously described action plans and subsidy, different from those of other enterprises, we also contributed resources to developing related products and services to meet the needs of the disabled and allow them to realize their right of access to the digital technology and convenient lives.

### Chunghwa Telecom Women’s Basketball Team Gives Back to Communities

During the summer vacation each year, the Chunghwa Telecom Foundation and members on the Chunghwa Telecom Women’s Basketball Team partake in the basketball summer camp events. The Basketball Team members serve as team mentors and coaches to offer students rich and solid experience on the camp. Meanwhile, through games and competition, sportsmanship and the spirit and attitude of team player are cultivated for the seeds of basketball to take root.



In light of the arrival of the 5G era, elements of technology, art, and basketball were fused together specifically in 2019. “Infinite 5G: E-trip of Technology x Art x Basketball” of three days and two nights was organized. Children from Hualien, Taitung, and Pingtung were invited to pay a visit to the Center of Intelligent Future of Chunghwa Telecom. In addition to getting a taste of the convenience of 5G life could bring, the children were arranged to join the art workshop to add an extra art touch besides the tech sense of the trip.

### Life with Good Neighbors Festival – promoting rural-urban exchanges and local industrial development

There are more and more “digital good neighbors” developing bit by bit community industries and local tours. To take it further to help promote the community industries, we threw the first edition of “Life with Good Neighbors Festival” in 2019. The 23 “digital good neighbors” across all counties and cities in Taiwan and 6 performance groups were invited to bring with them the local industries and unique performances to meet friends in the north and share their stories.



In addition to the assistance to the “digital good neighbors” in expanding their sales into the market in the northern Taiwan, the event also presented an opportunity for the workers in the industries to meet and communicate with their consumers face to face in order to learn about the consumers’ preferences in products and how to engage a face-to-face marketing. Furthermore, it was also a chance for the workers in the industries to learn from one another, which were turned into the richest nutrients to the local development.

The Foundation has been creating more marketing platforms for community industries, online and offline, in recent years. Joint forces with its parent company, they act upon the local economy with the expectation to bring back the youth to their hometown to create more job opportunities and solid development in local communities.



## Community Network Tutoring—"Read with You"

Chunghwa Telecom has supported education and shown its concern for rural villages ever since 2009, in the aftermath of Typhoon Morakot. We extended our services to the permanent settlements and newly developed communities in the disaster zones. Using visual Internet technology, we delivered educational resources in the form of private tutorship in rural villages for the unfortunate. We hope to give the children of the next generation a learning environment which is "safe, dignified, and hopeful."



Item	Description
<b>Goal</b>	By 2022, we hope to: <ul style="list-style-type: none"> <li>Assist 2,900 students in the remote areas with network tutoring</li> <li>Accumulate more than 4,500 volunteers to participate in network tutoring</li> <li>Accumulate more than 100,000 training hours for tutoring volunteers training</li> </ul>
<b>Characteristic</b>	Online education with one-on-one individual tutoring by university students helps pupils of junior high schools and primary schools in the rural villages to enhance their learning and provides equal learning opportunities.
<b>Method</b>	<ul style="list-style-type: none"> <li>To realize the spirit of stakeholder engagement, we have cooperated with the Center of Care Services for Taiwan Rural Area Education at Fu Jen Catholic University.</li> <li>University students helped the cause with one-on-one tutoring to take care of the school children in the rural villages and disaster zones.</li> <li>Customized exclusive class supplements to care for the spiritual growth of schoolchildren through companionship, interaction and communication.</li> </ul>
<b>Participant</b>	Pingtung Feng-Lin Church, Pingtung Chao Chou Boys Town, the Taitung Kaulahan Association, Taitung Chinese Love & Joy Charity Association, Taitung Fukid Tribe, Chiayi Fu Jen High School, Taitung Lanyu High School, Matzu High School, Taitung Luye Library, Hualien Yuli Library, Taoyuan Dayuan Catholic Church, and Taoyuan Guanyin Catholic Church
<b>Major Result</b>	<ul style="list-style-type: none"> <li>University students improve the children's learning outcomes with one-on-one individual tutoring of the school children in rural villages. They also took care of their need for personal communication and interaction.</li> <li>More than ten-years efforts by e-Tutor, it has helped several dozen students gain admission to national and private universities, including the National Yang Ming University and Taipei Medical University. Assistance to remote villages has really reduced the divide between the cities and counties, radically improved the opportunities available to the children and changed their lives.</li> </ul>

Schoolchildren who have been Tutored

**2,875** persons

University Students as Tutors

**4,460** persons

Tutorial Hours

**91,187** hours

Participants in Summer and Winter Classes

**2,812** persons

Note: The data period started from December 2009 to February 2020.

[Videos](#)

## Assistance Application Development



We believe "humanity to be the foundation of technology innovation." In 2013, we launched a "Voice-based Personal Assistance App" that was specifically designed for the visually impaired. The App incorporates image, voice, reading, and lifestyle functions to assist both visually impaired and elders to face some of their difficulties. By the end of 2019, the App had been downloaded/updated 54,270 times, with 7,078 logins and 347,987 clicks on average monthly in 2019. It is one of the most convenient and useful personal assistants available.

## EYE Social Innovative Call Center Creates Employment Opportunities for the Visually Impaired

Chunghwa Telecom has engaged in long-term cooperation with the Resource Center for the Visually Impaired at Tamkang University for more than 30 years and the EYE Social Innovative Call Center was set up in 2011. These joint efforts led to the unveiling of the first Total Solution in Taiwan. It includes research, development, and improvement of a computer-assisted telephone system, and its corresponding skill development, training, supervision for the needs of the visually impaired talents to offer the phone-services.

In 2015, the Company completed an upgrade to the Taipei City 1999 hotline, making it user-friendly to the visually impaired. This upgrade included: a real-time notification system, a three-way call feature with voice recording, English/Japanese services, a verbal abuse referral feature, a call duration reminder, a health regulation inquiry feature, and a quick link to service sub-categories. These upgrades greatly improved the scope and efficiency of the service.

By the end of 2019, the Total Solution had provided 8 working opportunities for the satisfaction surveyors of Chunghwa Telecom (including one visually impaired manager). And there were another 15 customer service personnel (12 visually impaired and 3 supervisors) for the Taipei City 1999 hotline.

We initiated new employment opportunities for persons with spinal injuries. Including one with severe injury serves as 4G visual assistance service personnel, i.e. assisting visually impaired people with image identification through 4G cloud services, which helps to promote the quality and independence for the visually impaired people's daily life while providing employment opportunities for the severely disabled.



## Automated Voice Donations

The automated voice system for donations developed by Chunghwa Telecom Laboratories has proved to be helpful for charities, social welfare, cultural, educational, and environmental protection institutions. It gives donors a more convenient means of donation. A donor simply needs to pick up their cell phones, dial the number, and follow the voice prompts to contribute care to those in need. In 2019, there were 8,256 donations, totaling NT\$ 4,389,350.



# Chapter 6

## Public Policy Participation

The SDGs CHT contributes to in this chapter: 8 , 9 , 10



In 2019, Chunghwa Telecom donated about NT\$ 500 million in the participation of public policy items including joining national and international associations, supporting government popularization services and constructions and developing its prospective industries.

We have joined almost 100 associations and groups to upgrade its technology and stimulate the development of the industry through exchange and cooperation within the industry or across different industries. The key associations we joined are as follows:

Name of Association	Description	Allocated Amount Annually NTD
Taiwan Telecommunication Industry Development Association	Participating in the affairs of the Association, the overall development of telecommunication industry in Taiwan is promoted.	8,000,000
GSMA	Following the annual events and activities of the Association, exchanges are carried out with mobile communication carriers worldwide, in software and hardware, to tap into the pulse of the global mobile communication ecosystem and facilitate the thriving development of the mobile communication industrial chains.	4,222,234
TM Forum	Through the participation in the international organization, TM Forum, the knowledge of 5G operation and management, development strategies, and advanced technologies worldwide are gained to streamline with the international standards, create an integrated 5G ecosystem, offer quality ICT services, and innovate the digital transition of industries.	1,955,778
Next Generation Mobile Networks Alliance (NGMN)	The participation in the NGMN activities helps the global telecom operators form consensus on the next-generation mobile network development, guide the trends in the industry, and foster the cooperation and integrity in the industry.	1,032,900
BROADBAND FORUM	Participating in the significant international broadband access network standard organization, CHT follows closely to the broadband network technology development globally from the perspective of a telecom carrier, promotes cooperation and exchanges among the relevant industries domestically, provides guidance to the domestic players, and exerts its international influence with its industrial advantages.	532,350
Taiwan Network Information Center	Through the activities with the Information Center, CHT facilitates and coordinates exchanges and integration among the network organizations on the national and the international levels, assists in the popularization and application of the Internet, and gains international network resources and opportunities for cooperation.	441,000
Business Council for Sustainable Development of Taiwan (BCSD-Taiwan)	As the member on the board of directors/supervisors, CHT participates in the Council's affairs to advocate and promote environmental protection and resource management joint forces with the corporate members so as to achieve the purpose of a sustainable development for enterprises while improve the quality of life for the citizenry.	120,000
Asia-Pacific Network Information Centre (APNIC)	Through the organization, CHT partakes in the distribution mechanism of IP addresses in the Asian-Pacific region, frequently attends relevant technology exchanges, and exercises fully its responsibility to maintain the normal operation of Internet infrastructure.	40,050
Taiwan Association of Information and Communication Standards	Consensuses on the standards concerning information and communication technologies are formed over the Association's exchange platform to facilitate the implementation of industrial standards domestically, exert influences in the region, strengthen connections with international and regional standards organizations, and establish channels for collaboration.	30,000
Chinese Non-store Retailer Association	In response to the consumption over the virtual channels, CHT leverages the influence of the Association to promote the enforcement of pertinent laws and regulations such as the Consumer Protection Act and the Fair Trade Act, access key information in the industry, facilitate its legal compliance, and improve the digital development.	20,000

## ✦ Strategies and Goals for Material Topics

Material Topics	Short-term Goals (2020)	Medium-and Long-Term Strategies (2021-2025)
Innovative ICT products and services	<ul style="list-style-type: none"><li>Commercialized 5G networks in Q3, 2020</li><li>Launch of “RISE ON, TOGETHER 2021” transformation plan</li></ul>	<ul style="list-style-type: none"><li>To improve business performance through the 4 transformational projects: “core business,” “emerging business,” “cost optimization,” and “improvement of basic skills” established under the guiding principle of “customer-centered value creation”</li></ul>
Climate change and energy management	<ul style="list-style-type: none"><li>Register for and pass the examination of the Science Based Targets (SBT)</li></ul>	<ul style="list-style-type: none"><li>To reach a capacity of <b>750</b> kW in renewable energy for the company's own facilities by 2030</li><li>To reach a cumulative <b>10%</b> decrease in carbon emissions by 2023, with 2017 as the base year</li></ul>
The integrity and business ethics of the employees	<ul style="list-style-type: none"><li>An employee satisfaction rate of <b>83%</b></li><li>The employee turnover rate within the first 3 years of employment maintained at under <b>5%</b></li><li>The rate of implementing annual integrity and ethics test reached <b>100%</b></li><li>To keep educational training expenses at NT\$ <b>500</b> million</li></ul>	<ul style="list-style-type: none"><li>To ensure that employees' average salary is in the top <b>5%</b> of the industry</li><li>To ensure that starting salaries are higher than the minimum wage in Taiwan</li><li>To maintain the collective agreement coverage rate at <b>99%</b></li><li>To reach <b>100%</b> in implementing general education courses</li></ul>
Building a happy business		
Fair and equal labor-management relations and employee engagement		
Health and safety	<ul style="list-style-type: none"><li>To reach <b>99%</b> in employees' participation in the routine physical examination</li></ul>	<ul style="list-style-type: none"><li>To obtain ISO 45001 management system certification for <b>every</b> branch</li></ul>
Accurate product labelling	<ul style="list-style-type: none"><li><b>0</b> cases of major unclear labeling or incidences of fraud</li></ul>	<ul style="list-style-type: none"><li>To ensure <b>100%</b> complete compliance with laws and internal regulations in promotional information of products and services</li></ul>
Rigorous Cybersecurity Protection	<ul style="list-style-type: none"><li><b>0</b> cases of major cyber security incidents</li><li><b>0</b> cases of major personal information leakage incidents</li></ul>	<ul style="list-style-type: none"><li>Annual examination of and adjustment to the policies, regulations, and strategies for cyber and personal information security</li><li>To external and internal audits; to pass the investigations of the competent authorities and obtain third party certifications</li></ul>
Corporate Governance	<ul style="list-style-type: none"><li><b>0</b> cases of major legal violations</li><li>Proportion of Independent directors on the Board maintain <b>35%</b> and above</li><li><b>2</b> females directors on the Board of Directors</li></ul>	<ul style="list-style-type: none"><li>To ensure that no major violations of Taiwan's economic, environmental, or social regulations occur</li></ul>





## ASSURANCE STATEMENT

### SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE CHUNGHWA TELECOM CO., LTD.'S CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2019

#### NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS Taiwan Ltd. (hereinafter referred to as SGS) was commissioned by Chunghwa Telecom CO., LTD. (hereinafter referred to as CHT) to conduct an independent assurance of the Corporate Social Responsibility Report for 2019 (hereinafter referred to as CSR Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented during on-site verification(2020/04/24~2020/05/25). SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

The information in the CHT's CSR Report of 2019 and its presentation are the responsibility of the management of CHT. SGS has not been involved in the preparation of any of the material included in CHT's CSR Report of 2019.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all CHT's stakeholders.

The SGS protocols are based upon internationally recognized guidance, including the Principles contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) 101: Foundation 2016 for accuracy and reliability and the guidance on levels of assurance contained within the AA1000 series of standards and guidance for Assurance Providers.

This report has been assured using our protocols for:

- evaluation of content veracity of the sustainability performance information based on the materiality determination at a high level of scrutiny for CHT and moderate level of scrutiny for subsidiaries, joint ventures, and applicable aspect boundaries outside of the organization covered by this report;
- AA1000 Assurance Standard (2008) Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2008); and
- evaluation of the report against the requirements of Global Reporting Initiative Sustainability Reporting Standards (100, 200, 300 and 400 series) claimed in the GRI content index as material and in accordance with.
- evaluation of the report against the IIRC International <IR> Framework (Chinese version 2015) requirements for content elements.

The assurance comprised a combination of pre-assurance research, interviews with relevant employees, superintendents, CSR committee members and the senior management in Taiwan; documentation and record review and validation with external bodies and/or stakeholders where relevant.

Financial data drawn directly from independently audited financial accounts, Total Impact Measurement and Management, and Task Force on Climate-related Financial Disclosures have not been checked back to source as part of this assurance process.

#### STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance.

SGS affirm our independence from CHT, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with ISO 26000, ISO 20121, ISO 50001, SA8000, RBA, QMS, EMS, SMS, GPMS, CFP, WFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

#### VERIFICATION/ ASSURANCE OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the information and data contained within CHT's CSR Report of 2019 verified is accurate, reliable and provides a fair and balanced representation of CHT sustainability activities in 01/01/2019 to 12/31/2019.

The assurance team is of the opinion that the Report can be used by the Reporting Organisation's Stakeholders. We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting. In our opinion, the contents of the report meet the requirements of GRI Standards in accordance with Core Option and AA1000 Assurance Standard (2008) Type 2, High level assurance.

#### AA1000 ACCOUNTABILITY PRINCIPLES (2008) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

##### Inclusivity

CHT has demonstrated a good commitment to stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, investors, suppliers, CSR experts, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns. For future reporting, CHT may proactively consider having more direct two-ways involvement of stakeholders during future engagement.

##### Materiality

CHT has established effective processes for determining issues that are material to the business. Formal review has identified stakeholders and those issues that are material to each group and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders.

##### Responsiveness

The report includes coverage given to stakeholder engagement and channels for stakeholder feedback.

#### GLOBAL REPORTING INITIATIVE REPORTING STANDARDS CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

The report, CHT's CSR Report of 2019, is adequately in line with the GRI Standards in accordance with Core Option. The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics and boundaries, and stakeholder engagement, GRI 102-40 to GRI 102-47, are correctly located in content index and report. For future reporting, it is recommended to be enhanced the CHT's management approach components as per described in GRI 103-2, as well as to be enhanced in GRI 103-3 for evaluating the effectiveness of the management approach for each material topic.

Signed:

For and on behalf of SGS Taiwan Ltd.

David Huang  
Senior Director  
Taipei, Taiwan  
12 June, 2020  
WWW.SGS.COM



✧ GRI Standards Index

The Management Approach and Its Components

Material Topics	How We Manage the Topic	Purpose of the Management Approach	Policy	Goal & Target	Grievance Mechanism
<b>Economic Performance</b> Innovative ICT Products and Services	We have a robust corporate governance system that involves independent directors and supervisors. The Audit Committee, the Strategy Committee and the Audit Department have been established for effective control of operating costs and business direction.	To ensure that the Company’s operations conform to the requirements of the government and supervising authorities, and that shareholders’ and stakeholders’ interests are protected.	“Business Integrity Principles” “Behavioral Guidelines” “Corporate Governance Principles”	p.16	<ul style="list-style-type: none"> <li>Shareholder hotline: 2394-1845</li> <li>Investor hotline: 2344-5488</li> </ul>
<b>Market Presence</b>	We have established a compensation committee, which helps to ensure that we provide employees with competitive salaries. We’re also able to adequately reward our employees through transparent salary policies.	Ensuring that the company’s compensation policies, systemic standards, and structures comply with government regulations and labor rights.	“Employment Contract”	p.67	<ul style="list-style-type: none"> <li>Grievance hotline: 0800-080998</li> </ul>
<b>Anti-Corruption</b>	To ensure that all employees can conduct business activities with the highest ethical standard, we have implemented the “Business Integrity Principles,” the “Behavior Guidelines,” and the “Integrity Procedures and Behavior Guidelines” that outline the ethics and responsibilities that employees are bound to obey in all commercial conducts. Furthermore, we actively convey to employees about the Company’s culture or its ethical policies.	To effectively manage and ensure that all operating activities are compliant with commercial, marketing, and integrity principles, and to eliminate corruption.	“Business Integrity Principles” “Codes of Conduct” “Corporate Governance Principles”	p.17	<ul style="list-style-type: none"> <li>Grievance hotline: 0800-080998</li> </ul>
<b>Energy</b> Climate Change	We perform annual greenhouse gas inventories & verifications and publicly disclose the related environmental information. We effectively keep track of environmental resources and energy saving performance through the self-developed EARTH system.	To improve the environmental management efficiency via the acquisition of international certifications.	“Environmental Policy”	p.97	-
<b>Employment</b>  <b>Labor/Management Relations</b>	CHT treats employees as its most important partners, and is committed to providing employees the utmost “assurance.” For best protection of employees’ work rights, Chunghwa Telecom has signed the “employment contracts” with individual employees and notifies them of changes regarding employment under the Labor Standards Act. Furthermore, we exploit various communication channels including seminars and labor management meetings to maintain a harmonious and mutually beneficial working relationship.	To ensure that employees’ employment and work rights are protected.	“Employment Contract” “Business Integrity Principles” “Codes of Conduct” “Corporate Governance Principles” “Collective Agreement”	p.66,67	<ul style="list-style-type: none"> <li>Compliant Investigation Committee</li> <li>Grievance hotline: 0800-080998</li> </ul>
<b>Occupational Health and Safety</b>	Chunghwa Telecom is the first telecom company in Taiwan to incorporate an Occupational Health and Safety Management System (OHSAS 18000). We ensure the effective management of employee health & safety through an institutional and systematic mechanism. In addition to complying with health & safety regulations and other related regulations, we also continue to improve the OHS facilities and measures of our working environment.	Chunghwa Telecom guarantees its employees a safe and healthy working environment to prevent occupational hazards.	“Employee Contract” “Collective Agreement”	p.76	<ul style="list-style-type: none"> <li>Grievance hotline: 0800-080998</li> </ul>
<b>Marketing and Labelling</b>	In addition to providing relevant information and usage descriptions on all products and services offered, we also have a “Marketing Policy” in place to ensure that business activities are carried out in compliance with the authority’s rules and requirements. Compliance with such policy constitutes part of senior managers’ performance appraisal.	To protect consumers’ rights to information and ensure the clarity and transparency of marketing information.	“Distribution Sales Aid Management Guidelines” “Marketing Policy”	p.17,86	<ul style="list-style-type: none"> <li>Telecom Service hotline: 0800-080123</li> </ul>
<b>Customer Privacy</b>	“Cybersecurity and Privacy Protection Steering Committee” has been established with the SEVP, appointed by Chairman, as the “CISO” to achieve the objective of zero toleration via regular meetings and third-party verification.	To ensure that customers’ personal information is strictly protected.	“Cybersecurity Policy” “Privacy Policy” “Personal Data Collection Notice”	p.50,85	<ul style="list-style-type: none"> <li>Telecom Service hotline: 0800-080123</li> </ul>
<b>Socioeconomic Compliance</b> Corporate Governance	Ethical management and legal compliance are the principles and guidelines that govern our operations. To ensure all operations comply with socioeconomic laws and regulations, all the departments as well as the level 1 and level 2 institutions of Chunghwa Telecom are operating in line with the laws and regulations pertaining to the businesses.	To ensure that the Company’s operations are free from violations of environmental regulations.	“Business Integrity Principles” “Codes of Conduct” “Corporate Governance Principles” “Distribution Sales Aid Management Guidelines” “Marketing Policy” NCC’s “Regulations for Administration of Base Stations of Mobile Communications Network Businesses”	p.17	<ul style="list-style-type: none"> <li>Compliant Investigation Committee</li> <li>Grievance hotline: 0800-080998</li> </ul>



✧ 2019 Evaluation of the Management Approach

Material Topics	Mechanism for Evaluation	Result of the Evaluation	Adjustment
Economic Performance	Independent directors, supervisor system, internal audit, Board of Directors evaluation (self-evaluation: by the directors and functional committees; third-party evaluation: by the external professional institutes commissioned), evaluation by the relevant authority	p.16	None
Market Presence	Compensation committee, internal audit, evaluation by relevant regulatory authorities	p.67	None
Anti-Corruption	Internal audit, communication/grievance system (including hotlines, emails, and specialized departments), annual online tests, TWSE Corporate Governance Evaluation, CoC obtained from the external third-party	p.17	None
Energy	ISO 14001, ISO 50001, and ISO 14064-1 management system certificate, TWSE corporate governance evaluation	p.97	None
Employment	TWSE Corporate Governance Evaluation, Employment Contract, Collective Agreement	p.67	None
Labor/ Management Relations	TWSE Corporate Governance Evaluation, Employment Contract, Collective Agreement	p.70	None
Occupational Health and Safety	Employment Contract, Collective Agreement	p.78	None
Marketing and Labelling	NCC’s telecom service quality survey, communication/ consumer complaint report	p.17	None
Customer Privacy	Grievance system, system certification (ISO 27001, BS 10012), internal auditor certification, TWSE Corporate Governance Evaluation	p.50,85	None
Socioeconomic Compliance	NCC’s telecommunication service quality survey, communication/consumer complaint report, evaluation of Board of Directors’ Performance by external third-party, TWSE Corporate Governance Evaluation, CoC by the external third party	p.17	None

GRI 103 Management Approach	Disclosure Item	Page
	103-1 Explanation of the material topic and its Boundary	p.30-31
	103-2 The management approach and its components	p.132-133
	103-3 Evaluation of the management approach	p.134

✧ General Disclosures

General Disclosures (2016)	Disclosure Items	Page / URL and Description	Identified Omission and Explanation	External Assurance
Organizational profile				
102-1	Name of the organization	Chunghwa Telecom		V
102-2	Activities, brands, products, and services	p.11		V
102-3	Location of headquarters	p.8		V
102-4	Location of operations	p.8		V
102-5	Ownership and legal form	p.8		V
102-6	Market served	p.11		V
102-7	Scale of the organization	p.8,14,68		V
102-8	Information on employees and other workers	p.67-68		V
102-9	Supply chain	p.12-13		V
102-10	Significant changes to the organization and its supply chain	None		V
102-11	Precautionary Principle or approach	p.40-51		V
102-12	External initiatives	p.17,109		V
102-13	Membership of associations	p.128		V
Strategy				
102-14	Statement from senior decision-maker	p.4-5		V
Ethics and integrity				
102-16	Values, principles, standards, and norms of behavior	p.17		V
Governance				
102-18	Governance structure	p.14		V
Stakeholder engagement				
102-40	List of stakeholder groups	p.35		V
102-41	Collective bargaining agreements	p.70		V
102-42	Identifying and selecting stakeholders	p.34		V
102-43	Approach to stakeholder engagement	p.32-33		V
102-44	Key topics and concerns raised	p.32-33		V
Reporting practice				
102-45	Entities included in the consolidated financial statements	2019 Annual Report p.109		V
102-46	Defining report content and topic Boundaries	p.30-31		V
102-47	List of material topics	p.31		V
102-48	Restatements of information	None		V
102-49	Changes in reporting	None		V
102-50	Reporting period	2019/1/1 - 2019/12/31		V
102-51	Date of most recent report	2019/8/15		V
102-52	Reporting cycle	Annually		V
102-53	Contact point for questions regarding the report	p.1		V
102-54	Claims of reporting in accordance with the GRI Standards	Core		V
102-55	GRI content index	p.132-140		V
102-56	External assurance	p.130-131 (SGS-Taiwan)		V

✂ Topic-Specific Disclosures

Topic-Specific Disclosures	Disclosure Item (topics without years noted are of the 2016 edition of the GRI standards)	Page / URL and Description	Identified Omission and Explanation	External Assurance
201 Economic Performance				
201-1	Direct economic value generated and distributed	p.16		V
201-3	Defined benefit plan obligations and other retirement plans	p.80-81		V
202 Market Presence				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	p.67		V
205 Anti-Corruption				
205-2	Communications and training about anti-corruption policies and procedures	p.17		V
205-3	Confirmed incidents of corruption and actions taken	None		V
206 Anti-Competitive Behavior *				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	None		V
302 Energy				
302-1	Energy consumption within the organization	p.96,97		V
302-4	Reductions of energy consumption	p.96-99		V
302-5	Reductions in energy requirements of products and services	p.96-99		V
305 Emissions *				
305-1	Direct (Scope 1) GHG Emissions	p.49		V
305-2	Energy Indirect (Scope 2) GHG Emissions	p.49		V
305-3	Other indirect (Scope 3) GHG Emissions	p.49		V
305-5	Reduction of GHG Emissions	p.47-48		V
307 Environmental Compliance *				
307-1	Non-compliance with environmental laws and regulations	None		V
308 Supplier Environmental Assessment *				
308-1	New suppliers that were screened using environmental criteria	p.104		V
401 Employment				
401-1	New employee hires and employee turnover	p.68		V
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	p.77-81		V
401-3	Parental leave	p.81		V

Topic-Specific Disclosures	Disclosure Item (topics without years noted are of the 2016 edition of the GRI standards)	Page / URL and Description	Identified Omission and Explanation	External Assurance
402 Labor/Management Relations				
402-1	Minimum notice periods regarding operational changes	p.70		V
403 Occupational Health and Safety				
403-1	Workers representation in formal joint management-worker health and safety committees	p.76		V
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	p.78		V
403-4	Health and safety topics covered in formal agreements with trade unions	<a href="https://goo.gl/gMRBN1">https://goo.gl/gMRBN1</a> Health and Safety topics make up 6.5% of the trade unions.		V
405 Diversity and Equal Opportunity *				
405-1	Diversity of governance bodies and employees	p.14,68,70		V
405-2	Ratio of basic salary and remuneration of women to men	p.69		V
414 Supplier Social Assessment *				
414-1	New suppliers that were screened using social criteria	p.104		V
415 Public Policy *				
415-1	Political contributions	None		V
416 Customer Health and Safety *				
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	None		V
417 Marketing and Labelling				
417-2	Incidents of non-compliance concerning product and service information and labeling	None		V
417-3	Incidents of non-compliance concerning marketing communications	None		V
418 Customer Privacy				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	None		V
419 Socioeconomic Compliance				
419-1	Non-compliance with laws and regulations in the social and economic area	None		V

Note: Topics marked with \* have been disclosed voluntarily, and are not part of the material topics identified in 2019.



✂ G3.1 Telecommunication Sector Specific Indicators

DMA and Indicators		Disclosure Items	Page / URL and Description	Identified Omission and Explanation	External Assurance
SUB-CATEGORY: INTERNAL OPERATIONS					
MATERIAL ASPECT: Investment					
DMA 116	IO1	Capital investment in telecommunication network infrastructure broken down by country/region	p.88		V
	IO2	Net costs for service providers under the Universal Service Obligation when extending service to geographic locations and low-income groups, which are not pro table. Describe relevant legislative and regulatory mechanisms	p.112,128		V
ATERIAL ASPECT: Health and Safety					
DMA 90	IO3	Practices to ensure health and safety of field personnel involved in the installation, operation and maintenance of masts, base stations, laying cables and other outside plants. Related health and safety issues include working at heights, electric shock, exposure to EMF and radio frequency fields, and exposure to hazardous chemicals	p.75-76		V
	IO4	Compliance with ICNIRP (International Commission on Non-Ionizing Radiation Protection) standards on exposure to radiofrequency (RF) emissions from handsets	p.90		V
	IO5	Compliance with ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines on exposure to radiofrequency (RF) emissions from base stations	p.90		V
	IO6	Policies and practices with respect to Specific Absorption Rate (SAR) of handsets	p.90-91		V
MATERIAL ASPECT: Infrastructure					
DMA 90	IO7	Policies and practices on the siting of masts and transmission sites including stakeholder consultation, site sharing, and initiatives to reduce visual impacts. Describe approach to evaluate consultations and quantify where possible	p.90		V
	IO8	Number and percentage of stand-alone sites, shared sites, and sites on existing structures	p.90		V

SUB-CATEGORY: PROVIDING ACCESS					
MATERIAL ASPECT: Access to Telecommunication Products and Services: Bridging the Digital Divide					
DMA 109	PA1	Policies and practices to enable the deployment of telecommunications infrastructure and access to telecommunications products and services in remote and low population density areas. Include an explanation of business models applied	p.88,112		V
	PA2	Policies and practices to overcome barriers for access and use of telecommunication products and services including: language, culture, illiteracy, and lack of education, income, disabilities, and age. Include an explanation of business models applied	p.112		V
	PA3	Policies and practices to ensure availability and reliability of telecommunications products and services and quantify, where possible, for specified time periods and locations of down time	p.116		V
	PA4	Quantify the level of availability of telecommunications products and services in areas where the organization operates. Examples include: customer numbers/ market share, addressable market, percentage of population covered, percentage of land covered	p.116		V
	PA5	Number and types of telecommunication products and services provided to and used by low and no income sectors of the population. Provide definitions selected. Include explanations of approach to pricing, illustrated with examples such as price per minute of dialogue / bit of data transfer in various remote, poor or low population density areas	p.116,122		V
	PA6	Programs to provide and maintain telecommunication products and services	p.88		V
MATERIAL ASPECT: Access to Content					
DMA 84	PA7	Policies and practices to manage human rights issues relating to access and use of telecommunications products and services	p.83,85		V

## Customer Relations

DMA 84	PA8	Policies and practices to publicly communicate on EMF related issues. Include information provides at points of sales material	p.91	V
	PA9	Total amount invested in programs and activities in electromagnetic field research. Include descriptions of programs currently contributed to and funded by the reporting organization	None	V
	PA10	Initiatives to ensure clarity of charges and tariffs	<a href="http://www.emome.net/cell_phone_plans/monthly_rate_plan">http://www.emome.net/cell_phone_plans/monthly_rate_plan</a>	V
	PA11	Initiatives to inform customers about product features and applications that will promote responsible, efficient, cost-effective, and environmentally preferable use	p.84	V

## SUB-CATEGORY: Technology Applications

### MATERIAL ASPECT: Resource Efficiency

DMA 60	TA1	Provide examples of the resource efficiency of telecommunication products and services delivered	p.60	V
	TA2	Provide examples of telecommunication products, services and applications that have the potential to replace physical objects (e.g. a telephone book by a database on the web or travel by videoconferencing)	p.61-62	V
	TA3	Disclose any measures of transport and/or resource changes of customer use of the telecommunication products and services listed above. Provide some indication of scale, market size, or potential savings	p.63-65	V
	TA4	Disclose any estimates of the rebound effect (indirect consequences) of customer use of the products and services listed above, and lessons learned for future development. This may include social consequences as well as environmental	p.61-62	V
	TA5	Description of practices relating to intellectual property rights and open source technologies	p.64	V



The background features a stylized wireframe figure of a person in a dynamic pose, overlaid with a complex network of intersecting lines and dots, suggesting a digital or network theme. The background is composed of horizontal bands of light blue and green, with large, soft-edged white and light green shapes that resemble clouds or abstract forms.

## Smart CSR Leads Smart City



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