

2017 Smart CSR Leads Smart City

Chunghwa Telecom Corporate Social Responsibility Report



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Editorial Policy



Welcome to Chunghwa Telecom's 11th 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 2017.

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

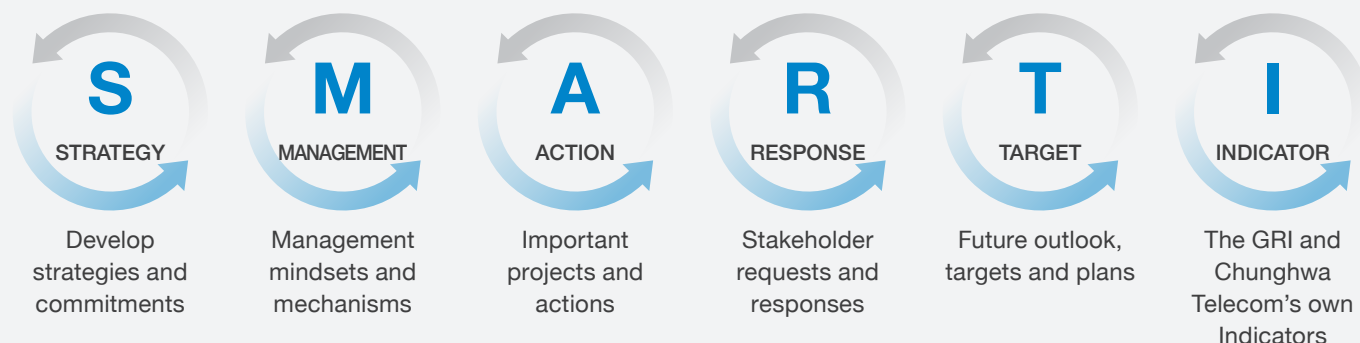
■ Reporting Period

This report discloses the Company's CSR management policies, material topics, countermeasures, initiatives and results between January 1 and December 31, 2017. However, to ensure complete coverage, parts of the report include descriptions of initiatives and results from 2016 to 2018.

■ References

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

■ How to Read the Report



■ 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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Message from the Chairman




The sustainability performance of Chunghwa Telecom in 2017 was extraordinary, due to the combined efforts of all employees. Besides being selected as an index component on the Dow Jones Sustainability Indices (DJSI) for the 6th consecutive year, MSCI Taiwan ESG Leaders Index and the FTSE4Good Emerging Index, we were also one of the first group of enterprises included in the FTSE4Good TIP Taiwan ESG Index. Our fruitful achievements in sustainability included:

1. The first telecom operator in Taiwan to publish the CSR Report in accordance with the Global Reporting Initiative Standards, which was 2 years ahead of the relative regulations of the Taiwan Stock Exchange.
2. We led in Green Power Procurement in Taiwan's telecom industry for 3 consecutive years. We support the government in developing renewable energy and have bought 12 million kW of clean energy over 3 years.
3. We are the leading telecom operator in the amount of energy generated from self-built solar power plants, with a total capacity of 527 kWp. The amount of carbon saved equals the total amount absorbed by the Daan Park in Taipei per year.
4. We are the first telecom operator in Taiwan to join the CDP Supply Chain Project and promote the sustainability management of the supply chain thoroughly. With our suppliers, we are marching toward the future of environmental sustainability.
5. We received the Exercise Enterprise Certification for 2 consecutive years, and also many Sports Promoter Awards.
6. We supported the Taipei 2017 Universiade, the largest global sporting event in Taiwan that year, with the social participation amount of NT\$ 100 million.

"Chunghwa Telecom can do more" has always been our core principle. In addition to industry development and competition, we also focus on the voice of internal and external stakeholders. We listen carefully and respond to the need of society, as we use our core expertise in the information and communication technology to actively respond to the expectations from the consumers, investors, shareholders, communities and society.

The telecom industry is now facing an era where mobile revenue has surpassed that of the traditional voice business and has become the main source of revenue. At the same time, we are also facing Internet market saturation, the highly competitive domestic telecom market and challenges from the growth of the IoT and the innovative applications industry. We developed a diverse layout strategy in 2017 and continue to improve the basic infrastructure of the broadband to provide support for various industries in the development of the digital economy. We foster the prosperity of innovative application of information and communication technology, and we grasp opportunities in startup industry growth. Furthermore, we continue to collaborate



Thank you for taking the time to peruse the 11th CSR Report of Chunghwa Telecom. In 2016 we embody the brand spirit of “Always Ahead,” Chunghwa Telecom was the first one company who published its CSR Report in accordance with the “Global Reporting Initiative Standards” in Taiwan telecom industry. Upon that, we won the “Asia’s Most Transparent Report” award in the 2017 Asia Sustainability Reporting Award, which specifically shows Chunghwa Telecom’s excellent management and value-creating capabilities in sustainable issues.

As a responsible corporation, Chunghwa Telecom places much emphasis on CSR in addition to the pursuit of business growth and profits. Apart from to its efforts in corporate governance, environmental protection and social responsibilities, Chunghwa Telecom continues to utilize its information and telecom technologies to help Taiwanese businesses realize their sustainability goals and exert a positive social influence.

with industrial partners and schools to build a new environment for digital economic development, to reach the goal of “being the motivator of digital economy and the pilot of creative industry” as the leader in the new era of digital economy.

As for the attraction and the maintenance of talent, we increased the average overall salary in 2017 to reduce the impact of the coming tide of retirement on human resources and operations. The average salary increase was 3.54% and the maximum was 5%. By adopting a competitive remuneration system, we hope to keep our young and excellent employees while attracting more talent to join the CHT family, and be the first choice in the telecom service industry for the new generation.

Chunghwa Telecom is responding to the continuing deterioration of global natural resources, the environment and its ecology, as well as the social perspectives, with concrete actions. In addition to the promotion of 5G (Green) sustainable strategic plans, “energy, procurement, operation, store and supply chain,” we are developing environmental green products as well. Chunghwa Telecom has been transforming into a full scale “green corporation,” and sparing no effort in the two main social aspects, which are: “Minimizing the digital divide” and “Creating digital opportunities.” We are connecting the outcome of social communion over the years to actively promote social innovation and digital inclusion.

We publicly adopted the “5I-SDGs” initiative in 2017 and now stand beside the UN SDGs to connect Taiwan to the world in an official response and engagement. We have also used our core competence to respond to the DIGI+ Project goal of the “Digital Country · Innovative Economy” of the Executive Yuan. By using our influence on society, we are completing our digital inclusion range to protect information and to give equal rights to all in this Internet and digital era.

We hope to strengthen the connections of our CSR spirit and the local communities in Taiwan with the aids of our relations with partners and the promotion of corporate volunteers. The connections between the underprivileged and the diverse groups and the digital economic era are supported by the sharing and communicating of knowledge, technology and resources. Through these, we link the “cycle of kindness” to realize a win-win situation in terms of digital human rights and innovative economy. We hope that you can continue to give us support and encouragement.



Chairman & CEO
Chunghwa Telecom Co., Ltd.



The SDGs CHT
contributions to
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8 DECENT WORK AND
ECONOMIC GROWTH



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Corporate Overview



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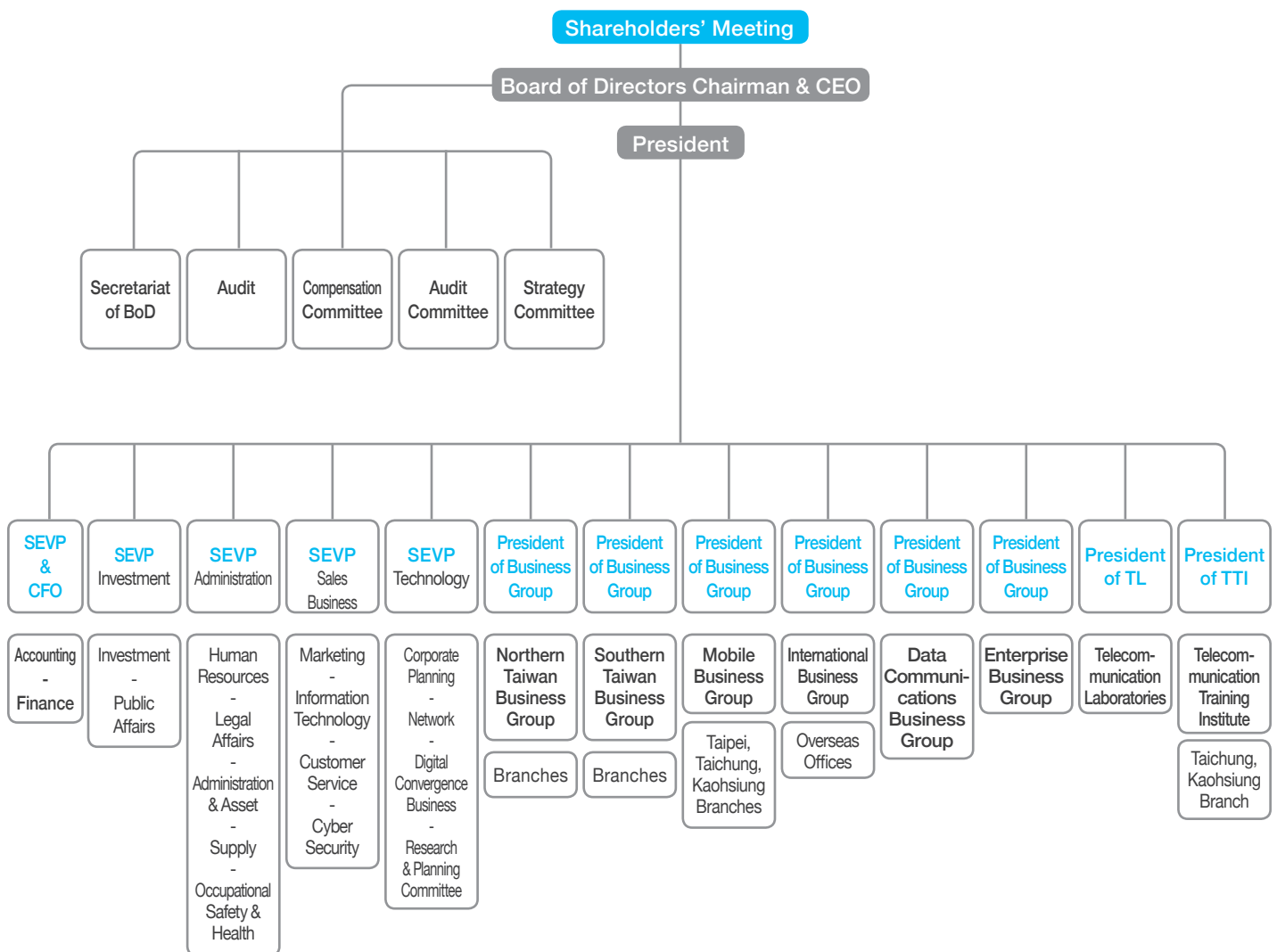


Chunghwa Telecom (TAIEX:2412, NYSE:CHT) is the largest integrated telecom carrier in Taiwan, with more than 750 service locations. Our business has three major areas: fixed and mobile communications, broadband access and the Internet. We also provide corporate customers with information and communication 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: <http://goo.gl/678ya>

The main business of the branches and re-investments: Please refer to page 127 to 141 in the 2017 Annual Report.



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.

Products and Services

Mobile Phone



Customer Amount **10.452** million
Annual Growth **-3.1%**

Mobile Internet



Customer Amount **8.31** million
Annual Growth **+11.4%**

100 Mbps



Customer Amount **1.282** million
Annual Growth **+9.5%**

4G



Customer Amount **7.987** million
Annual Growth **+19.0%**

FTTx



Customer Amount **3.552** million
79.5% of the broadband customers

HiNet



Customer Amount **3.733** million
No. 1 Market share



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



Domestic Fixed Network **31.3 %**

	Customer Amount	Market Share
Local Network	10.687 million	93.3%
Long-distance Network	2,382 million minutes (traffic volume)	82.7%
Broadband Subscriber	4.467 million	72.5%
MOD	1.602 million	23.5%

● Others **1.9 %**

International Fixed Network **6.0 %**

Communication Amount	Market Share
854 million minutes	62.5%

The Major Product

● Internet **12.7 %**

Customer Amount	Market Share
4.134 million households	67.6%

● Mobile Communication **48.1 %**

Customer Amount	Market Share
10.452 million	36.5%





» 2017 CSR Milestones



March

- Won the Finance Asia “2017 Best Company in Asia”-“Best Corporate Governance” first place prize in the telecom industry
- First telecom company in Taiwan acquiring the “Cisco Golden Certificate”

May

- Won the Exemplar Award in Global Views Monthly’s 13th “CSR Annual Grand Survey–Service Industry Division”
- Received the nomination of the “Asia Communication Award”-“Annual Best CEO Award” and “Smart City Award”
- Awarded Top 5% of the Corporate Governance Evaluation from the Taiwan Stock Exchange Corporation

July

- The Banqiao Cloud Data Center won the “2017 the 2nd Extraordinarily Smart Green Building Contest”-Platinum Award of the “Extraordinarily Smart Green System Product” & Silver Award of the “Extraordinarily Smart Green Building Design”
- Won the “Joint Supply Contract” of the cloud service for three consecutive years
- Won the ISLA Award for four consecutive years

April

- Won first place in telecom brand and third place in original brand in the “100 Influential Taiwanese Brands”
- Won the Platinum Awards of Reputation Brand in “Telecom Service” and “4G Internet Service” from Reader’s Digest
- Won the first place in the telecom industry of the “Golden Service Industry Survey” from the CommonWealth Magazine consecutively

August

- Ranked top ten among the CommonWealth Magazine’s “Excellence in Corporate Social Responsibility” for 11 consecutive years





September

- Selected for FTSE4Good “Emerging Index”
- Selected for Dow Jones Sustainability Index for the 6th time
- MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM
- The “Chunghwa Telecom 2016 CSR Report” received the assurance from the SGS in accordance with the “Global Reporting Initiative Standards”



November

- Awarded by British Standards Institution (BSI) for the “Payment Safety Contribution Award”
- Won the Platinum Award for five consecutive years in The Asset Corporate Award
- Awarded in the “2017 Asia Pacific Network Security Summit” for information security service “Pornography Goalkeeper”
- Received six Taiwan Corporate Sustainability Awards, including the 10 Sustainability Model Award of the Telecom Industry, the Golden Award of the Information and Communication Industry Top 50, and the Society Communion, Transparency and Honesty, Supply Chain Management and the Innovative Growth Awards
- Won the first place of the Global Views’ Five-Star Service Award of the telecom industry division



October

- Won the “World Branding Awards” for three consecutive years
- Received the “2017 Exercise Enterprise Certification”
- Won the “2017 CSEA Extraordinary Customer Service Award”- “Best Customer Experience Management Corporation” and “Best Service Innovative Team”



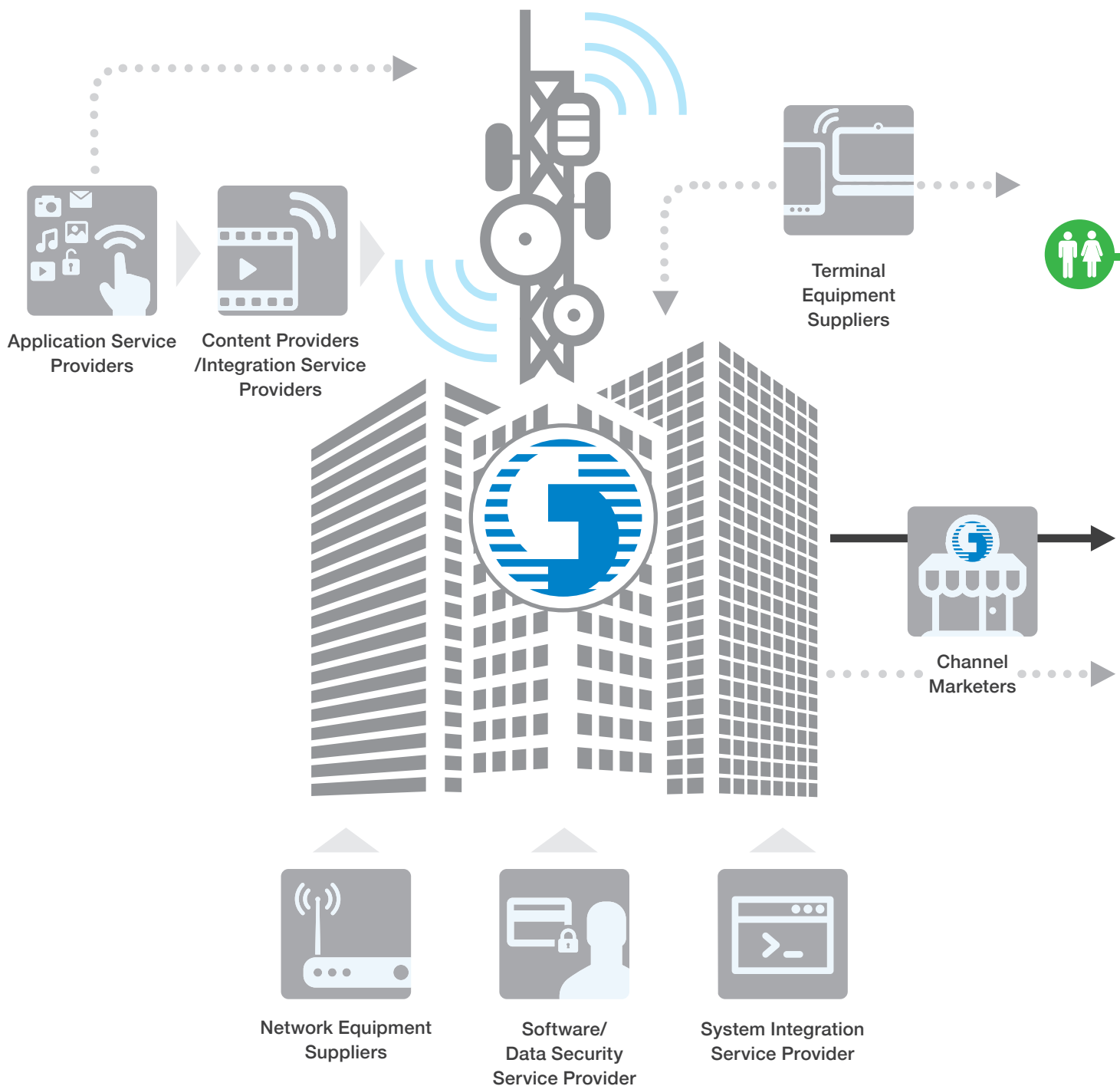
December

- Won the “Best Brand Award” from Business Today
- Awarded “Special Prize” and “First Prize” of “Buying Power- Social Innovative Product and Service Procurement Awarding System” from the Ministry of Economic Affairs

» Industry Value Chain

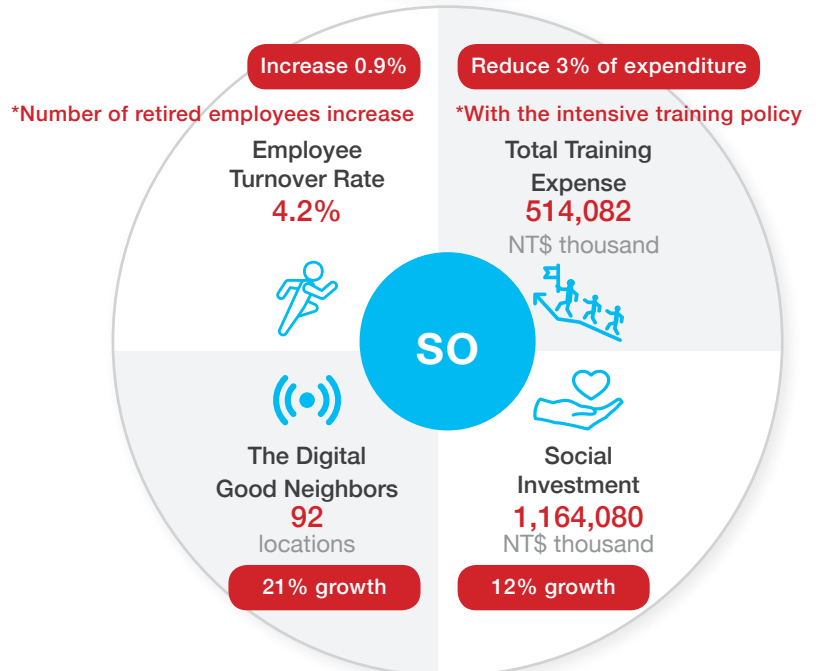
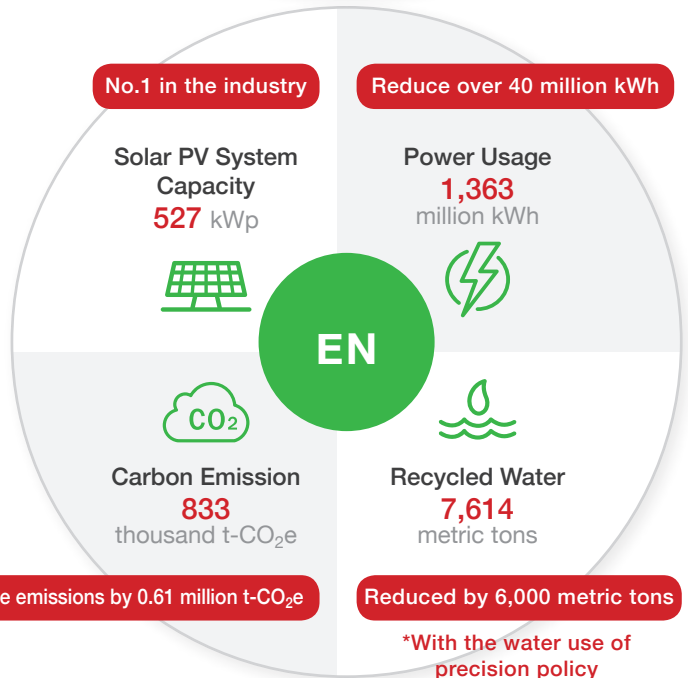
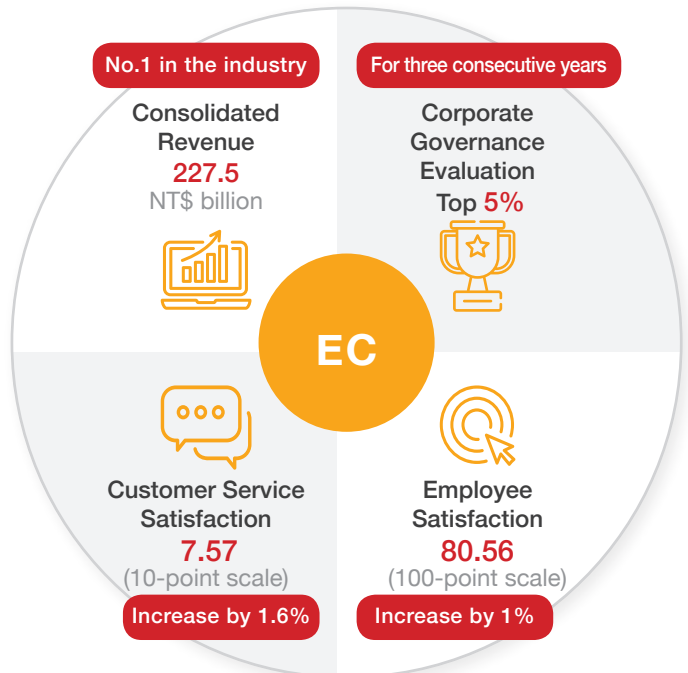
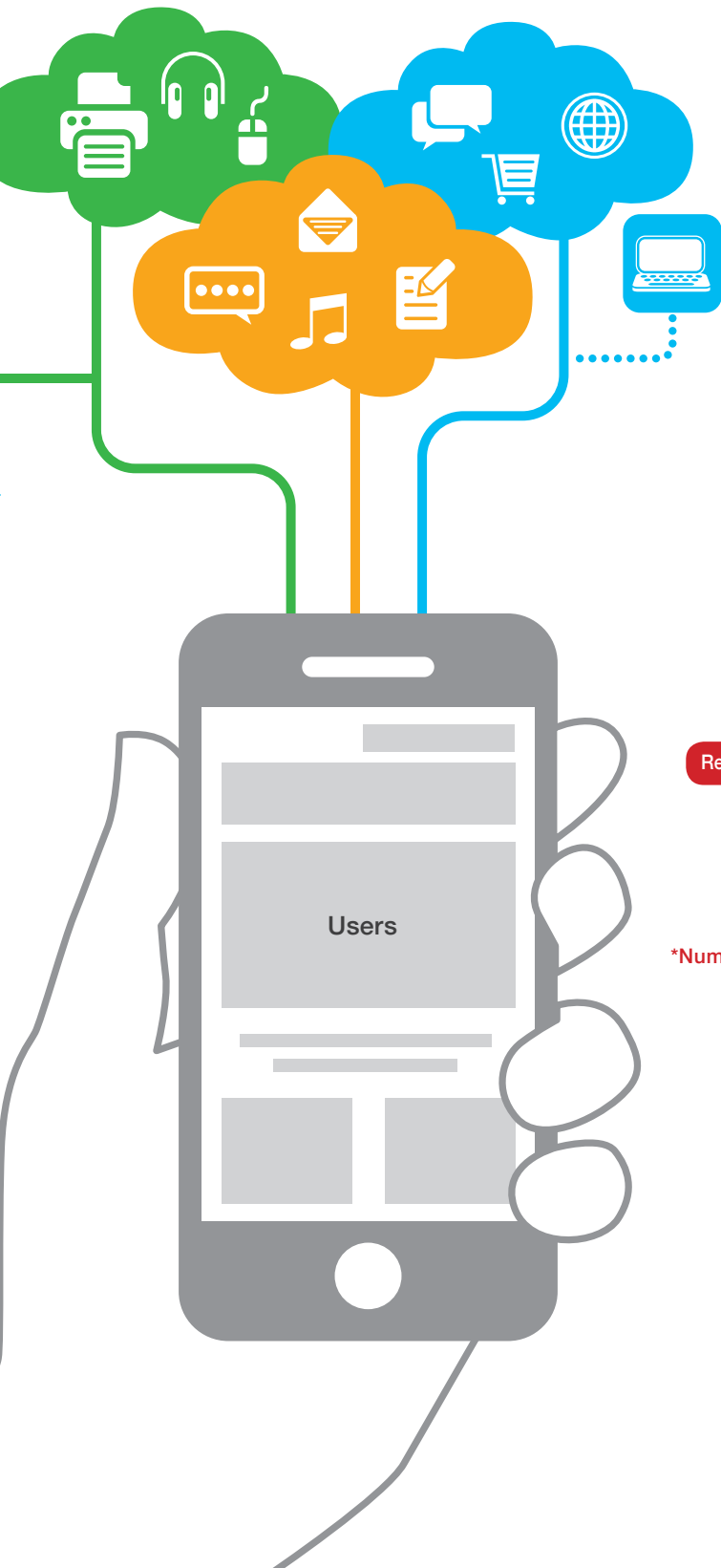
Due to technological advancements, boundaries of specialized markets that we used to know of are starting to shift, thus allowing industry participants to compete outside of their dominant markets. IDC has even combined ICT, e-Commerce, Electronics and Entertainment into a new segment called eICT to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





In the future, Chunghwa Telecom will continue to dedicate to the fixed network, mobile, data and eICT framework and strengthen collaborations with suppliers to offer the best services to our customers. By tightening coordination among the upstream, midstream and downstream, we shall be able to provide users with best quality service.



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 8th Board has 13 directors. To date, there are 2 women and 11 men (including 4 independent male directors and 1 female independent director, and one of the male independent directors resigned on August 5, 2017, therefore there are only 12 directors now). Directors' tenure is three years (June 24, 2016 to June 23, 2019). All of the independent directors are included in the Audit Committee to ensure the independence of governance and the perspectives of the stakeholders.

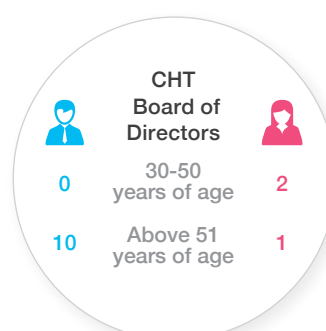
Chunghwa Telecom's independent directors and outside directors provide expertise based on their respective areas of practice and professionalism, to assist the Board of Directors in making decisions as to benefit the company and the shareholders. To prevent personal liability and financial losses due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

Experiences of the Directors: Please refer to the 2017 Annual Report on page 18 to 21.

* Continuing Education for Directors: Please refer to the 2017 Annual Report on page 80 to 81.

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, nationality or ethnicity. Directors are expected to have outstanding quality, industry experience and expertise to complement the board.



Audit Committee

Consists of the independent directors, whose main duties are to select or dismiss the CPA, determine the CPA compensation, review and discuss quarterly, semi-annual, and annual financial reports, review the internal control system and examine and revise the content and appropriateness of the internal control statement.



Strategy Committee

Consists of seven board members, who are responsible for mid- and long-term development plans and other important issues, as well as major investment and mergers and acquisitions, major changes in organization and structure, the acquisition or surrender licenses, formulating and or modifying the annual operational plan and budget, increases or decreases in capital, and other important strategic issues. The resolutions are submitted to the full Board of Directors for final approval.



Compensation Committee

Consisting of three independent directors, responsible for the evaluation of the performance of directors and managers, and for determination of appropriate compensation policies, wages, institutions, standards and structures.



» 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 bodies, 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 Section 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 Section 206 of the Company Act.
- The section 17 of Rules of Procedure of Board of Director defines the things that directors should recuse themselves with.

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 secretariat also evaluates on a regular basis.

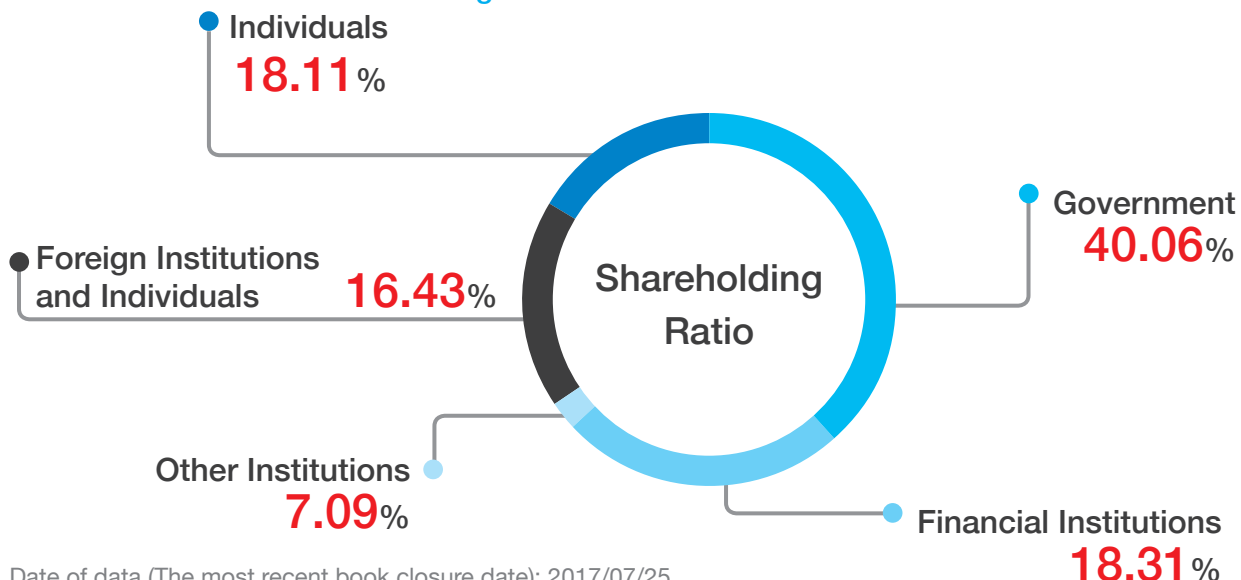
Code of Corporate Governance: <https://goo.gl/2Fm443>



» Encouragement of 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.

Chunghwa Telecom Shareholder Structure



Date of data (The most recent book closure date): 2017/07/25

» 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, following the law, and make a solid contribution 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\$ 227.5 billion in 2017, a decrease of 1.1% from 2016 and this represented a 98.4% accomplishment rate given the financial forecast for the current year.

The increasing popularity of smart mobile devices, information security, and the IoT technology, has resulted in a growth in revenue from value-added services, sales, and data subscriptions that covered the decline in voice services. Net income attributable to the parent company amounted to NT\$ 38.9 billion while EPS reached NT\$ 5.01 with a full-year accomplishment rate of 105.5%.

In 2017, Chunghwa Telecom income tax was the equivalent of an effective tax rate of 16.57%. The deviation from statutory 17% tax rate was mainly attributed to the provisions of Article 4 of Income Tax Act, in that net dividends or net earnings recognized from local invested businesses are exempt from income tax. The application can be made for tax preference pursuant to Article 10 of the Statute for Industrial Innovation.

Tax policy of Chunghwa Telecom: http://www.cht.com.tw/csr/upload/files/Tax_Policy.pdf

Paid-up capital	77,574	 Total number of employees in the company including subsidiaries 33,311 people	Employee salaries and benefits	47,407
Revenues	227,514		Dividends paid to shareholders	38,337
Operating cost	146,837		Income tax paid	5,790
Operating expenses	33,869		Expenses of social investment /donations*	1,164
Retained economic value	2,681			

Unit: NT\$ million

* Operating costs and expenses included





» The 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 a basic ethical guideline 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. A hotline was set to encourage employees to voice opinions safely and confidentially. All employees participated in the test in 2017 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 47 internal complaint cases (disciplinary and leak investigations) were accepted and closed in 2017. Six were associated with violation of the code of conduct (there were no corruption events). 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.

■ The Internal Audit System

Effectiveness of the internal control systems and operating efficiency. The internal audit unit answers to the Board and it 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 presentation and 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:

<https://www.cht.com.tw/en/home/cht/about-cht/corporate-governance/internal-audit-function> ➤

■ 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.

Since the Securities and Futures Institute issued the Information Disclosure and Transparency Ranking in 2004, Chunghwa Telecom has been rated A++ every year. In 2017, the Company was ranked among the top 5% in the Corporate Governance Evaluation by the TWSE. These two achievements are a testament to the efforts we have devoted to information disclosure.

■ 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. Chunghwa Telecom received no penalty from the Fair Trade Commission in 2017.

■ 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.

The Chunghwa Telecom Telecommunications Training Institute organizes human rights related courses on a yearly basis or when there is a change in labor regulations and policies. Three courses totaling 18 hours were held in 2017 and were attended by 240 employees.

More information regarding protecting human rights refer to page 68 to 71 of this report.

Chunghwa Telecom Human Rights Policy: <https://goo.gl/7BHsx2> ➤

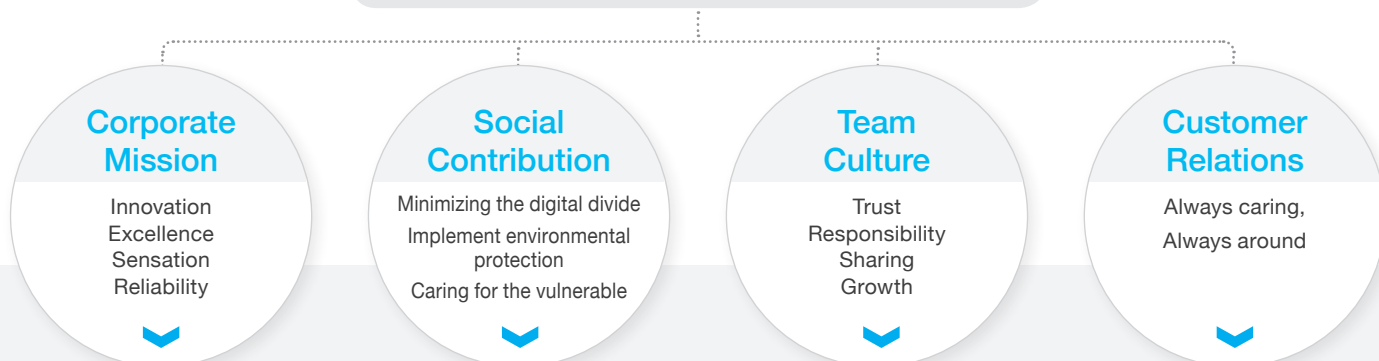
CSR Management

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.”

Chunghwa Telecom Corporate Social Responsibility Best Practice Principles:

https://www.cht.com.tw/home/cht/-/media/Web/PDF/About-CHT/Corporate-Governance/Other-Bylaws-EN/CSR_Best_Practice_Principles_for_CHT.pdf

Chunghwa Telecom's CSR Vision



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.

Internalization and Communication of CSR

To ensure that all employees understand the spirit of CSR, we have established a diversity of 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.

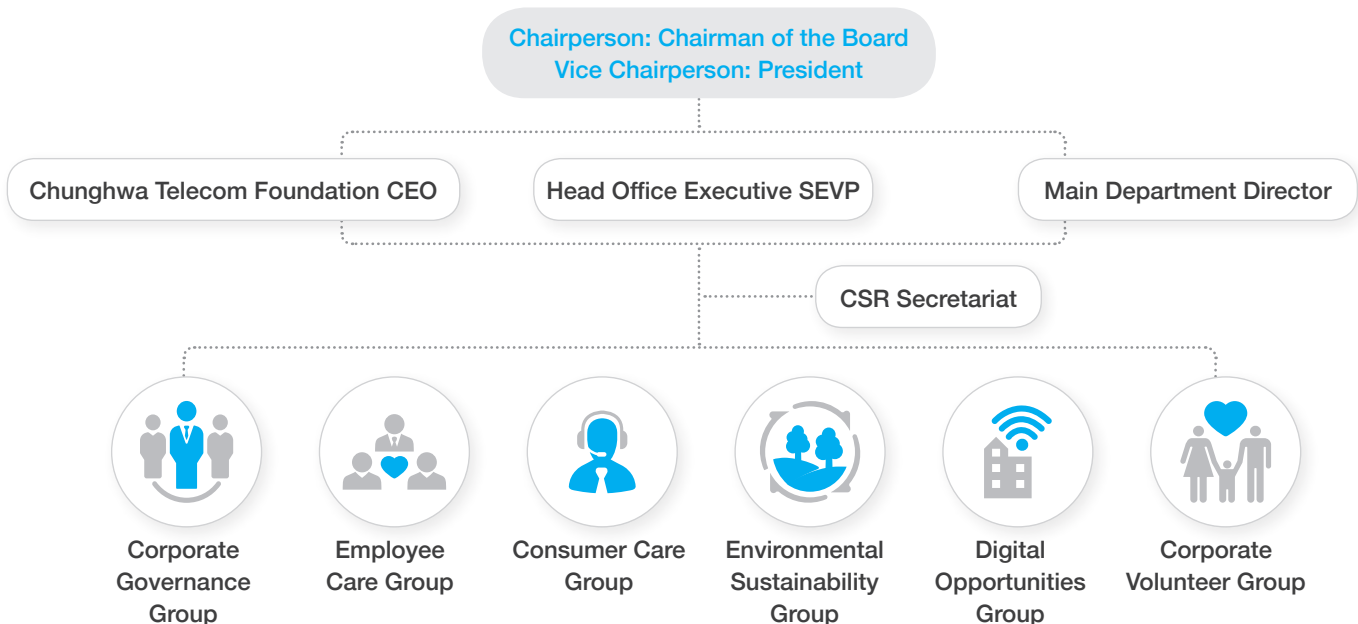
Channel	Item	Content
Communication Within Senior Management	Senior Management Meeting	Material CSR issues are discussed in the senior management meeting annually, and the resolution indicates our improvement and direction.
Employee Forum	Chunghwa Telecom Online Forum	We have an intra-site for employees to share opinions with the company and make suggestions. We will discuss the issues of concern with the employees and resolve them in a timely fashion.
Employee Training	Environmental Training	We provide at least four 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 three days of 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.



» 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.

Representative	Yu Cheng, Chairman Chi-Mau Sheih, President
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"> The Public Affairs Department is designated as CSR Secretariat. 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. The 6 groups, branches and affiliates are responsible for promotions and implementation of related projects.
Meeting Frequency	Quarterly
Report Approval	Reports are submitted to the Chairman for final approval after the managements’ (SEVP) review.



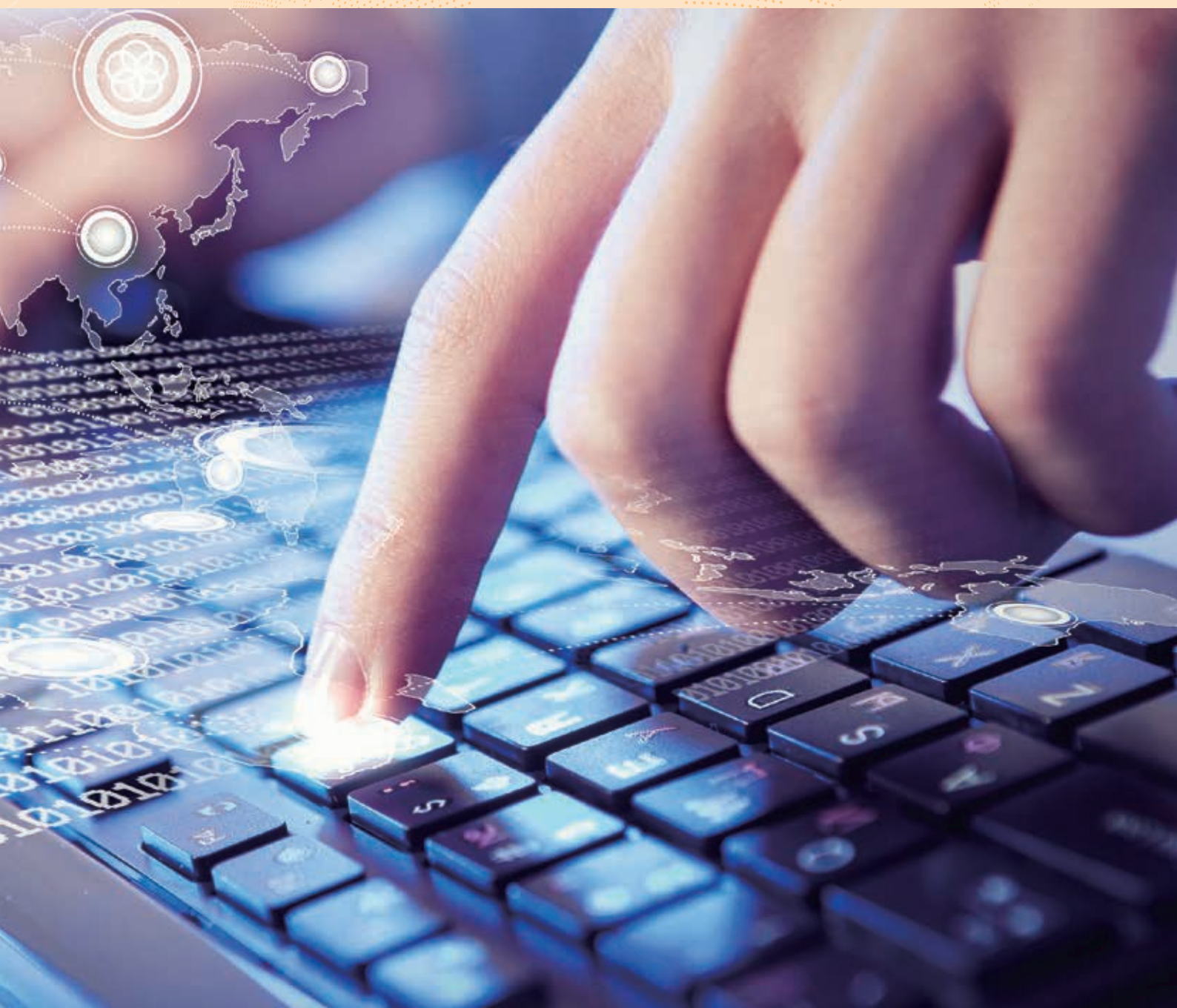
Channel	Item	Content
Annual Evaluation	Administration Management	We set energy reduction targets and link the results with employees’ performance bonuses.
	Sustainable Performance Assessment	
	Online Test on CoC	All our employees are required to take the “Chunghwa Telecom Code of Business Conduct and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



Sustainability Value Strategy

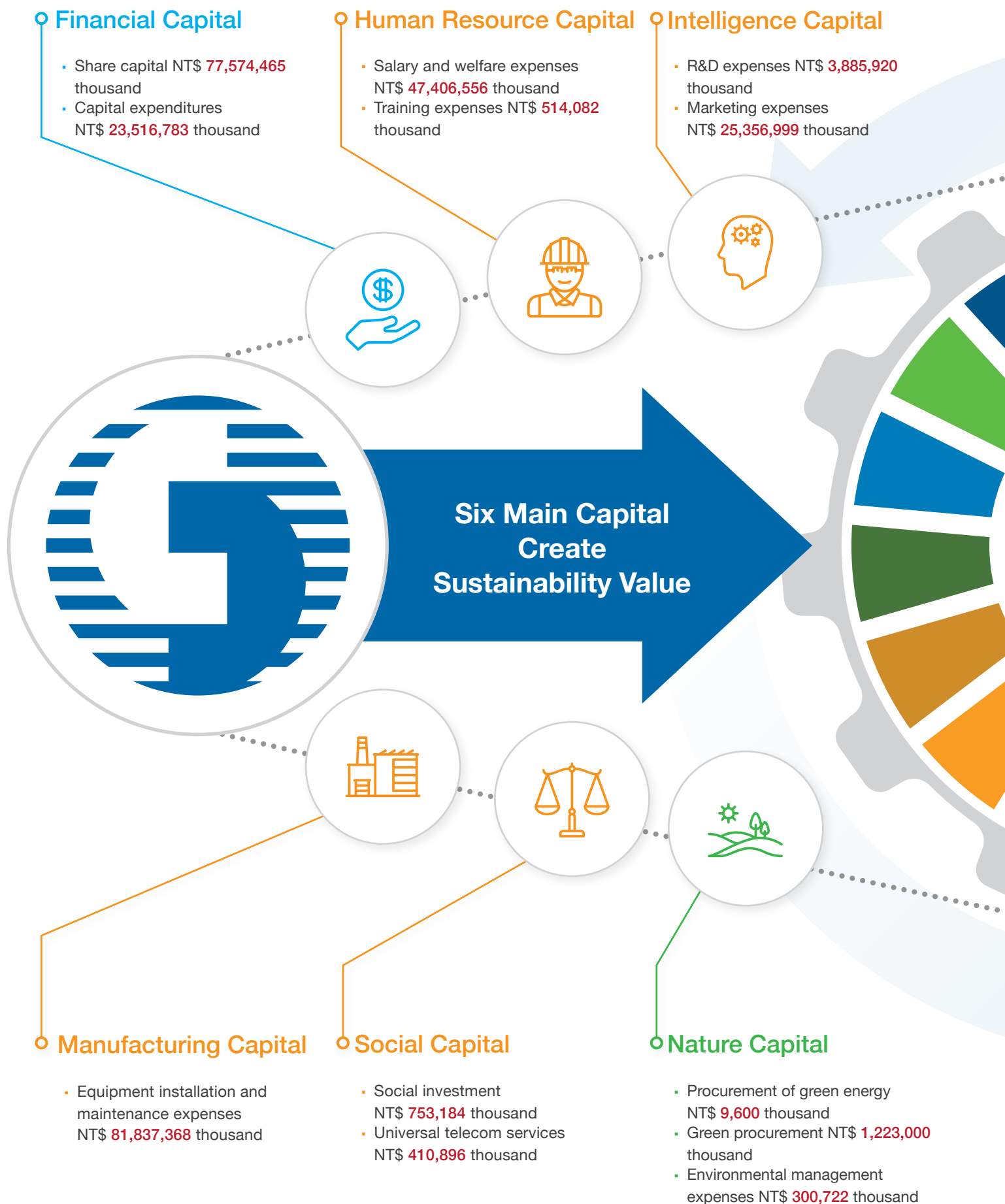


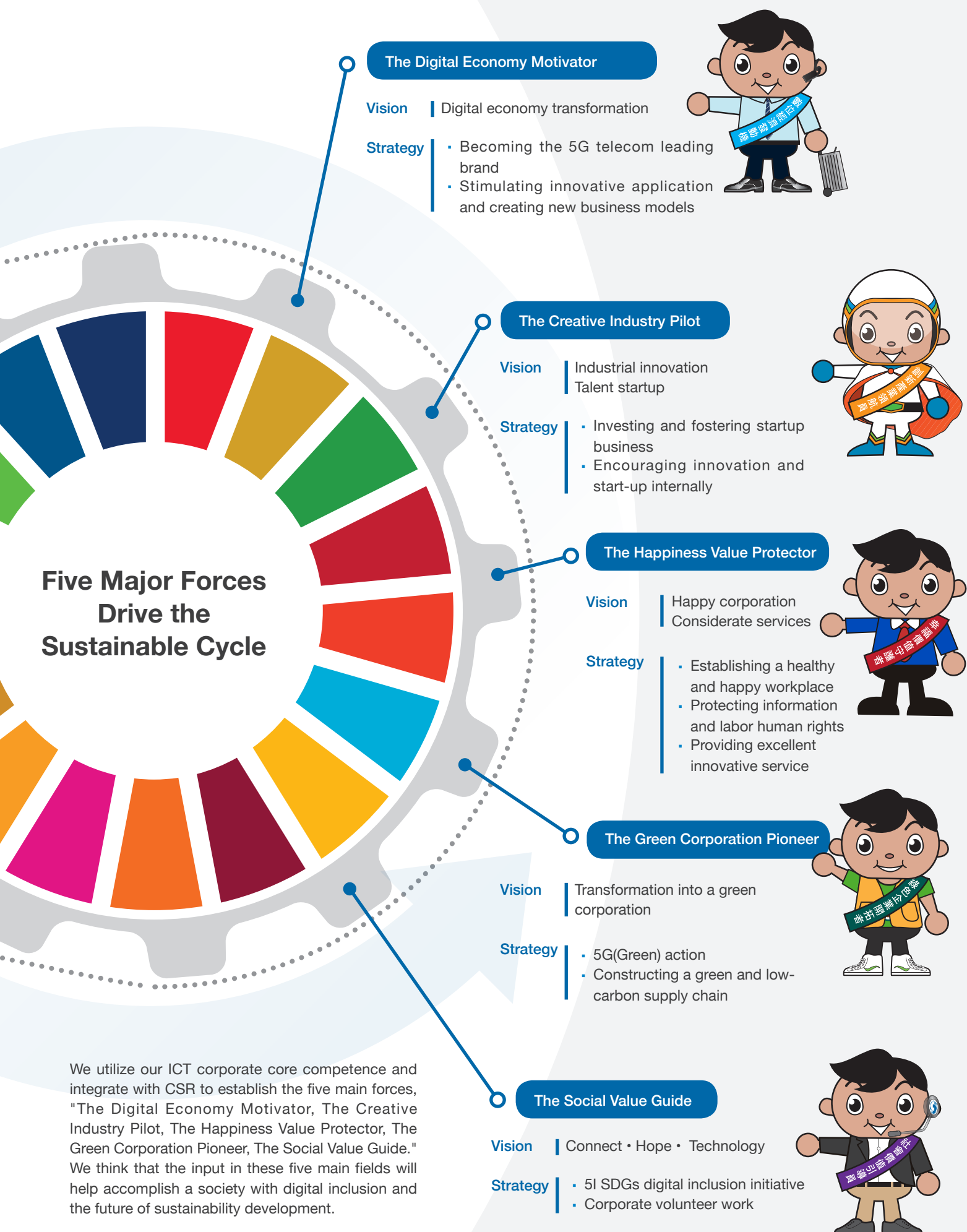
The result of our CSR input has been the creation of profit in corporate operation and a maximization of shareholder value. Our shareholder structure allows us to carry on a broad citizen responsibility. Our position in the ICT industry and the innovative products and service we provide give us the opportunity 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.





CHT Sustainability Value Strategy

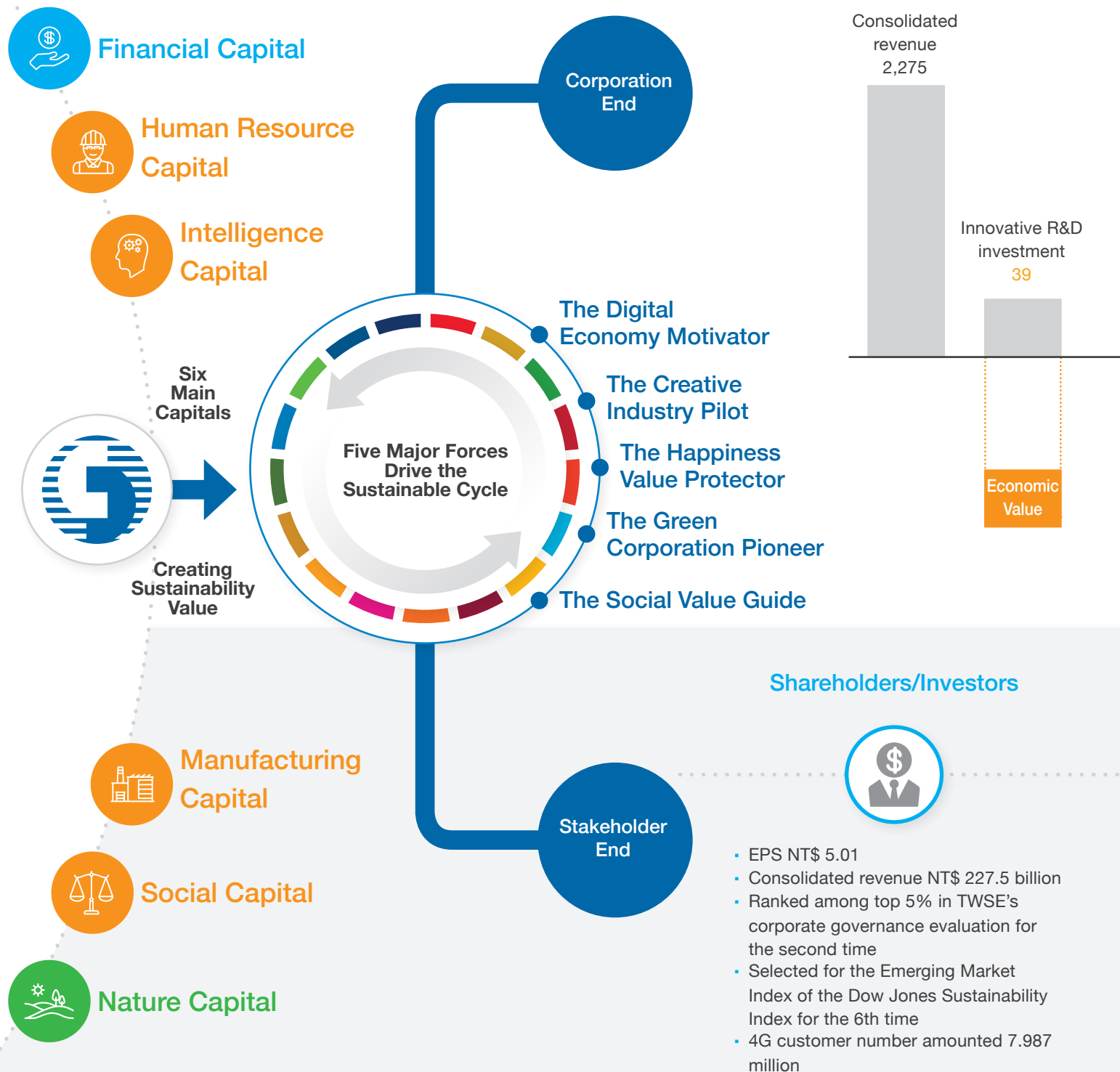




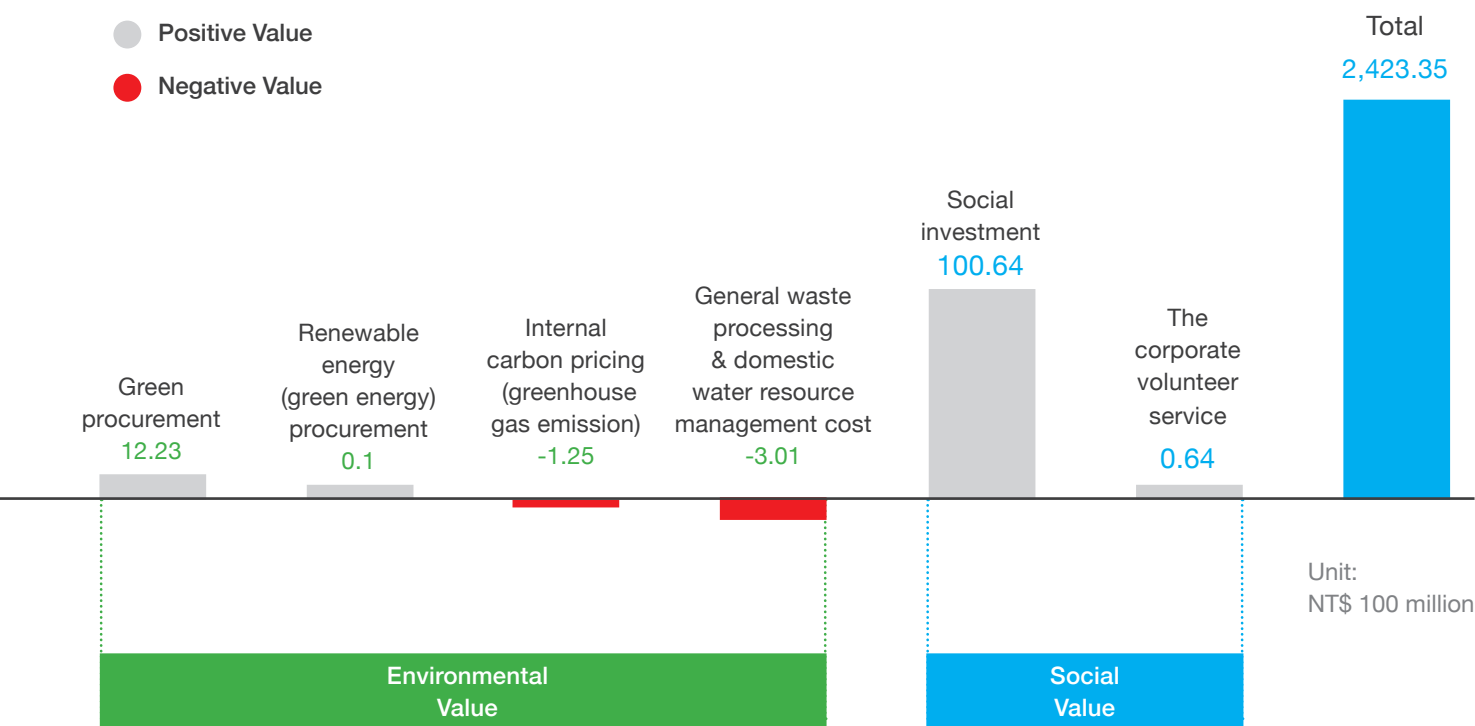


Creating Sustainability Value

Our CSR issues and actions have created sound economic, environmental and social value. 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.



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 2017. The economic, social and environmental currency value CHT created on operation has also been blended in.



Employees



- Employee salary and benefits are NT\$ 47.407 billion
- The average training hours per person are 43 hours
- The total training cost is NT\$ 514.082 million
- The total service hours of the corporate volunteer service are 14,201 hours
- The occupational injury rate per thousand workers is 1.16 for men and 1.57 for women
- We have 668 employees with disabilities (the legal amount is 212 people)
- We have 43 aboriginal employees
- The employee satisfaction score is 80.56 (out of 100)

Clients /Costomers



- We have more than 59 thousand public Wi-Fi hotspots
- The customer satisfaction score is 7.57 (10-point system)
- The customer hotline service satisfaction score is 4.68 (5-point system)

Communities /NPOs

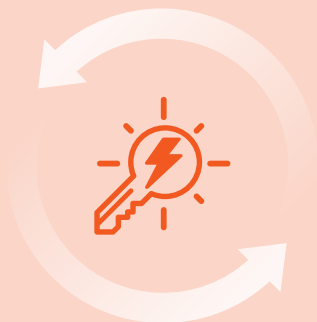


- We provide the disadvantaged groups' communication for 18,112 households
- The subsidy amount is NT\$ 39.054 million
- Coverage rate of the 12Mbps universal broadband service is over 96%
- The voice assistant App for the blind has been downloaded 50,826 times
- The locations of Digital Good Neighbors has accumulated to 92 places

Supply Chain Partners



- The local procurement percentage takes up 56% of the total procurement
- The green procurement amount is NT\$ 1.223 billion



The SDGs CHT
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Material Topics and Impact



2017 Material Topics and Impact	28
Stakeholders Engagement	32



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.

» Process for Determining Material Topics






2017 Material Topics and Impact

CHT is an integrated telecom service provider. Except for the use of electricity at business locations, generator 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.

		Within the organization		Range of impact	Outside the organization	
The Material Topic		CHT	Honghwa Subsidiary	CHT Security Subsidiary	Engineering Suppliers	Equipment Suppliers
Ensuring the shareholders' equity		○	□	□	□	□
Building a happy business		○	□	□		
The integrity and business ethics of the employees		○	□	□		
Health and safety		○	□	□	△	△
Honest business activities		○	□			
Privacy rights protection		○	□			
Information on the products and service marketing		○	□			
Social and economic law compliance		○	□			
Environmental law compliance		○	□			
Emerging Topics	*Innovative ICT products and services	○		△		□
	*Social participation	○	□			
	*Climate change	○			□	□
	*Information security	○	□	□		

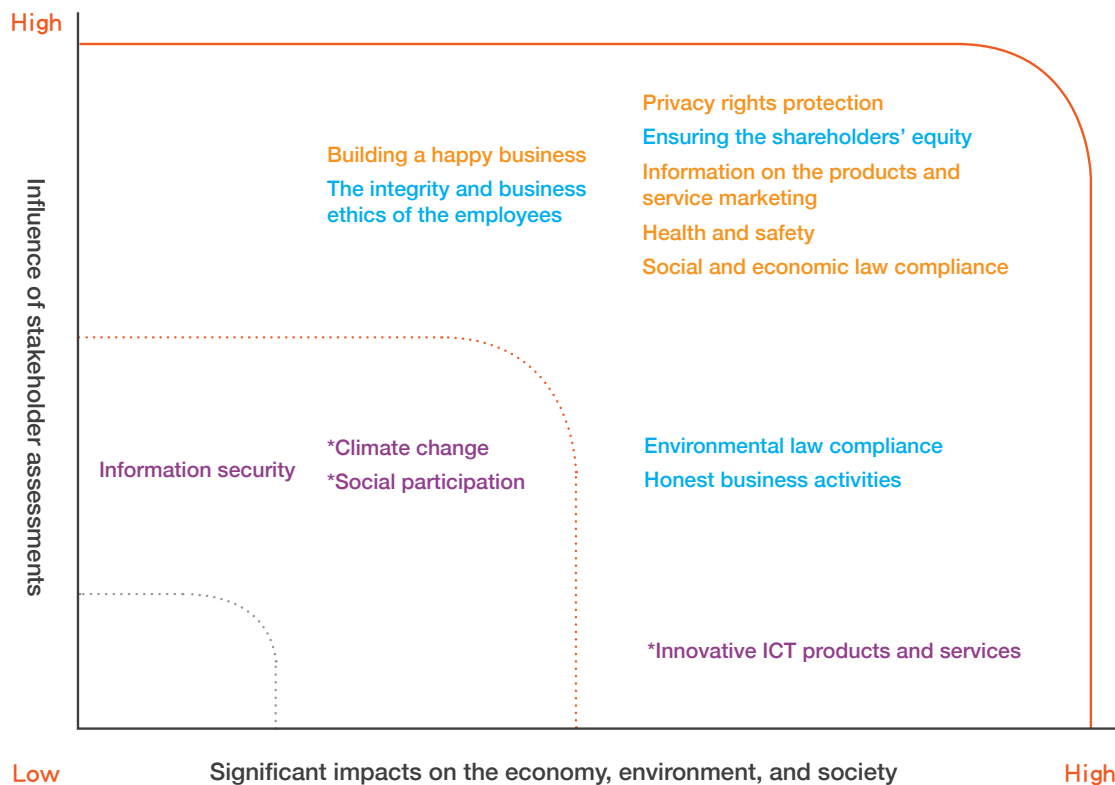
- Note: 1. ○: direct impact; △: indirect impact; □: impact from business relations.
 2. Except for the impact within the CHT organization (including 2 subsidiaries), the influence of the external impact is determined by the "supplier type."
 3. CHT also promotes relative management principles and actions. For detailed topic information, please refer to the corresponding chapter and page.
 4. The mark " *" represents the emerging topics determined in 2017. Attention has been drawn to them by stakeholders and they will influence our mid- and long-term development. We are disclosing this information because they will become part of our future goals, with designated chapters, even though they are not material topics at the present time.

2017 Emerging Material Topics Description	Material Topic	Material Influence toward CHT			Mid-long Term Target
		Cost	Revenue	Risk	
 2017 Emerging Material Topics Description	Innovative ICT products and services		○		<ul style="list-style-type: none"> MOD customer number to exceed 2 million by 2018 IoT related revenue to reach NT\$ 15 billion in 2020 AI related revenue to exceed NT\$ 3 billion in 2020 Penetration rate of mobile payment customers to reach 90% in 2025
	Social participation	○			<ul style="list-style-type: none"> Social investment to reach 1% of revenue in 2020
	Climate change			○	<ul style="list-style-type: none"> Electricity used in IDC generator rooms to reduce by 10% in five years Solar PV System Capacity > 1,000 kWp
	Information security	○			<ul style="list-style-type: none"> The revenue of perjury prevented cloud products reaches 500 million by 2020 The revenue will reach NT\$ 3 billion by 2022



» The Materiality Matrix

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



Note: 1. The materiality threshold: 2.5 and above for both the X-axis and the Y-axis (3 point scale). The mark “*” represents the new topics determined in 2017. Due to the concerns of our stakeholders and the substantial influence of the company's mid and long-term development, we disclose the information and future goals in a designated chapter despite that they are not the material topics identified this year.

2. Chunghwa Telecom also willingly discloses topics that are not identified as material topics in 2017, please refer to the topics with “*” in the GRI Index catalog.

Progress in 2017

Achieving Rate

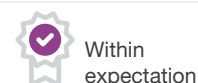
- The penetration rate of using mobile payment was 50%
- The IoT platform user amount was 500 households
- We developed several AI applied products, such as face verification and big data traffic status analysis
- We were honored with the Chairman of the “Mobile Payment Applied Service Alliance”



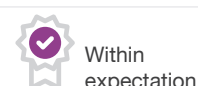
- Social investment was NT\$ 1,164,080 thousand, which was 0.51% of the revenue



- The capacity of renewable energy construction was 527 kWp



- We founded CHT Security Co., Ltd. to provide better and more integrated information security solutions





» 2017 Material Topics Description

Sustainability Aspect	Material Topics	Meaning to CHT
 Economic	Ensuring shareholders' equity	The distribution of share dividends maintains the confidence of shareholders and investors in our operation, and increases the likelihood of our stock being held over the long term.
	The integrity and business ethics of the employees	Employees who carry out their duties with the highest ethical standard not only comply with the regulations but also give themselves the opportunity to reflect upon themselves favorably when performing their business activities.
	Honest business activities	Honest governance and upright management are the foundation of our operations. Our strict procedures and guidelines for operational conduct prevent any breaches of the regulations and unethical behavior.
 Environmental	Environmental law compliance	We have undertaken the responsibility of becoming a green corporation with real sustainable development and we comply with all the relevant environmental laws and regulations. We earnestly request all others in the ICT industry to accelerate their move towards green living and help to bring it to all sectors of society.
 Social	Building a happy business	We have established complete worker benefits which exceed the legal requirements in an effort to increase the welfare of our employees. They feel more secure and happy in their work. This improves the quality of work and also gives employees a feeling of security that also prompts hard work and better results.
	Health and safety	We make every effort to ensure workplace safety and comply with every law and regulation to maintain a fine occupational safety and health management system in a secure workplace.
	Product information and service marketing	We provide the most comprehensive products and services information as well as excellent professional service that makes it possible for our customers to quickly find the most suitable solution for their needs.
	Privacy protection	We continue to strengthen customer data and information security. We use several diverse processes and systematic regulations, to prevent data leaks, intrusions, or improper searches, that might result in the disclosure of confidential information.
	Social and economic law compliance	CHT insists on strictly honest and upright operation as a core value. Employees are urged to adhere exactly to all the laws and regulations through the regular promotion of company policy.
 Emerging Topic	Innovative ICT products and service	Influence of the global industry chain, has made it impossible for the original output value of the telecom industry to correspond to the convergence era. We are therefore actively strengthening our original core business to bring revenue to the Company through innovative ICT products and services.
	Social Participation	We hope to build an environment that has no technological or information barriers, using our original business, which is telecommunication.
	Climate change	Climate change is an issue that has a close relationship to the operation of a corporation. We are actively establishing plans and setting goals to reduce the costs and risks related to climate change in the value chain.
	Information security	As the biggest general telecom service provider in the country, we continue to improve our information security system and management strategies under constant external threat to information security and even changes in the Law.



Topic corresponding with the GRI Standards	Management principle (page number)	UN SDGs
Economic Performance	16	<div>8 DECENT WORK AND ECONOMIC GROWTH</div> <div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div>
Anti-corruption	17	<div>11 SUSTAINABLE CITIES AND COMMUNITIES</div>
Anti-competitive Behavior	17	<div>11 SUSTAINABLE CITIES AND COMMUNITIES</div>
Environmental Compliance	40	<div>7 AFFORDABLE AND CLEAN ENERGY</div> <div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div> <div>13 CLIMATE ACTION</div>
Labor/Management Relations	55	<div>3 GOOD HEALTH AND WELL-BEING</div> <div>8 DECENT WORK AND ECONOMIC GROWTH</div>
Customer Health Safety	72	<div>3 GOOD HEALTH AND WELL-BEING</div> <div>8 DECENT WORK AND ECONOMIC GROWTH</div>
Marketing and Labeling	17	<div>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div>17 PARTNERSHIPS FOR THE GOALS</div>
Customer Privacy	74	<div>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div>17 PARTNERSHIPS FOR THE GOALS</div>
Socioeconomic Compliance	17	<div>3 GOOD HEALTH AND WELL-BEING</div> <div>8 DECENT WORK AND ECONOMIC GROWTH</div>



Stakeholders Engagement

We have always thought that “Chunghwa Telecom is not just Chunghwa Telecom,” it is much 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 use our influence to 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. We have established a stakeholder identification and negotiation process in accordance with AA 1000SES (2015), interacting and communicating with stakeholders through diverse channels.

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 “Supplier CSR Interchange Meeting” is held every year





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.

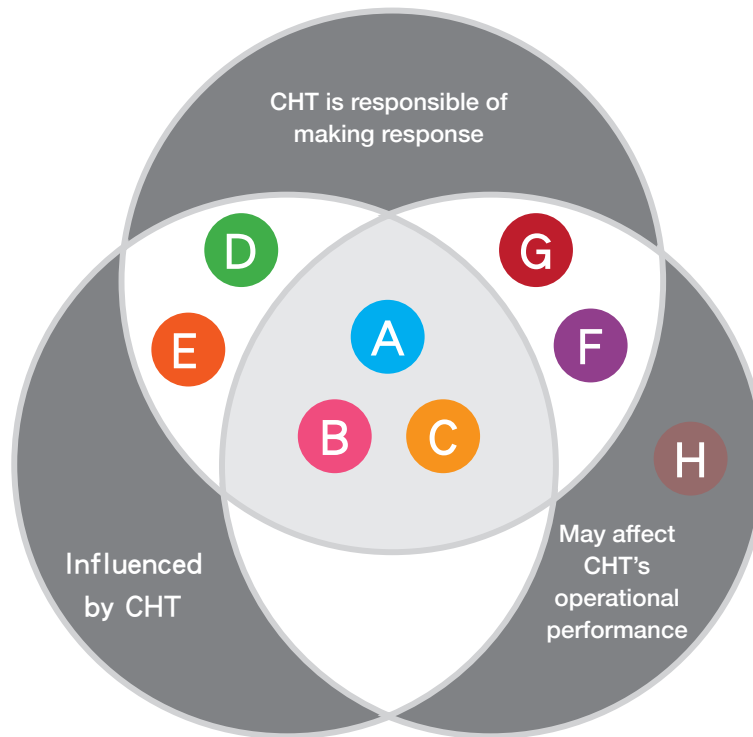
See: <https://www.cht.com.tw/en/home/cht/about-cht/brand-and-service/advert/csr>





- Specialists designated for CSR and the CHT Foundation

Chunghwa Telecom Stakeholder Engagement Guidelines:

https://www.cht.com.tw/home/cht/-/media/Web/PDF/Sustainability/Csr-se/Stakeholder_engagement_guideline_en.pdf

CHT's Stakeholders	 Shareholders /Investors	 Employees	 Customers	 Suppliers
	A	B	C	D
Meaning to Chunghwa Telecom	We need to be accountable to our shareholders and investors.	Employees are critical to CHT development as a driving force for sustainable growth.	When users begin to show preferences for our products we can be sure of the value of our company.	CHT relies on the stable support of suppliers to manage their large range of products and services.
Focused Topic	<ul style="list-style-type: none"> ▪ Economic Performance 	<ul style="list-style-type: none"> ▪ Labor/Management Relations ▪ Anti-corruption 	<ul style="list-style-type: none"> ▪ Customer Privacy ▪ Marketing and Labeling ▪ Customer Health and Safety 	<ul style="list-style-type: none"> ▪ Environmental Compliance ▪ Socioeconomic Compliance
Communication Channel	<ul style="list-style-type: none"> ▪ Stockholder hotline ▪ Results call 	<ul style="list-style-type: none"> ▪ E-mail ▪ Telephone call ▪ Online forum ▪ Labor-employer meeting 	<ul style="list-style-type: none"> ▪ Service hotline ▪ Customer service center 	<ul style="list-style-type: none"> ▪ E-mail ▪ Hotline ▪ CSR supplier social event ▪ Survey
Communication Frequency	Real-time or at least quarterly	Real-time	Real-time	Real-time



	 Communities /NPOs E	 Media /Accreditation Institutes F	 Competent Authorities G	 Competitors H
	We wish to create a better future by giving back to society.	Our sustainable development has grown under the mentorship of the media and accreditation institute.	Our products, services and related marketing behaviors are subject to audits by the competent authority.	We engage in fair completion for healthy development.
	<ul style="list-style-type: none"> Environmental Compliance Marketing and Labeling Socioeconomic Compliance 	<ul style="list-style-type: none"> Anti-corruption Marketing and Labeling 	<ul style="list-style-type: none"> Anti-competitive Behavior Anti-corruption Environmental Compliance Socioeconomic Compliance 	<ul style="list-style-type: none"> Marketing and Labeling
	<ul style="list-style-type: none"> E-mail Hotline Stakeholder briefing 	<ul style="list-style-type: none"> E-mail Hotline Press release Press conference Survey 	<ul style="list-style-type: none"> E-mail Official document Meeting Telephone call Visit 	<ul style="list-style-type: none"> Official document Meeting
	Real-time	Real-time	Real-time	Once or twice a year



» 2017 Results of Critical Stakeholders Engagement



Employees

- 6 labor-management conferences
- 1 unscheduled meeting



Competent Authorities

- Negotiating and communicating with the competent authorities, such as the Legislative Yuan, on **1,214** cases



Shareholders/ Investors

- 1 annual general meeting
- 4 quarterly operational reports
- 4 results call



Media

- **292** press releases in total
- **26** press conferences in total



Customers

- The “123 customer service hotline” has served over **40** million people



Suppliers

- Approximately **80** suppliers participating in the environmental and educational visiting tour
- Approximately **100** suppliers participating in the “CSR 2017 Supplier Social Event”

Result 3- The CSR Supplier Social Event Enables Management of the Supply Chain





Result 1- Overall Employee Salary Increase with an Average of 3.54%

To satisfy the needs of our operations and expanding the business, we publicly recruit new employees and maintain an excellent workforce. To encourage high performance, we convened an unscheduled Board meeting to approve an overall salary increase in 2017. The average raise was 3.54% with a maximum of 5%, and was effective from January 1st, 2018. This was the biggest salary raise during our 12 years of privatization and we expect it to encourage employees in all aspects. We also expect better morale and higher performance, making CHT “The Digital Economy Motivator and The Creative Industry Pilot.”



Result 2- The Digital Good Neighbors Program Provides Information Equality in the Communities

When implementing the “Digital Good Neighbors” program, and to make the best of limited resources, the CHT Foundation assessed the needs of the communities through regular interaction with the local populations.

1. Construction assessment: Applicants are required to complete a “Digital Good neighbor Application Form” to allow an assessment to be made of the status of the community. After a review, meetings are held with the local key person and on-site visits are also made. Internal discussions and further assessment of the feasibility of cooperation are held a full understanding of the community and the matter has been reached.
2. Maintenance: Regular and random meetings are held with the key person to get feedback about the project. This interaction allows us to better determine the needs of the community and allows a better and more even distribution of available resources.

Implementation of the annual Foundation projects starts with a specific community need. During long-term interaction with “the good neighbors,” the community or tribe will also reciprocate to the Foundation. These interactions form a basis for modification of the project over the years in an effort to fully meet the local needs.

The annual procurement of CHT exceeds NT\$ 40 billion. The items procured extend over a wide range, from broadband, mobile and fixed network devices to customer terminal products such as cell phones, tablets and laptops. At the annual CSR supplier social event in 2017, we announced that we had joined the “CDP Supply Chain Project” and officially started the application of carbon management to our supply chain. We started gradually by using counseling to encourage suppliers to reduce carbon emission. In the long term, we will include carbon reduction performance into bidding documents to make it a requirement. This means that suppliers will only be able to place bids with CHT after completing a predetermined level of carbon emission reduction.

[Video record of the event](#)





The SDGs CHT
contributions to
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8 DECENT WORK AND
ECONOMIC GROWTH



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION



Sustainability Risks and Opportunities



Emerging Risks 38

Emerging Opportunities 38

Climate Change Risks 40

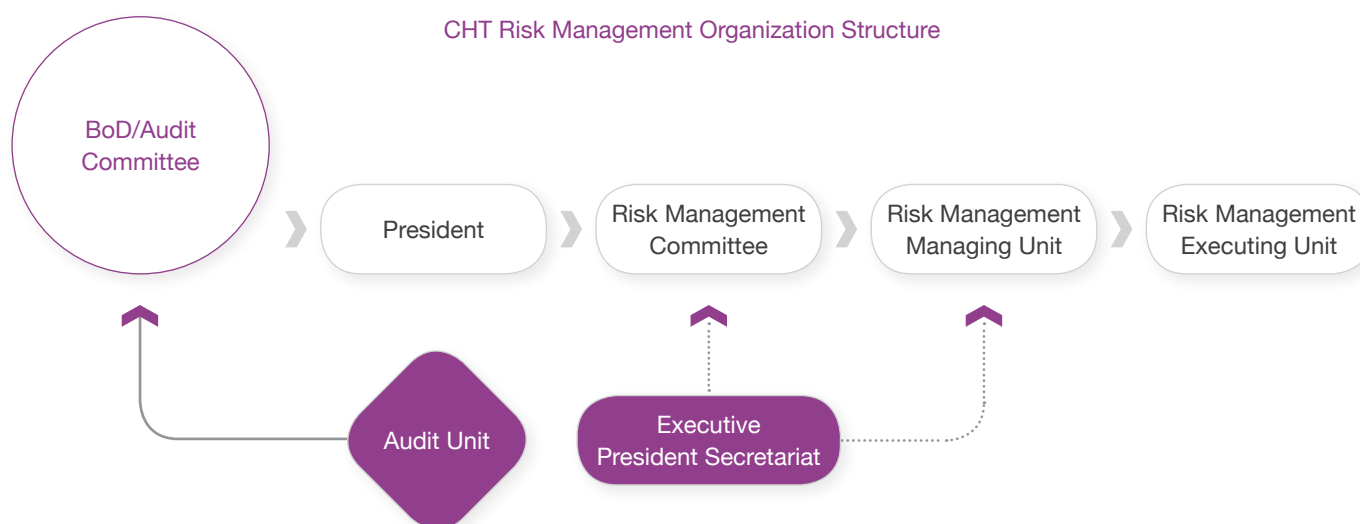
Information Security Risks 44



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 senior 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.

Aspects	Description
Organizational Aspect	<ul style="list-style-type: none"> The “Risk Management Committee” was established
Strategic Aspect	<ul style="list-style-type: none"> The BoD established the risk management strategy and structure The “Risk Management Regulations” were established as a foundation and are followed by all employees engaged in business operations
Management System	<ul style="list-style-type: none"> The Enterprise Risk Management system (ERM) was established for the regular control of risk in each division of the business
Assessment Tool	<ul style="list-style-type: none"> We use a “Risk Analysis Matrix” as a tool for the assessment of legal risk, network maintenance risk, market competition risk and financial operations risk For major operational items and relative CSR issues, we use sensitivity analysis and the pressure test to enhance performance
Audit Aspect	<ul style="list-style-type: none"> The Executive Secretariat promotes risk management activity throughout the Company The Auditor reviews all risks and reports to the BoD
Feedback and Improvement	<ul style="list-style-type: none"> Risk status is followed up on a monthly basis and reports are regularly sent to the Risk Management Committee 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

CHT Risk Management Organization Structure



Forming the Management System with the Organizational Structure to Increase the Overall Risk Management Efficiency




To further enhance risk management, the Risk Management Committee has divided subordinate branches and the operational risks into 16 categories. Some of these include strategy, information security, operational marketing, network maintenance, law, and occupational safety, according to Company organization in 2017. We will enhance risk management performance evaluation in 2018 to make risk management more effective.

You can find information related to risk management on page 115 to 116 in our 2017 Annual Report.



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 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.

Risk Factor		Potential Influence (Obstacles)
	The decrease in the voice revenue	<ul style="list-style-type: none"> Market competition and VoIP, has 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> A stable and sufficient electricity supply The establishment of renewable energy

CHT IoT intelligent internet platform: <http://iot.cht.com.tw/iot/>

Emerging Opportunities

The new 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.

Opportunity Factor		Potential Business Opportunity
	Development of 5G	<ul style="list-style-type: none"> Forecasts show that 5G technology will result in an output of US\$134 billion to the companies in Taiwan in 2035.
	IoT/Big Data	<ul style="list-style-type: none"> International research institutes predict that the derivative application of the IoT will produce installation business opportunities amounting to some NT\$ 30 to 50 billion in 2020. The global IoT output value in 2025 will be US\$ 6 trillion.
	Information Security Management	<ul style="list-style-type: none"> SonicWALL reported that in 2017 the number of blackmail attacks on company IT systems grew to 638 million, 167 times that of 2016. Gartner predicts that company investment in information security will rise to US\$ 114.8 billion by 2020 with a compound annual growth rate of 7.9% around the globe. In 2017, company investment in information security in Taiwan was NT\$ 30 billion. The annual growth of 14.5% is higher than the global average.



Enhancement and Response Mechanism



- 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, 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.

The scale of blackmail software and other kinds of illegal activity that uses Internet technology has increased by 40 times in recent years. The growth rate of information leaks has also increased by a factor of 2.8. Threats to information security have become multifaceted and compound. This has made integrated information security services an immediate need and a serious future risk. CHT has extensive experience in the field of information security, and has cultivated a deep and complete integrated service. During the 2017 Lunar New Year, there were several serious attacks on the IT systems of some securities and futures companies. However, those using our deep multilevel information security service, all successfully avoided attacks.

Enhancement and Response Mechanism



- We are cooperating with the 5G office in DoIT, the Industrial Technology Research Institute, and the Institute for Information Industry, in the launch of the “Taiwan 5G Industry Development Alliance-CHT leading team” project.



- CHT is forming a national IoT team in a coalition with several international and Taiwanese companies to build a competitive IoT industry in Taiwan. There are now 40 first-tier companies in the alliance.
- We have developed our own intelligent IoT internet platform that combines five of our main services, information security, big data, blockchains, AI and AR.



- The “SOC Information Security and Integration Monitoring Center” has also been established and one of its main functions is hacker information control and the processing of information about security events.
- CHT “EyeQuila” is the first information security service in the world that uses a retrospective detection concept. The application can collect, store and analyze information security data.
- The “FIDO Biometrics” application was developed to recognize fingerprints on cell phones or other devices. CHT was the first ISP company to implement such a service.
- We also founded CHT Security to provide an information security service that integrates both hardware and software security. Our own internal research and development technology has been used to expand the market scale and launch new products. We plan to build an international information security company using a combination of brand, research, development and service.



Climate Change Risks

Global climate change has recently become rather severe. As a part of the global supply chain, CHT also faces the potential risks and pressure of energy conservation and carbon reduction. To ensure that we are able to respond to climate change issues in a timely fashion we comply strictly with all the environmental laws and regulations and maintain our leading position in the industry. We make sure that stakeholders have no reason to question our behavior or reputation, and confirm and identify the potential risks, and even opportunities, presented by climate change.

Corresponding Strategy

The core competence, technology and the business acumen of CHT will be the key to energy conservation and carbon reduction in the future, and also make it easier to cope with the coming mobile and cloud era. We will use internal and external strategy to realize our vision of environmental sustainability.

External

In our efforts to establish a green operation we have adopted the “green products and services” philosophy. We use professional energy saving technology and services that help industrial companies easily manage energy conservation.

Internal

We have established an organized “Corporate Strategy and Environmental Sustainability” system with set goals and manage all environmental information with our own Environmental Sustainable Development and Management System (EARTH).





» The Potential Operational Risks Caused by Climate Change

1. The impact of the greenhouse effect, rising global temperatures and the aggravation of extreme climate, have caused some areas of Taiwan to experience more severe typhoons and flooding while other parts face serious water shortage. Such crises affect both industrial and domestic water use and effort has to be made to reduce the severity and avoid disastrous outcomes. Resources need to be made available for action in cases of natural disaster, and the equipment used must be properly maintained and be available for further use after disasters and operational energy must also be easy to acquire.
2. We will establish greenhouse gas emission control and also allow carbon rights transactions in accordance with the "Greenhouse Emission Reduction and Management Act" of Taiwan. The CHT Internet and the operation of the generator room depend on a huge amount of energy and the relative input has a direct effect on company finances.

Opportunities and Actions

We have adopted the following strategies to cope with potential regulations and international environmental and climate initiatives in a timely manner:



Engagement with the stakeholders

We focus closely on domestic and international law changes and communicate actively with the competent authorities and stakeholders.



Planning environmental sustainability scheme

We have amended our "Five-year Plan of Strategy and Goal for Environmental Sustainability Development," which set in 2015, to target "green corporation," "green sustainability" and "green innovation" and have actively expanded our environmental actions. Furthermore, we have established a generator room disaster prevention and climate adaption plan to enhance our disaster response measures.



Import and develop renewable energy

1. In 2016 we established an "Energy Office" targeting three main areas, solar energy, wind energy, and LED. We cooperate with subcontractors in the generation of solar energy and install solar panels on the roofs of rented spaces. After connection to the power grid, we can provide the leasing contractor with power, and sell any excess back to Taipower. We have been assessing the possibility of participation in government bidding or investment in Taipower wind energy projects where we could put our telecom expertise and experience of energy conservation and carbon reduction to good use.
2. We have installed photovoltaic panels on base stations in some of the remote mountain areas to provide green power and reduce energy consumption and carbon emission. In the event of mains power loss due to natural disaster, or breakdown at Taipower, the solar facilities can provide emergency power for the base stations.
3. We have responded to the government's renewable energy development efforts by the purchase of 2 million kW of green electricity in 2015, 4 million in 2016, and 6 million in 2017, and took first place among all the companies in Taiwan.



Greenhouse gas emission management

We carry out a greenhouse gas inventory and verification every year and publish all the relative information. We use our self-developed EARTH system, to control environmental resources and the effectiveness of energy conservation to increase efficiency in environmental management.

We also joined the CDP Supply Chain Project in 2017. We gained an understanding of carbon emission data produced by the supply chain, how the inventory was calculated and what concrete action was necessary. This will be used as a basis for setting the carbon reduction goals for the supply chain in the future.



Developing green products and services

In addition to reducing the influence of our operations and product services on the environment, CHT also considers crises to be opportunities, at least with respect to products and service. We are reducing our carbon footprint through green innovative services including, video conferencing, the use of electronic billing, cloud products and several other technology innovations. We also make good use of our technological advantage in the field to improve current products and also use it to build intelligence into the city. The intelligent taxi sending system is an example which helps avoid empty journeys and reduces gas consumption. We will continue to develop more efficient ways to use energy and investigate low carbon emission solutions in collaboration with our customers.

» Greenhouse Gas Emission Management

The total greenhouse gas emission in 2017 was 832,987.46 t-CO₂e. This includes six GHGs of CO₂, CH₄, N₂O, HFCs, PFCs and SF₆. As an integrated telecom carrier, most of the energy consumed by Chunghwa Telecom is purchased electricity, classed as Scope 2 gas emission and accounted for 96.29% of total gas emission. The source of Scope 1 gas emission is normally greenhouse gas from offices and accounted for 3.71% of total gas emission.

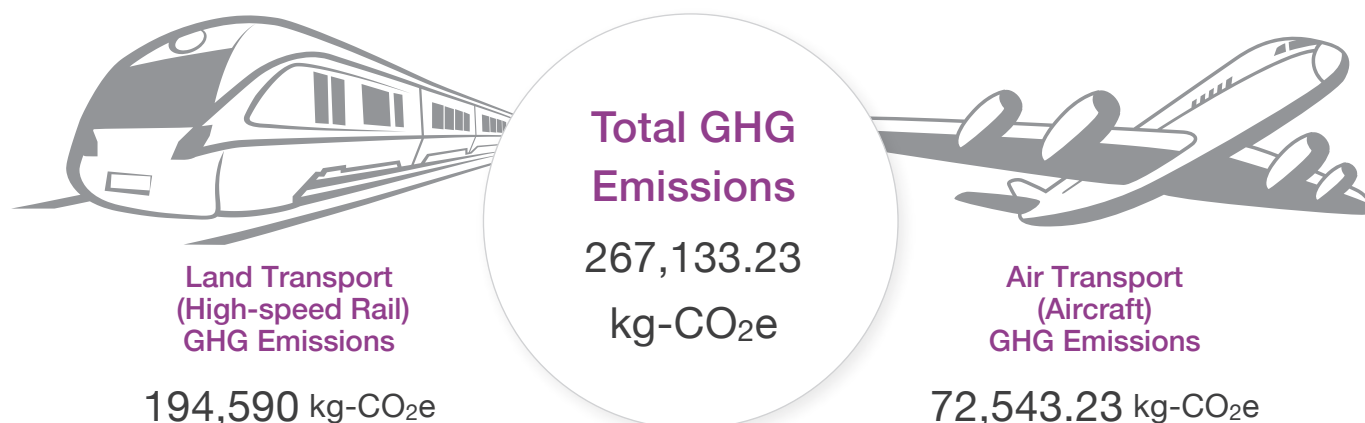
Unit: t-CO ₂ e	2015	2016	2017
Direct Emissions (Scope 1)	26,994.3	27,345.62	30,873.98
Indirect Emissions (Scope 2)	807,750.98	811,826.45	802,113.48
Total Emissions Amount (Scope 1+Scope 2)	834,745.37	839,172.07	832,987.46
GHG Intensity(t-CO ₂ e/NT million)	3.6	3.7	3.7
Coverage of Revenue	100%	100%	100%

Note: GHG inventories and certification are made in accordance with the ISO 14064-1 standard, and the value of Global warming potential is referred to IPCC in the Fourth Assessment Report (2007). All data are certified by SGS-Taiwan.



» Green Transportation

In 2013 Chunghwa Telecom started discussions about the carbon footprint associated with business travel by employees. Boundaries were set at “Scope 3,” as specified by the World Business Council for Sustainable Development (WBCSD), while emission was calculated based on mileage. Company Scope 3 emissions were 267.13 kg-CO₂e in 2017. Employee business travel emission was calculated based on two main forms of transportation: high-speed rail and air travel.










» Internal Carbon Pricing

CHT places great emphasis on carbon management risk. In 2017 we combined the GHG emissions and relative operation and activities and carbon pricing management was used to do a pressure test in respect to risk management. This was important for compliance with the restrictions of future laws, such as the “Greenhouse Emission Reduction and Management Act,” and for responding to requests from stakeholders. Promotion of energy conservation and emission reduction, and the establishment of a renewable energy system are very important aspects of carbon management risk.

Internal carbon pricing as a negative environmental reduction value was used as a pressure test for scenario 2 “fines for exceeding the total emission amount in the Greenhouse Emission Reduction and Management Act.” Although no total GHG emissions amount has yet been specified for the ICT industry in the Greenhouse Emission Reduction and Management Act, we voluntarily set the mid-long term carbon reduction goal as a basis for carbon price calculation. Evaluation of our internal energy conservation and carbon reduction project is carried out on the same basis.

CHT Internal Carbon Pricing Analysis

				
The Scenario for Carbon Management Risk	Carbon Pricing of Use (Shadow Price)	GHG Emission Scope	Interfered Business Location Amount	Actual Carbon Pricing (NT\$ 100 million)
100% renewable energy use	NT\$ 3.56 /kW	Scope 2	Headquarters and the business locations	48.51
Fine for exceeding the total emission amount in the Greenhouse Emission Reduction and Management Act	NT\$ 1500 /t-CO ₂ e	Scope 1 Scope 2	Headquarters and the business locations	1.25

Note: 1. Sources from National Renewable Energy Certification Center

- The green electricity add-on charge was NT\$ 3.12/kW in 2017, and the price dropped to NT\$ 1.06/kW during the promotion. But the actual green electricity fee of using 1kW was NT\$ 2.5+NT\$ 1.06=NT\$ 3.56.
- Shadow price: It is the hypothetical cost of processing the GHG emissions. The risks and opportunities behind the GHG emission are concretely quantified to be the reference for the project promoting or capital expense decision.
- Scenario 1: 100% renewable energy use (such as green electricity).
- Scenario 2: After the inclusion of a system of fines for exceeding a total GHG emission limit has been included in the Greenhouse Emission Reduction and Management Act an enterprise will be fined a maximum of NT\$ 1500 per metric ton for exceeding such specified limit.
- The actual price in scenario 2 has been estimated in accordance with our voluntary emissions reduction goal for mid-long term carbon management. 2017 was taken a base for a 10% reduction in greenhouse gas emission from our buildings in 2023. The amount of GHG emission in 2017 was 832,987.46 t-CO₂e. If the 10% voluntary goal is not reached, we estimate that emission of 83,298.75 t-CO₂e will be subject to a fine.





Cybersecurity Risks

As the largest integrated telecom service provider in the country, CHT will put its customers' rights and the reputation of the overall communication industry in jeopardy if there is any information security accident or personal information leak. The Company will also face sanctions and financial losses.

With the external threats and the continuous technology updates of the hackers, our system and service might be influenced by the information security risk, including advanced persistent threat, phishing, the robbing of the clients' information by the hackers, and distributed denial-of-service (DDoS), etc. Digital services such as electronic billing and multi-line payments are also at risk of cyber-attacks.

Corresponding Strategies

We comply with international standards such as ISO 27001 and BS 10012, and all relative laws and regulations. This helps us maintain a management system that includes excellent information security and personal information protection. We keep close contact with the external environment and watch for changes in government policies and laws, for new threats to information security, international standards, and developments in technology. We carry out the internal risk assessment that includes internal and external audit results, CHT SOC information security monitoring, as well as event processing. We also continue to improve internal abnormality detection and security methods to increase information and intelligence control. We enhance endpoint security and machine learning and technology and implement the necessary security control measures. Regular reviews are made of progress to decrease the risks to corporate security.

"Cybersecurity Department," created in 2016, directly implements, regulates, promotes, and audits information security. The head of Cyber Security reports to the SEVP, President and the BoD. The mechanism includes:

Monthly evaluation

A progress report and any information about new risks are sent to the Risk Management Committee for action. Reviews and modifications to strategy are decided at the regular information security meetings.

Designated
Unit

Cybersecurity Department

Establishment of the yearly strategic action

Results are evaluated based on occurrence, frequency, the degree of risk and the level of impact on operations. Plans for important projects and activities as well as performance indicators are included in personnel performance evaluation after approval by the President.





CHT carried out an extensive risk assessment in legal compliance with both the “Cyber Security Management Act” of the Executive Yuan and the EU “General Data Protection Regulation” (GDPR). We report every threat and the corresponding measures taken and will continue to remain vigilant and follow-up and assess all the risks to our system security.

Opportunities and Actions

A focus on new markets for CHT Security

Chunghwa Telecom is the leading company in the telecom industry in Asia. We have cultivated a professional service for information security and use our technological expertise to provide clients with a complete professional service. We keep an eye on business opportunities brought about by the recent flood of global information security issues. In 2017 we established CHT Security, a new subsidiary that we hope will soon become international. A combination of brand, research, development and service will allow us to expand operations into new markets and take advantage of business opportunities overseas with the help of CHT client relations management. We also expect CHT Security to become the leading domestic information security brand. We intend to expand into international information security operation and will also promote the development of an extensive chain of domestic cybersecurity resources in the country.



Establishment of a Complete Information Security Mechanism

To implement a national cybersecurity strategy “cybersecurity is homeland security,” we not only support and encourage information security professionals, but also strive to achieve risk management security goals in advance to ensure a timely warning and monitoring of an event and a quick post-response.



Planning and Organizing the Education and Training Needed for an Information Security Project for the Government or Corporate Clients

Information security forums, training courses and seminars are arranged for all sizes of enterprise from large to small. Ten such training courses were held in 2017.



Building an Information Security Service, or a Product Planning and Equipment Application Technology Team

To build self-confidence in team personnel and give personnel a better understanding (from a service point of view) of an information security service and selling, planning and equipment application, we arranged comprehensive training courses for AM/PM/PE.



The CHT Re-investment Subsidiary “CHT Security”

“CHT Security” was established not only to lead the local development of information security, but also to defend digital security on a national scale. This helps the government to achieve a vision of “building a safe and trustworthy digital country.”



The Creation of Sustainable Value



The Digital
Economy
Motivator
48



The Creative
Industry
Pilot
50



The Happiness
Value
Protector
54



The Green
Corporation
Pioneer
82



The Social
Value
Guide
94





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.

Capital	Impact on Value Creation	Resource Allocated to Sustain Value Creation
 Financial	<ul style="list-style-type: none"> ▪ To ensure eligibility for licensing (eg, the 4G 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 	<ul style="list-style-type: none"> ▪ Contribution to the government in the form of tax revenue ▪ Supports the development of network infrastructure ▪ Improves the quality of telecom services
 Human	<ul style="list-style-type: none"> ▪ Telecom knowledge and skills acquired by employees ▪ Human capital represents one of our major operational costs 	<ul style="list-style-type: none"> ▪ Introduction of compensation and incentive schemes to attract and retain talent ▪ Encourage high value-added services and innovations ▪ Talent training and development programs
 Intellectual	<ul style="list-style-type: none"> ▪ Licensing, laboratory and R&D expenses, and the acquisition and development of industry technologies ▪ Investment to maintain the brand 	<ul style="list-style-type: none"> ▪ Ongoing investment in R&D, and construction and services. Maintaining service quality and customer satisfaction ▪ Investment in the R&D of new technologies and the setting of new protocols
 Production	<ul style="list-style-type: none"> ▪ Allocate financial capital to develop and maintain infrastructure facilities ▪ Operation of Internet Data Center (IDC); installation of wireless facilities and development of software and applications 	<ul style="list-style-type: none"> ▪ 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, the recycling and disposal of obsolete equipment
 Social	<ul style="list-style-type: none"> ▪ Regular contact with the relevant authorities to ensure, 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. 	<ul style="list-style-type: none"> ▪ Engage with stakeholders to better understand their concerns and the legitimacy of Company operations ▪ Engage in social activities to exert influence through core activities to minimize the digital divide
 Natural	<ul style="list-style-type: none"> ▪ Natural capital such as 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 	<ul style="list-style-type: none"> ▪ Purchase products that are environmentally friendly to reduce consumption of those that strain 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 such as proprietary and commissioned Photovoltaic systems

» SMART-I

S STRATEGY

We have enhanced the current core business, and actively developed and research new products. It will bring new revenue through better and more innovative ICT products and services

M MANAGEMENT

We have established the “Digital Convergence Business” and an AI team, which is a core business unit that imports ISO research and development quality systems and capable and mature integration models, and also manages system research and development

A ACTION

- We have developed an IoT application platform using our own innovative technology
- Five previously separate pursuits have now been combined. These are IoT, AI, big data, AR/VR and self-driving cars.
- We actively support the innovative startups

R RESPONSE

More details of innovation business cases on page 51

T TARGET

Short-term:

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

Mid-long term:

- The client amount of MOD total exceeds 2 million
- Relative revenue of IoT reaches NT\$ 15 billion
- Relative revenue of AI exceeds NT\$ 3 billion

I INDICATOR

- GRI** CHT has accumulated **1,839** patents
- CHT** CHT's investment in R&D is NT\$ **39** billion
- CHT** CHT has more than **1,400** R&D employees



The Digital Economy Motivator

The SDGs CHT contributes to in this section





Leading the 5G Smart City

Forecasts show that in 2035 the revenue from 5G technology to companies in Taiwan will be NT\$ 134 billion.. To gain an understanding of the potential business opportunities we have been monitoring five main aspects. We intend to help Taiwan keep up with the global trend through cross-field cooperation and assist in laying a firm foundation for Taiwan to participate in a promising global 5G economic environment.

CHT's 5G System

Item	Content	Result
Industry Circle	IoT Circle	800 corporations and individuals joined by 2017
Industry National Team	We have joined up with 40 other companies, including MediaTek Inc., Quanta Computer Inc., ASUS, HTC and SERCOMM to form the "Taiwan 5G Industry Development Alliance."	CHT has become a leader in several innovative applications including AI, IoT and self-driving cars

Innovative ICT Products and Services

We predict that 5G technology will urge the development of the IoT in the near future. Services of emerging new type such as AI, big data, drones, AR, VR, smart family and smart long-term care will bring about global economic growth. CHT is already actively investigating innovative products and applied ICT service development. We expect a substantial increase in the Company's business power from expansion in the innovative field.

The CHT Innovative ICT Products and Services Targets in 3 to 5 Years



CHT leads in the development of an IoT application platform using innovative technology. Five main services have been combined, including Information Security, Big Data, the Cloud, AI and AR. There are now more than 500 medium to small companies using our platform. We have recruited a new talent force of 350 for the development of AI. There are 200 data scientists and 150 professionals engaged in AI research and six main AI application services have been developed:

1. AI face recognition
2. Face recognition
3. A face and voice combination recognition access control system with image monitoring
4. A big data traffic condition forecast and warning system
5. AI technology internet threat prediction
6. An AI human machine gesture interface that uses intelligent glasses

CHT owns MOD, the biggest audio-visual platform in Taiwan which possesses a volume of 1.7 million users. In the field of client-oriented digital video convergence, we launched the MOD+OTT multiple screen service that integrates fixed network, data and mobile platform viewing.

Another core business unit, the "Digital Convergence Business," has also been established. This unit is responsible for the operation of the MOD/OTT video platform and digital convergence business such as the Smart Family. We have also combined the technology of IoT, Big Data, AR, VR, MR and AI to import business with the prospect of expansion. This will make CHT the first choice as a partner in Taiwan for the development of the "Smart City."



The core business market of the telecom industry (fixed network, mobile service and voice service) has gradually reached saturation. This will have an impact on revenue in the mid-long term. There might be a reduction in revenue from voice services, overly high costs for basic telecom construction, or influence of the OTT suppliers. We predict that the overall output value of the telecom industry will continue to decline until 2020.

Our innovative strategies to cope with this situation include enhancing the current core business, active research into new product development, and more revenue from new and innovative ICT products and services.

» Innovative R&D Center – Chunghwa Telecom Laboratories

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. The Institute strives 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 Chunghwa Telecom deal with the complexity.



The Creative Industry Pilot

The SDGs CHT contributes to in this section



Overview of Chunghwa Telecom Laboratories in 2017

- There are more than 1,461 employees (nearly 6.50% of total employees in CHT), and 95% are R&D personnel.
- The funding for R&D funds totaled NT\$ 3.9 billion, which was 1.7% of the consolidated operating revenue.
- The laboratories secured 190 new product/technical patents (167 domestic and 23 overseas) to a total of 1,839 (1,673 domestic and 166 overseas). 1,059 of the patents are currently in force (967 domestic and 92 overseas).

The Telecommunication Laboratories Human Resources Structure

Male		Female	
94	Doctor	7	
6.43%		0.48%	
962	Master	300	
65.85%		20.53%	
23	Bachelor	17	
1.58%		1.16%	
27	Others	31	
1.85%		2.12%	



Environmental Innovation

Sponsoring the NASA Hackathon — Saving the Earth with Innovation

Chunghwa Telecom was the only sponsor of the 2017 “NASA Hackathon” in the telecom industry. We resourced an excellent broadband circuit, fiber-optic network, firewall and other information and communication software and hardware equipment, as well as all the necessary labor. We also provided the space, the NTU Sports Center, and used the safest and fastest Internet devices available to give the hackers a smooth, comfortable and uninterrupted Internet environment. The event went very well and many innovative technological applications were developed.

“NASA Hackathon” is an international 48-hour long hack marathon that is held simultaneously worldwide. There were 161 groups taking part in the 2017 Hackathon including one in Taiwan. NASA uses its resources and advantages in space development to collect high-quality global data. Hackers have access to these databases and put their heads together to find creative ways to manage water resources, respond to natural disasters, and many of the other challenges our planet is facing that can be addressed by IT applications in some way. CHT continues to use our excellent technological services to inspire the younger generation and make Taiwan more competitive in the information and communication industry.



iEN Water Resource Management

CHT launched the iEN intelligent environmental service in 2008. We provide corporate clients with energy management technology that helps to reduce operational cost. In 2017, the iEN service embarked on water resource management to provide a full-scale water resource solution through information security and IoT technology.

1. Improved irrigation and water conservation management technology: An intelligent decision-making system on the cloud, along with environmental monitoring equipment, calculates and delivers the precise amount of water needed for the irrigation of crops to effectively improve the efficiency of irrigation water conservation.
2. Smart operation and management technology at the Mudan Reservoir: The reservoir monitoring system continuously collects information about the climate, water quality, the valve settings, embankment and slope. The system also provides suggestions about water discharge based on rainfall over the catchment area and the reservoir water level. Stability of the water supply has increased and this allows much better management of resources. The system can be effectively used for three applications, the use of stored water, flood control and reservoir safety.



Social Innovation

Cloud Security and the Protection of Intellectual Property

Counterfeits such as fake cigarettes, alcoholic beverages, tea and even soft drinks are all over the market. To prevent counterfeiting and the infringement of company property rights, we developed the “CHT Security Cloud” that provides a more complete security mechanism for the management layout of corporations. It not only secures brand value for a corporation but also effectively protects the rights of customers worldwide.

Up to 90% of the “CHT Security Cloud” users operate overseas. To provide a more effective security mechanism for overseas operation, “CHT Security Cloud” applies global channel management. The application also provides a multiple language interface that includes Traditional and Simplified Chinese, English and Japanese. This allows to act rapidly in cases of infringement and the appearance of counterfeit products and continue to focus attention on product research and development and other normal operations.

CHT Security Cloud: <http://wetrusty.twgate.net/>



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. In 2017, we adopted a strategy of internal and external cooperation to encourage and promote new startups in the ICT industry in Taiwan.

2017 Result

External

Investment



A venture capital fund was established

We support and finance startups

We arrange overseas links for startups

- “CHT/PChome 1” venture capital was started with an initial capital of NT\$ 400 million.
- We donated NT\$ 50 million to promote the “Fireflies Project”(credit guarantee project)
- We bought into the Taishan Capital Venture Fund, to become the biggest civil shareholder. We link startups to Silicon Valley by indirect investment.
- We send employees to Silicon Valley for on-site service, which expands the links with startups overseas

Internal

Venture



Innovation Incubation Team

Innovation incubation incentive provided for employees

- We provide an annual budget for creative teams of employees with a maximum of NT\$ 100 million for each case. This helps creativity and supports the set-up of new companies.
- The regulations for setting up companies for internal employees was amended to include an innovation incubation incentive with a maximum of 30-months salary.

Supporting Startups 1 – Launching the “hi-accelerator project”

CHT and the Institute for the Information Industry signed the “hi-accelerator project” MOU in 2017, and together began to cultivate innovative talent in the digital industry. The CHT cloud and the resources of the IoT applied platform combined with the innovation incubation power of the Institute for Information Industry accelerate the development of startups with innovative products, or services with good business value, further promoting the development of new innovative industry in the country.

Supporting Startups 2 – Establishing a Venture Capital Fund with PChome

To support the development of early innovative startups in Taiwan and to incubate the “unicorn companies,” the Strategic Committee of the BoD approved the establishment of an NT\$ 400 million venture capital fund “CHT/PChome 1” with PChome Online Inc. The professional fields and resources of both parties are channeled towards investment and incubation and the fund supports Taiwan startups that create value and have their own core technologies.

Supporting Startups 3 – CHT “Firefly Project”

CHT and the Small and Medium Enterprise Credit Guarantee Fund of Taiwan cooperated in the launch of the “Firefly Project Credit Guarantee” in December 2017. The “Firefly Project (counter guarantee for enterprise),” was also expanded by a donation of NT\$ 50 million from CHT. The credit guarantee can allocate equal value and provide guarantees of up to 20 times the financing amount (NT\$ 2 billion) to support startup teams.

This initiative also encouraged project organization in the Bank of Taiwan, the Hua Nan Commercial Bank, the First Commercial Bank, the Taiwan Cooperative Bank, and the Taiwan Business Bank. There were 20 applications for financial support by the end of 2017 and financing amounted to NT\$ 278 million.



The MOD Micro Movie Contest

CHT has cultivated the film and television industry for a long time. To support original digital content and foster excellent talents in Taiwan's film industry, we held the "MOD Micro Movie and Gold Film Creation Contest" with awards to a total of NT\$ 4.3 million in 2017 and received 324 entries, with 30 used 4K resolution to film. To give these short movies proper chance, we stream them on the MOD platform with HD high resolution, and provide them movies-in-theaters scale media exposure. We also held the first "Film Festival of Awarded Pieces in the MOD Micro Movie and Gold Film Creation Contest." The participating teams were able to exchange ideas and learn the latest trends in the audio-visual industry.



The Hami Software Development Contest

We think the innovative technology and the younger generation need to be closely tied together, hence the "2017 Hami Software Development Contest" was held. Many innovative software development teams were attracted to the contest and there were about 200 entries. The participants combined shared economy, IoT, 3D technology, AR and other approaches to develop creative applications. We provided these teams and suppliers with the opportunities and platform to implement creation and access to the market.



The champion in the Innovative division of the 2017 Hami Contest developed the "USPACE Partner" application. This app uses the concept of shared vehicle parking from an economic viewpoint. Personal parking spaces can be shared and the application intelligent ground lock makes the parking space available for use by others when it is vacant. This can go some way to help with the shortage of parking space in cities.

The "USPACE Partner" App was used in a demonstration at a shopping area on the Nanjing East Road under the auspices of the Mayor of Taipei City, Wen-Je Ko. The concept of shared parking space was also approved and promoted by several government and city departments. Everything needed to use the application was available on Google Play, and the downloads performed well. We may witness the creation of more world-class Apps through our contests in the future.

Innovative Research and Development Result in 2017

Award Granting Unit	Award
IEEE Advanced Communication Technology	The Convergence Services Lab received the "Extraordinary Paper Award" of the IEEE Advanced Communication Technology Forum
European Innovation Partnerships	The Business Solutions Lab and the IoT Lab received the "Best Paper Award" from the EAI IoTaaS 2017 Conference
Ministry of Economic Affairs	The Wireless Communications, Broadband Networks, Network Management, Information & Communication Security, Convergence Services, Business Solutions, IoT, and the Big Data laboratories received three gold, seven silver and one bronze award at the 2017 Taiwan Innotech Expo held by the Ministry of Economic Affairs
The Chinese Institute of Electrical Engineering	The Managing Director of the IoT Lab, Wen-Sheng Hsieh received the "Distinguished Engineer Award" and researcher Yan-Zhong Chen, the "Excellent Young Engineer Award," of the Chinese Institute of Electrical Engineering
Committee of the Information Technology Month	The Broadband Networks, Convergence Services and the IoT Laboratories received the "Innovative Products Award" from Information Technology Month, for research and development
Intelligent Transportation Society of TAIWAN	The "Usage Based Insurance Analysis System-Driving Insight" of the IoT Lab, received the "ITS Taiwan Award"
Bureau of Standards, Metrology and Inspection	The "Satellite 2-Way Transmission Software Viterbi Decoder Technology" of the Wireless Communications Lab was adopted by the Bureau International des Poids et Mesures for Coordinated Universal Time re-identification

SMART-I



- 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



- 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
- Advocation of refined service supervision
- Comprehensive and robust personnel management



- The Company has a specialized training facility-“Telecommunication Training Institute” and an Occupational Safety and Health Department in place
- Transparent and diverse means of communications and grievances
- Invested resources in digital transformation and established the first telecom combinative store in Taiwan
- Established the system of self-inspection, audit, and supervision for service quality
- Launch the personal information management and auditor certification system



- The only carrier with an established union in Taiwan
- Alleviate Public Concerns over Electromagnetic Waves



- Fosters talents and allows all employees to share the results of the operations
- Make personalized high-quality products and services available to all our customers



- GRI** Basic salary offered by Chunghwa Telecom is **1.4** times the minimum wage in Taiwan.
- GRI** Per Capita Training Hours: **43** hours
- No violation** of GRI laws concerning personal information, health, safety or product labeling



The Happiness Value Protector

The SDGs CHT contributes to in this section





Ensuring Employees' Happiness

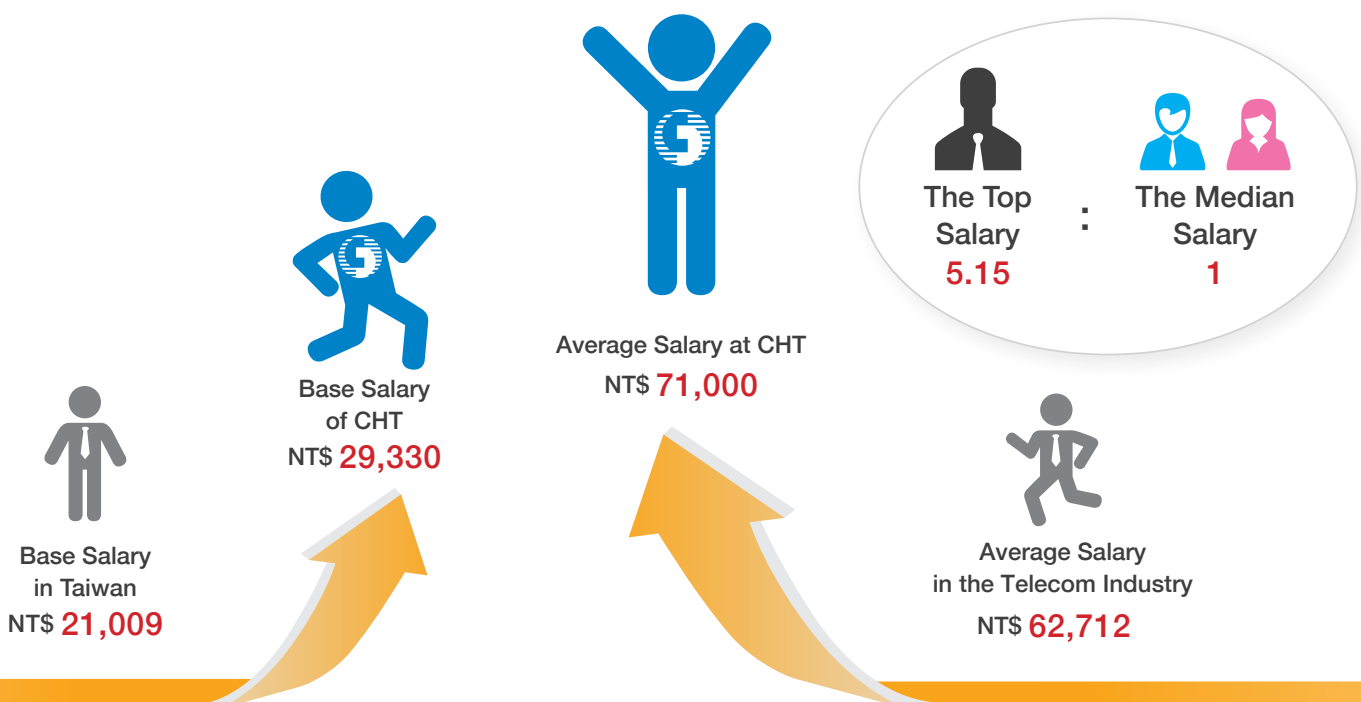
» Protecting the Rights of the Employees

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 individual employees 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.





» Human Resources Structure at CHT

CHT has more than 22 thousand employees with an average age of more than 51-year-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 to foster the talents of a new generation.

We not only face competition from the telecom industry, but also from an ever-changing information and communications industry. Future recruitment will be on a large-scale and will involve public recruiting exams. We will also use external recruiting methods aligned with each professional field. CHT talent will become an important growth power that will rise to a new level.

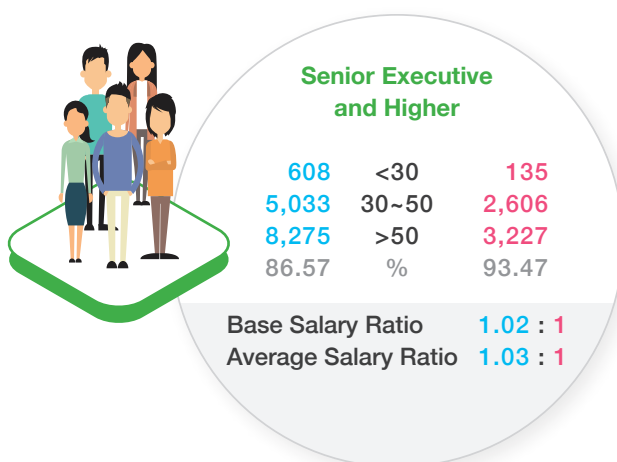
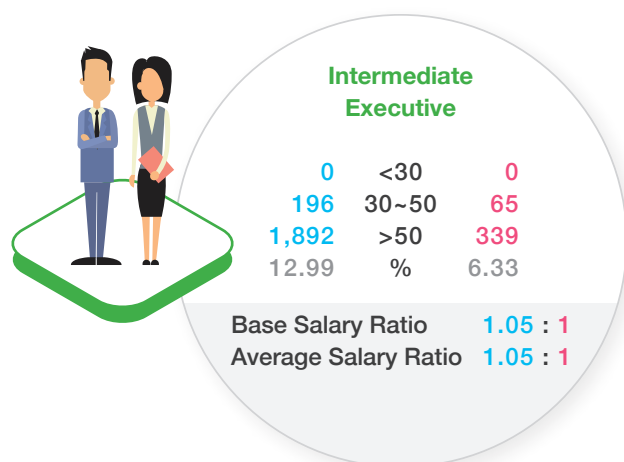
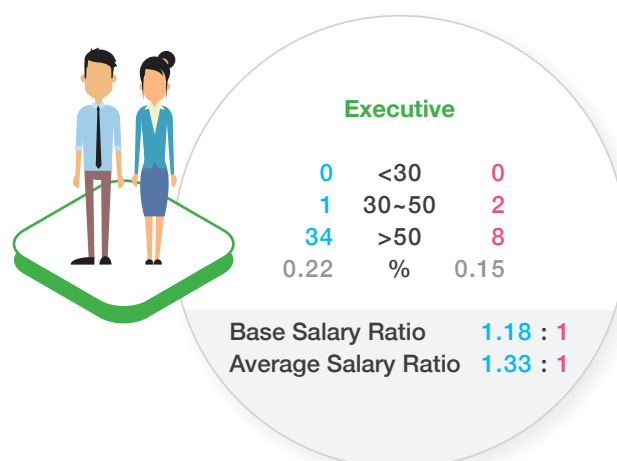
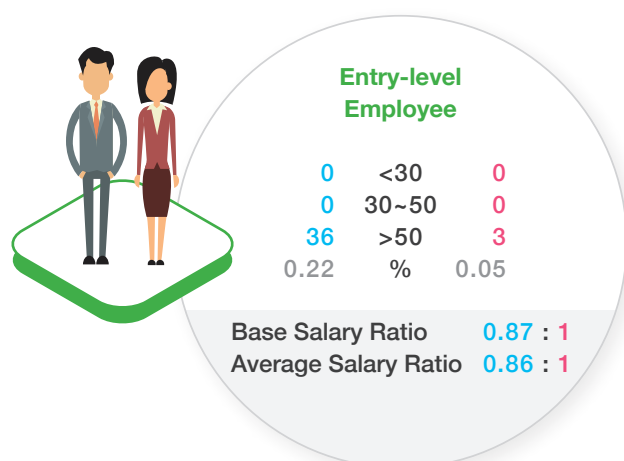


2017 Total Employees **22,460** people

Male

Female

	Total Amount in Each Category	
16,075 71.5%		6,385 28.5%
608 3%	Under 30 Years Old	135 0.5%
5,230 23%	30~50 Years Old	2,673 12%
10,237 45.5%	Above 50 Years Old	3,577 16%



- Note: 1. All employees are full-time; all employees are Taiwanese.
 2. For all grades, basic salary is defined as the fixed salary (monthly).
 3. For all grades, average salary includes fixed salaries and variable portions (including the monthly salary, year-end bonus, performance bonus, etc.)
 4. Levels of all grades: Basic-00~10; Executive-11~16; Intermediate Executive-17; Senior Executive-18~22.

**Aboriginal Employee**

27 persons | 16 persons

A total of 43 persons

**Disabled Employee**

436 persons | 232 persons

A total of 668 persons

**Specialist**

0 person | 1 person

(Fixed-term contracts)

New Recruitment**New Recruitments Amount** 687 persons

Accounted for 3.06% of total employees

Resignation Amount of New Recruits 5 persons

Accounted for 0.73% of all New Recruitment

age

<30 275 persons
40.03%30~50 403 persons
58.66%>50 9 persons
1.31%567 persons
82.53%120 persons
17.47%

Note: New recruits rate = Number of new employees/total number of employees

**Employee Turnover** 951 persons
Ratio 4.2%

age

<30 17 persons
1.79%30~50 37 persons
3.89%>50 690 persons
72.55%

age

<30 3 persons
0.32%30~50 28 persons
2.94%>50 176 persons
18.51%

Note: Turn rate = Number of turnover employees/total number of employees

**Human Resource Structure
of Honghwa Subsidiary in 2017**

Composition	Male	Female
Under 30 Years Old	909	1,306
30~50 Years Old	1,811	1,809
Above 50 Years Old	19	43
Total Employees	2,739	3,158
Disabled Employees	27	23
Aboriginal Employees	12	12

Note: All employees are full-time; all employees are Taiwanese.



Gender Equality and Diversity

Chunghwa Telecom places great value on human rights and gender equality. In 2017, female staff accounted for 28.43% of the total, and 25.86% 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 five members, three of whom are female. Our effective control has resulted in no incident of discrimination being reported in 2017.

CHT has done more than complying with the quota required by Article 38 of the Persons with Disabilities Rights Protection Act and have hired more than the required number. In 2017, the number of persons with disabilities hired was 3.71 times more than the statutory quota. (quota: 212; actual hire: 787). 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 45 aboriginal employees on board in 2017. We fully respect their cultures and no violation of work or human rights was reported during the year.

The Only Taiwanese Carrier with an Established Union

Chunghwa Telecom is the only telecom carrier in Taiwan with an established union. 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 11 other unions under the organization. In 2017, 99.86% of employees were union members. A director's seat has also been reserved for a workers' representative, through whom workers can more freely express opinions.



Note: 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 Complaint Channels

We have open communication channels in place to ensure that employee 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 47 complaints in 2017. Of these, 45 were disciplinary investigations and included such behavior as disrespect of the CHT system, principles, administrative management, violation of the employee code of conduct or other misconduct, and two were leak investigations. There were no human rights related cases in 2017.

We hold regular labor-management meetings to maintain contact between employees and the employer. There are nine 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 2017, the Company held six nationwide labor-management meetings and one 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. Eight such meetings were held in 2017.

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



» 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 Telecommunication Training Institute has devised human resource development strategies based on business focus and talent requirements between 2016 and 2018.

- ✓ 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 one-way teaching has been replaced by an environment 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 2017 included core business, ICT extended business, business in the new field and new knowledge of management and health care. There were 175 classes with 14,665 participants.

Results

- **Information security certification**
In 2017, 40 employees received EC-CHFI certification, 30 received EC-ECSA certification, and 28 received ISO 27001:2013 surveyor certification.
- **Improved sales performance**
AM enterprise customer training and certification resulted in a revenue increase of 13.76%.
- **Enhanced professional skills**
Employees who completed the 4G Network Quality Improvement Talent Program showed a 15% average capacity improvement.
- **New business potentials**
 - The Company organized 17 professional skills for intelligent building courses to reinforce our service competitiveness in smart buildings; there were 526 enrollments.
 - The Company organized 17 courses for the training of facilitators, promoters, planners, designers, and maintenance workers for photovoltaic technology; there were 509 enrollments.

Dedicated Training Units

Chunghwa Telecom has founded a “Telecommunication 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 Company training effort. 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 Telecommunication 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 eight learning channels: class teaching, distance education, digital learning, direct-broadcast courses, the Digital College, tutoring, external programs, and the digital library.

New Employee Orientation

Orientation provides new recruits with a general understanding of Company vision, values and culture that helps them adapt to the new work environment and culture. “New Recruit Counseling Guidelines for Chunghwa Telecom and Subordinate Institutions” were introduced in 2014 as well as a counselor system and digital learning tools to reduce the steepness of the new employee learning curve.



Recruitment and Development of the New-Generation Talents

According to an internal manpower survey, Chunghwa Telecom will encounter a wave of senior management retirements in five years. The following measures have been developed as a response to reduce disruption in the transfer of knowledge:

- Honghwa will be engaged where necessary to fill in shortfalls of frontline staff.
- We will recruit additional talent for the R&D of IT, ICT and 4G technologies and support business growth. Recruitment needs will be approved on a case-by-case basis.
- 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 Assessment Mechanism

Chunghwa Telecom now applies “Employees Performance Evaluation Guidelines” which are used in the evaluation 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.

Chunghwa Telecom conducts performance appraisal at three different levels: entry-level staff, entry and mid-level managers, 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 Company performance. During these sessions, managers also discuss career plans and suggest courses that are relevant to the future career of each employee. Performance bonuses and employee remuneration are tied to performance.

Nurturing of Professional Talents

Chunghwa Telecom is dedicated to providing employees with a diverse learning environment. In 2017, Chunghwa Telecom training expenses exceeded NT\$ 500 million and employee training sessions totaled 974 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 440 employees in 2017 and the Company compensation amounted to NT\$ 7.01 million.

	2015	2016	2017
Total Training Expense (NT\$ thousand)	572,351	529,744	514,082
Per Capita Training (NT\$)	24,733	23,384	22,889
Total Training Hours	1,078,140	1,046,253	974,712
Per Capita Training Hours	47	46	43

Note: A precision training policy was adopted in 2015 and instruction was carried out by internal personnel in many instances. As a result, the budgeted training expenses went down while the number of total and average training hours was the same as in 2014.

The Happiness at Work Survey

Since 2011, we have been engaging outside agencies to carry out annual “Chunghwa Telecom Happiness at Work Survey” in an anonymous manner. This helps us to understand how employees feel about their work and working status. The findings 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. We will continue these surveys and respond to employee opinions. The 2017 “Happiness at Work Survey” graded at an average of 80.56 points out of 100.





» 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. By the end of 2017, 27 Company business groups and branches had already passed international certification. We use careful systematic management to ensure the health and safety of our employees. 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. Nine divisions within the Company have received awards under the “National Workplace Safety and Health Campaign” organized by the Occupational Safety and Health Administration, Ministry of Labor. The Taipei Mobile Business Group location received the “Health Model Award” from the Ministry of Health and Welfare.



■ The Dedicated Occupational Safety and Health Management Unit

We have a dedicated “Labor Safety and Health Department” responsible for the planning and implementation of labor safety and health matters. A “Labor Safety and Health Committee” has also been created that meets every quarter to deliberate, coordinate and make suggestions on labor safety and health issues.

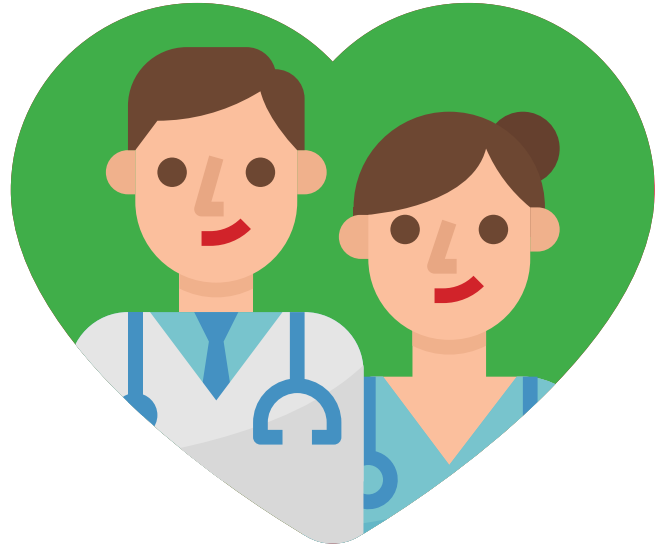
The “Labor Safety and Health Committee” has 27 members, including representatives from each department unit and the labor union as well as several technicians and medical personnel. Among these, ten members are from the labor union, accounting for 37%. Four meetings were held in 2017 and eleven proposals were presented by the labor representatives. Four of these were related to the improvement of safety and health facilities, five to the refinement of safety and health management, and two concerned food hygiene. All proposals have been solved after deliberation.



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

To better provide immediate medical assistance and attend to worker health, we engaged 20 full-time nurses and contracted 22 physicians in 2017 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 six 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.



Health Promotions for Senior Employees

A significant portion of Chunghwa Telecom employees are 50 years old or older. This is one reason why we consider health care an important issue, especially for senior employees. In 2017, we launched a series of health checkups and health management programs for senior employees. In addition to helping them develop physical capabilities, it was also part of our intention to create support systems among friends.

1. 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.
2. Health seminars: We invited a dietitian from the Taiwan Adventist Hospital to talk about "eating for good eyesight" to let the employees learn how to choose the right food and supplements for maintaining good eyesight. We also invited the instructor from the health and exercise association to demonstrate muscle strength and stretching exercises in the office, emphasizing the importance of health plans toward the maintenance of body function.
3. Others: As a countermeasure to influenza outbreaks, Chunghwa Telecom subsidized influenza vaccinations for 1,745 employees.



National Fitness Program

The Sports Administration of the Ministry of Education, commissioned Shung Ho Hospital to organize a National Fitness Program in 2017, and 149 employees from headquarters signed up to learn more about fitness. The program included many tests such as body measurements (height, weight, waist-hip ratio); muscle strength and endurance (sit-ups in a minute), flexibility (forward flexion) and cardio-respiratory fitness (stair-climbing over 3 minutes) designed to help employees learn more about their health and absorb new knowledge about sports.



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 138 training sessions in 2017 and there were 6,257 enrollments.

The Company encountered 49 cases of occupational hazard in 2017; 31 of which had occurred during work (including 20 traffic accidents) 18 accidents occurred during commuting. The top three accidents were a work-related injury, a traffic accident while commuting, and a fall. To raise employee awareness of traffic safety and reduce the occurrence of traffic accidents, we organized the “Prevention and Handling of Traffic Accident” training. The instruction was given by members of the New Taipei City Traffic Accident Investigation Committee. 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.

	2015	2016	2017	
Injury Rate (IR)	0.07 0.11	0.09 0.17	0.12 0.16	Male
	0.08	0.11	0.13	Female
Occupational Disease Rate (ODR)	0 0	0 0	0 0	Total
	0	0	0	
Lost Day Rate (LDR)	2.68 2.47	3.79 7.12	40.41 3.31	
	2.62	4.74	29.86	
Absentee Rate (AR)	0.28 0.59	0.31 0.66	0.30 0.70	
	0.37	0.41	0.41	

Note: Injury Rate (IR) = (Total number of injuries/Number of hours worked by all employees) x 200,000; Occupational Disease Rate (ODR) = (Number of occupational diseases/Total work hours) x 200,000
 Lost Day Rate (LDR) = Total loss of work days/Total work hours x 200,000;
 Absentee Rate (AR) (Including personal and sick leave) = (Total number of absent days/Total number of man-days) x 100%





A Safe and Healthy Workplace

Chunghwa Telecom considers its employees' health to be a valuable company asset. Providing a safe and healthy workplace is a basic requirement of good corporate social responsibility. In 2017, we spent NT\$ **82,245** thousand on employee health care. Our contributions related to employee health included:









Item	Description			
Health Examination of Employees and Dependents	<ul style="list-style-type: none">The Company offers much better care than required by law and employees are given the choice of various health checkup packages depending on their age, risk factors and so on. A total of 21,870 (99.14%) employees had checkups during the year.Family members are also entitled to checkups at the same rate, and a total of 3,292 persons participated during the year.			
Free Influenza Vaccination	<ul style="list-style-type: none">Free influenza vaccinations are available for all employees who fit the requirements for vaccination at public expense. Registration can be done online and 1,745 employees were vaccinated.			
Employee Assistance Program (EAP)	<ul style="list-style-type: none">CHT was one of the largest corporations in Taiwan to start promoting the Employee Assistance Program (EAP) since 2007.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.Case managers made 9 visits and completed 454 service sessions in 2017.			
Employee Health Service	<ul style="list-style-type: none">Physicians visited the plants 35 times a month. Sessions were for 3 hours and each patient was allocated 30 minutes.Healthcare personnel use the “Employee Health Management System” for the analysis and for the evaluation of health records. Where necessary, extra consultations can be arranged between the physicians and the employees for proper guidance and healthcare. Related expenses amounted to NT\$ 15.15 million. <table><tr><td>Headcount of medical consultation with physicians 2,491 (30 minutes/per person)</td><td>Frequency of on-site physician service 383 persons</td><td>Headcount of consultation with medical personnel 7,412 persons</td></tr></table>	Headcount of medical consultation with physicians 2,491 (30 minutes/per person)	Frequency of on-site physician service 383 persons	Headcount of consultation with medical personnel 7,412 persons
Headcount of medical consultation with physicians 2,491 (30 minutes/per person)	Frequency of on-site physician service 383 persons	Headcount of consultation with medical personnel 7,412 persons		
Employee Health Promotion	<ul style="list-style-type: none">A total of 7,983 employees participated in 124 health seminars. There were 34 sports competitions in which 6,047 employees participated. There were 73 educational trips attended by 8,175 employees. Health examinations were given to 2,178 employees in 15 sessions and 18,518 employees participated in 311 big group events.The Company published 2 health-related articles each month that contained comprehensive information about the concept of disease prevention.			
Healthy Workplace	<ul style="list-style-type: none">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.Furthermore, all offices feature ergonomic chairs, natural ventilation, indoor plants and other elements of a healthy work environment.			
Employee Cafeteria	<ul style="list-style-type: none">Our employee cafeteria offers choices from a diverse range of nutritionally balanced meals to choose from.All food suppliers are subjected to rigorous review to ensure the safety of food served to our employees.			
Balancing Work and Life	<ul style="list-style-type: none">Chunghwa Telecom has 31 hostels in Taiwan. An annual travel subsidy of NT\$ 8,000 encourages employees to achieve a balance between work and life.			
Flexible Working Hours	<ul style="list-style-type: none">Chunghwa Telecom provides two flexible working hour sessions in the morning and afternoon: 8:00 to 9:00 and 17:00 to 18:00. There are also several places of different types for group events after working hours.			



» Building a Happy Business

CHT has long been devoting considerable resources, including human resources, to the promotion of awareness to the need for physical exercises at the workplace and to support of the sports industry. Utilizing both software and hardware resources, we have created an excellent environment for exercise, and the building of a healthy, happy and safe corporation. CHT was awarded the 2nd “2017 Exercise Enterprise Certification.”

We offer a commitment to “peace of mind” to our employees, and refrain from making layoffs and salary reductions. This means employees can devote themselves fully to boosting performance at work to create more value for themselves and the Company.

Item	Activities and Description	Number of Participant/ Beneficiaries	Contribution/ Supplement
 Maternity Allowance	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.	122 persons	NT\$ 14,731 thousand
 Sports Activity	Regional activities include 100 road running events, 130 hiking activities, 102 ball sports activities and 254 others (such as employee year-end dinners, travel, and so on).	448 thousand persons	NT\$ 12,769 thousand
 ESOT	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 19 thousand persons	NT\$ 2.2 thousand /month per person
 Dependent Education Subsidy	Twice a year (two semesters).	20,127 persons	NT\$ 198,892 thousand
 Wedding Subsidy	A wedding subsidy is available for employees who are to be lawfully married.	211 persons	NT\$ 528 thousand
 Childbirth Subsidy	Employees or their spouses are eligible for a childbirth subsidy.	467 persons	NT\$ 1,168 thousand
 Funeral Subsidy	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.	865 persons	NT\$ 4,325 thousand
 Recreation and Sports Space	Includes an integrated stadium, swimming pool, tennis, badminton, basketball, and table tennis courts, multi-functional event space, karaoke room, and an employee dormitory.	Total 13,103 square meters	

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





Parental Allowance Offer Better than Legal Requirements

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.

In 2017, NT\$ 14,731 thousand was paid out as child care leave allowances, an increase of NT\$ 2,382 thousand over 2016; 169 employees applied for maternity leaves; 122 employees applied for unpaid child care leave; 122 employees applied for child care leave allowances.

Year	Item	Male	Female	Total
2017	The number qualified for UPL for raising children 2017 (A)	1,011	537	1,548
	Number of applications for UPL 2017 (B)	31	91	122
	Application rate for UPL 2017 (B/A)	3%	17%	8%
	Number of expected reinstatements 2017 (C)	29	98	127
	Number of applications for reinstatement 2017 (D)	29	98	127
	Reinstatement rate 2017 (D/C)	100%	100%	100%
2016	Number of reinstatements 2016 (E)	15	73	88
	One year retention after reinstatement 2016 (F)	14	63	88
	Retention rate 2016 (F/E)	93%	86%	88%

Note: 1. The number of employees entitled to apply for a parental leave of absence in 2017 (A): calculated as employees who had applied for maternity leave and parental leave in 2015-2017.
 2. The number of expected reinstatements 2017 (C): The number of employees who applied from 2015 to 2017 and should be reinstated in 2017.
 3. The number of actual reinstatements 2017 (C): The number of employees who applied from 2015 to 2017 and were reinstated in 2017.
 4. Reinstatement rate: (actual number of reinstated employees 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%

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 NT\$ 33.7 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.

To help employees adapt to life after retirement, the Telecommunication Training Institute organized a series of "Retiree Adaptation Courses." Nine sessions were held in 2017 for participants totaling 362. Furthermore, a donation of NT\$ 4.5 million was made by CHT 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" for retired employees to engage in our endeavors to maintain continuous growth. Consultants can have a paid or honorary role. Senior 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 human rights issues, and actively protect the value of human rights. We have responded 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 have also responded to the UN International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights. We are dedicated to the promotion of human rights awareness and to the assurance of respect and fair treatment to all stakeholders.

CHT is a member of the International Telecommunication Union and we fully comply with all the “International Radio Regulations” established with respect to equal rights to information. The regulation lays down rules concerning: freedom of communication, transparency in global roaming charges and competition, the support of telecommunication 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, for which a human rights due diligence investigation is presently being conducted. We also 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.



Human Rights Risk Investigation Process

CHT conducts evaluations of potential human rights issues to identify any possible human rights violations. This evaluation allows us to take the necessary mitigation measures to ease any damage and impact. The identifying process is as follows:

STEP1

Reviewing Issues

We refer to external and internal human rights indicators to evaluate related issues.

Externally

International guidelines

Domestic and international sustainability evaluation survey

International benchmark

- UN's "Declaration of Human Rights"
- UN's "Guiding Principles on Business and Human Rights"
- ILO's "Convention"

Internally

Annual major issues

The Company grievance channels

- "International Radio Regulation"
- "International Covenant on Civil and Political Rights"
- "International Covenant on Economic, Social, and Cultural Rights"




STEP2

Identification Scope and Issue

Internal meetings and discussions are held to identify the corresponding value chain associated with each issue, including the CHT parent company, subsidiaries, re-investment companies, the supply chain and customers.



Value Chain Human Rights Risk Map

Category	Material Issues	Issue Descriptions	Value Chain with Potential Risk
 Local Human Rights	Responsible Procurement	Do we forbid the use of raw materials and minerals from conflict zones?	Supply chains
		Do we restrict the use of hazardous substances to protect the physical and mental health of employees?	
	Indigenous Rights	Do we respect the land ownership, health and safety of local indigenous groups when base stations are constructed?	Chunghwa Telecom
 Employment Human Rights	Work Time and Wages	Is there an event of overtime work? Is the pay lower than the minimum wage?	Chunghwa Telecom, supply chains, subsidiaries, and re-investment companies
	Freedom of Association	Do we encourage employees to join the Workers' Union and sign collective bargaining agreements to ensure smooth labor-management cooperation?	
	Anti-Discrimination and Harassment	Do we discriminate, engage in harassment, or otherwise violate legislation?	
		Do we force employees to leave the Company because of pregnancy or unpaid childcare leave?	
		Do we pay differently for the same work or job based on gender?	
	Occupational Health and Safety	Do we provide a good work environment to ensure employee occupational safety?	
 Customer Human Rights	Information Security and Privacy Protection	Do we have a strict control mechanism to ensure the safe transmission of personal customer information and good business conduct?	Chunghwa Telecom, supply chains, and subsidiaries
		Do we provide customers with a choice about the right to use their personal data again or for other purposes?	Chunghwa Telecom
 Information Equality	Minimize the Digital divide	Do we provide corresponding services for minority groups in need to ensure information equality? Including migrant workers and local communities?	Chunghwa Telecom

STEP3

Assessing Impact

Each responsible unit carries out further assessments to confirm the relative impact of each different major issues. We record the audited result of impact level in detail on the "auditing items self-inspected implementation and record form for the promotion of human rights strategy."

STEP4

Mitigating and Monitoring

We deduce the value of the result and prepare a human rights value chain risk map. The responsible unit reviews the actual risk events and discusses and formulates possible improvements.






STEP5

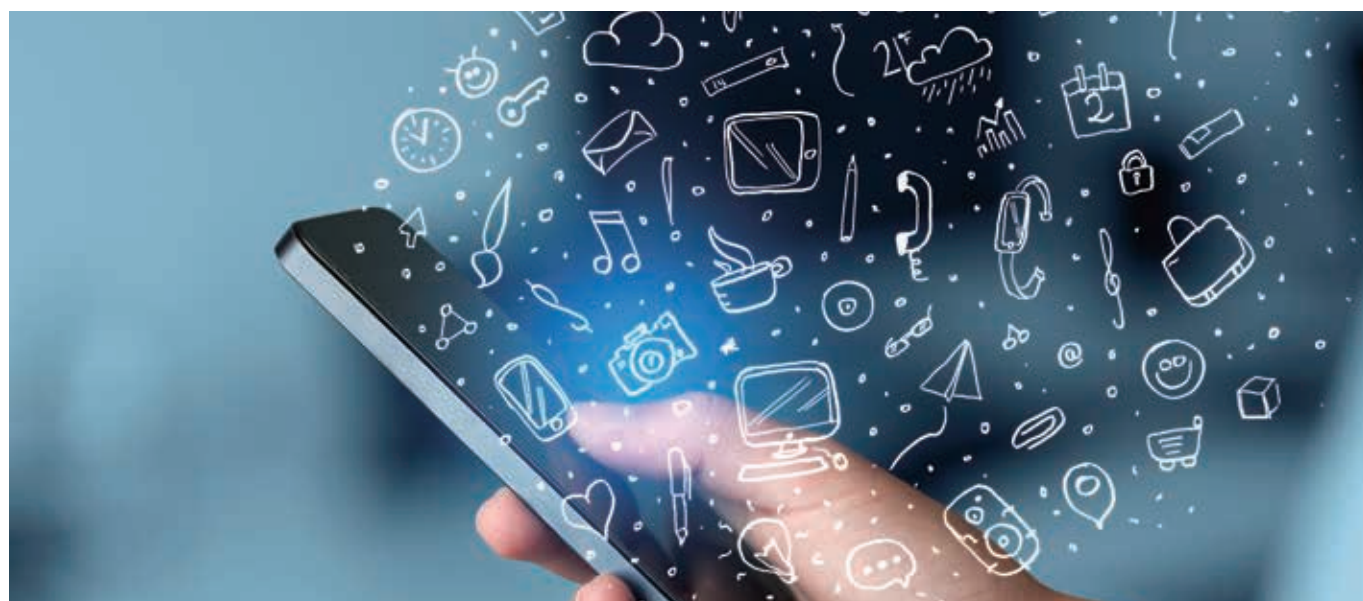
Disclosure

We disclose the implementation of human rights strategies and the audit process in the Annual CSR Report and on the Company website.



2017 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	23	<ul style="list-style-type: none"> Labor-management meeting Collective agreement Workers' Union meeting Annual human rights event inspection 	100%	1%	<ul style="list-style-type: none"> Some institutes were in violation of regulations and legislation and corrective measures had to be taken. We continue to protect human rights through the Workers' Union and Collective Agreements.
 Subsidiaries	19	Annual CSR implementation inspection	100%	1%	Some institutes had violated the occupational safety and health regulations. We made some suggestions for improvement and will continue with follow-up and proper management.
 Re-Investment Companies	6	Annual CSR implementation inspection	100%	5%	Some re-investment companies had violated legislation. We made some suggestions for improvement and will continue with follow-up and proper management.
 Up-Stream and Down-Stream Suppliers	Tier 1 1,471	<ul style="list-style-type: none"> CSR survey inventory CSR second party audit Occupational health and safety audit 	100%	1%	<ul style="list-style-type: none"> Some suppliers had violated the labor laws and regulations. We will continue to increase the evaluation percentage using more Supplier Interchange Meeting and other channels. Follow-up of suppliers with identified risk will also be done to see if improvements have been made.
	Critical tier 1 146				
	Critical tier 2 28				
 The Public	All consumers	<ul style="list-style-type: none"> Diverse complaint channels (including discrimination and harassment) Satisfaction survey Personal information and privacy rights protection inspection Minority group service mechanism 	100%	0%	<ul style="list-style-type: none"> There was no discrimination or harassment, or any invasion of CHT customer privacy or misuse of personal information in 2017. We will continue to promote the 5I SDGs Initiative to ensure information equality among the groups.





Human Rights Material Risk Issues

After a study of the 2017 risk analysis and inspection of the human rights value chain, we have concluded the following material issues, including:



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” at the procurement phase. We evaluated the suppliers to determine if raw materials derived from human rights high-risk areas like the République Démocratique du Congo were being utilized to avoid further infringement of the basic human rights of local residents in places where we provided information communication services and products. 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.



Employment Human Rights

We use the Occupational Health and Safety Management System (OHSAS 18000) 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 take action 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 course of the provision of our services. We established an SOP for employee response and took action at a critical level in certain circumstances. Legal assistance can be authorized to provide assistance in the event of serious offenses and to prevent illegal practices. CHT adopted the ISO 10002 quality management system in 2001 and have a certified and flawless customer service procedure and management mechanism in place. In addition, we regularly offer pertinent educational training courses in customer relations, the management of emotional stress, and occupational hazard prevention. While building up professional capability, we positively avoid pressure on customer service personnel to avoid mental and physical health problems. Customer service personnel were given five training courses during the year and training hours totaled 588 hours in 2017.



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.

To improve our operational management 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.

We take customer privacy protection very seriously and in addition to 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.” This means that personnel need to make formal application and receive managerial approval before being granted the authority that allows access 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.



Information Equality

Chunghwa Telecom 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,” Chunghwa Telecom watches the trends of this digital divide and offers solutions that facilitate social innovation and digital inclusion. We spare no effort in the advocacy of the “corporate volunteer,” participate in community services, and proactively assist communities in the creation of digital opportunities.



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 December 2017, we had 465 direct physical channel service stores, and 285 franchised stores, a total of 750 service outlets that provide convenient service for all consumers in cities, or even in remote areas in Taiwan.

CHT is aligned with the digital economy and has made 2017 as its digital transformation year. We have put more resources to promote digitalized customer services, including a network of digital stores and a Chunghwa Telecom mobile customer service App. Business services such as bill inquiry and the application of international roaming will be replaced by mobile services to increase customer service capacity.

Digital Customer Services – The Chunghwa Telecom Customer Service App

The “Chunghwa Telecom Customer Service App” provides information about mobile, fixed network, international services, broadband Internet and other business services. The number of customers using the App each month has exceeded 6,600,000, about 90% of which are by mobile customers. The most common inquiries are about mobile Internet use, bills and contracts.



Chunghwa Telecom Customer Service APP

Download the free customer services APP that provides Chunghwa Telecom mobile phone, local telephone, broadband Internet and HiNet business services with an instant and free round-the-clock customer response.

Ethical Marketing and Information Transparency

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 2017.



Diverse Services — The CHT Combinative Store

In 2017, Chunghwa Telecom established the first telecom combination store in Taoyuan, Taiwan. The location includes a cafe, 3C and an experimental display. Green store capability was also developed and energy saving household appliances such as TV, refrigerators, air purifiers and even electric bicycles provide customers with new service experiences.



MOD: The Biggest Audio-Visual Platform to Watch Multimedia on Demand

"My TV my demand, I buy what I want to watch!" Chunghwa Telecom MOD is the biggest audio-visual platform in Taiwan and it guided the development of national digital television in 2017. The service promoted a new profit distribution system with channels that encourage the introduction of high-quality video. Audience subscription is attracted by multiple contents and the formation of positive circulation of the channels, platform and the consumer. This was the most successful revolution in the audio-visual industry.

The easy channel purchasing on MOD enables the customer to select freely and they need subscribe only to the channels they want. By providing multiple viewing models and content, we allow true viewing autonomy and provide rich audio-visual experiences.

Easy Shopping with Hami Wallet

Hami Wallet has been comprehensively upgraded to satisfy the demand for diverse mobile payments for "buying, transportation, point collection and payment." We have promoted the co-branded card in cooperation with card associations like MasterCard, CTBC Bank, E.SUN Bank, UBOT, iCash and iPass. It has been the first card combined with HCE and TSM and the first telecom carrier to provide an NFC co-branded card with an auto-reload function in Taiwan. Our customers experience "one card in hand for more free mobile payment," with a combination of Pi Wallet, which gives an integrated payment function that satisfies a range of different payment situations.



Wise Financial Promoter — Cross-industry Collaboration for Smart Payment

According to eMarketer, smartphone use is more prevalent in Taiwan than in any other country in the world, and almost everyone has one. Mobile phones are used to connect with a wide range of different services. We have collaborated with Shin Kong Life Co., Ltd. and the Shin Kong Bank Co., Ltd. to provide mobile payment. Using the "Hami Wallet App" policyholders can use the Chunghwa Telecom 3G or 4G service to set up a payment account that allows them to pay their Insurance Premium from anywhere at any time.

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

Chunghwa Telecom complies strictly with the Personal Information Protection Act with respect to the collection, processing, and use of personal information and guarantees the best security and protection of personal information using its meticulously designed management system.

All our employees are involved in the implementation of personal information protection and are all fully aware of the need for security. To this end we have established a management mechanism for personal information. In addition to this we carry out proper awareness training on a regular basis and internal audits are done for certification and to give an unbroken trace of the outcome all the performance indicators.

In 2017, there were 14 complaints about alleged information leakage, fewer than the 21 cases in 2016. Complaints of this type accounted for only 0.000026% of our customer service hotline. **The cases were checked using all the available channels and none of them were proved to be the result of a violation of the relevant regulations.**

Chunghwa Telecom Management Mechanism for Personal Information

Category	Description
 Organization	<ul style="list-style-type: none"> We have assembled a Personal Information Protection Task Force that answers to the Information Strategy Committee to promote the security of CHT client personal information. Corporate headquarters has established the “Cyber Security Department” in charging of cybersecurity strategy, regulations and SOC operation for the entire CHT corporation.
 Policies and Procedures	<ul style="list-style-type: none"> We have complied with both International and National standards and regulations including BS 10012, the Personal Information Protection Act, the Personal Data Protection Management for Non-public Affairs Assigned, from the National Communications Commission and others. All personal information protection policies and regulations implemented have been disclosed, and are posted on the Company internal website. We review and modify the content on a regular basis and it is up-to-date and in accordance with all related regulations and newly discovered risk issues. To comply with the Personal Information Protection Act, the Company makes it easy for customers to make inquiries, or to retrieve and make duplicate copies of their personal information. They can also unsubscribe from the receipt of marketing messages and have their personal information file entries deleted after termination of their service.
 Management System	<ul style="list-style-type: none"> The Company was the first Taiwanese mobile carrier to be validated by NCC for the “ISO 27001-International Information Security Management System” and “NCC ISO 27011-Telecommunication Supplements.” Chunghwa Telecom member services, all customer service hotlines and digital mobile products have been certified under BS 10012.
 Personnel Control	<ul style="list-style-type: none"> All the customers’ basic profiles are classified as “highly confidential,” and all data is held in locked dedicated cabinets. All employees are required to sign a “Confidentiality Agreement,” and line managers are held jointly responsible for any breaches by their subordinates. If an outsourced service involves business secrets, the contractor and the workers would also be required to sign a confidentiality agreement. The history of all computer access to customer personal files by employees is recorded and kept on file. This history is audited by the manager on a regular basis.
 Customer Service Control	<ul style="list-style-type: none"> Customer service operations are carried out within the boundaries outlined in the “Customer Service Department Personal Information Protection Manual.” The Company promotes proper awareness on a regular basis and detailed records are kept for future reference. The Company has a personal information incident procedure in place that requires the customer service center to handle all leakage of personal information in accordance with the “Customer Service Department Personal Information Incident Procedure Handbook.” In an attempt to provide each department with the right incentives to enforce personal information protection, we organize a competition every six months and reward the top three performers with trophies and prizes. The competition rates participants on several aspects including cross-server virus alert, a social engineering email test, third-party verification and personal information incidents.



Refined Customer Service

Chunghwa Telecom provides services which are refined, thoughtful and professional to build the most congenial and 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. This positive approach cultivates both favorable impressions and brand loyalty.

We received the “Best Corporate Customer Experience Management” and the “Best Service Innovation Team” of CSEA Customer Service Excellence Awards given by the Taiwan Contact Center Development Association. We were also awarded first place in the 15th “Global Views: Five-Star Service” of the telecom division.



Chunghwa Telecom Customer Service Mechanism Scanning

Item	Description
Customer Service Location / Size	<ul style="list-style-type: none"> The Company has 15 customer service centers The number of customer service personnel averages 3,200
Multi Channel Customer Services	<ul style="list-style-type: none"> Webchat Social media, “Chunghwa Telecom Dr. Q Fan Page” Web customer service center Mobile customer service center Mobile App SMS

We use customer service training workshops to refine our customer-centric approach and devotion to the provision of the most thoughtful services. In 2017 three such workshops were held in the Chunghwa Telecom training facilities in Banqiao, Taichung, and Kaohsiung. A total of 450 people participated in these training sessions which were also made available online for remote teaching.

Training Result

Year	Total Participants Total	Total Training Hours	Average Training Hours
2015	7,838	166,960	21.3
2016	7,487	171,355	22.9
2017	6,832	161,911	23.7

First Place “Five-Star Service Award” for Six Consecutive Years

We treat our customers with sincerity and honesty, and fully grasp the idea that “Good Service is Good Business.” We understand customers’ needs and also know it is important to gain their trust. We have been rewarded for our service quality by the award of first place in “Global Views: Five-Star Service” of the Telecom Division for six consecutive years.

We have strict requirements for our customer service personnel. In addition to a good speaking tone, attitude and proper etiquette, we emphasize a need for professional competence. We have set up a training group to strengthen professional skill with diverse training methods and relevant content. To expand our training capacity, we have prepared audio/visual versions of all our teaching material and this has been uploaded to a MOD audio-visual platform for broadcast at morning meetings. We have also built an e-learning platform, for the introduction of a range of business information and value-added services, as a question bank for employee reference.

Innovative Customer Services

To help us quickly understand a customers’ problems and find a solution, we started integrating voice applications into our customer service platform in 2016. In 2017, we adhered to our brand spirit of “Always ahead” and continue to develop and extend related technologies expected to serve customers better with more convenient services.

1. A text-based customer service bot: Texting has become very popular with the growth of the mobile Internet and has emerged as a new way to serve customers. We introduced an internal AI assistance application at the end of 2017 to promote the working efficiency of customer service personnel and expect official services to be launched at the end of June, 2018.
2. Interactive Voice Response (IVR): IVR not only provides customers with a brand new call experience, but also helps them find the services they need through “speaking” and this reduces the time spent listening to options. Technical development of the system was completed and functionality testing continued during 2017. The launch is expected by the end of 2018.
3. VOC and smart quality inspection: Chunghwa Telecom records and analyzes customer calls to learn customers’ real opinion. Our focus is the conversion of words, phrases, and spoken sentences into text, so that we may have a complete picture of what a customer wants and take the necessary steps to meet their expectations.

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.



Thank You for Your Professional and Warming Service



Ms. Chen has called to inform that she had not received her bill and customer service specialist Ms. Fan immediately found and resent the bill. Ms. Chen also said that she has received a marketing promotion call for broadband Internet contract renewal, but considered that renewal through the customer service hotline was easier and there was no need for concern about fraud. After that, customer service specialist Ms. Fan described and introduced the suitable plan content in detail. Finally, Ms. Chen decided to renew the broadband Internet to 100M and praised Ms. Fan's professional service.

The line was disconnected for some reason during the call and Ms. Fan immediately called the customer back. In addition to telling Ms. Chen that the broadband Internet had been completely upgraded, she told Ms. Chen about related issues. Because of the thoughtful service, Ms. Chen asked to talk to the customer services manager, saying: "Ms. Fan had a great and professional service attitude. I want to tell you that I am in a good mood this morning thanks to her. She is a modest and great person and I really appreciated the service. Chunghwa Telecom manager has good guidance. Thank you so much."

Starting from the greeting "Good morning, Ms. Chen," customer service specialist Ms. Fan made a good impression on the customer and quickly provided professional assistance and the appropriate suggestions to resolve the customer's problem, adding a new sale into the bargain.



KPIs for the 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	2015	2016	2017
Customer Service Response Within 20 Seconds	78.50%	77.38%	72.26%
Service Satisfaction (5-point scale)	4.61	4.64	4.68

Tenth Anniversary of 123 Customer Service Day

The “123 customer service principles” were introduced to optimize the quality of customer services. 1. “Listening”: An applied “Service Excellence” section to win customer trust. We listen with great care so that we can fully understand the customer’s problem so that a quick response can be made; 2. “Caring”: We take great care and give assistance to the customer at once; 3. “Engaging”: We have established a new generation of customer engagement activities. This is designed to build a warm relationship with each customer.

We established this Customer Service in January 2007 to integrate the 123 and 080 service hotlines. This service is available 24 hours a day all year round. The Chairman, Yu Cheng, noted that: the “123 customer service hotline has served more than 40,000,000 people a year and the average score of service satisfaction has reached more than 4.6 (on a 5-point scale). However, we are not satisfied with this and will continue to optimize the customer service process and promote customer service quality!” We will use big data to analyze consumer behavior from past accumulated data to learn about the actual needs of customers and optimize customer experience.

[Video record of the event >](#)



Consumer 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.

	Consumer Category	Survey Method	Survey Result (10-point scale)
	Large Enterprise	Designate an external market survey company to conduct consumer satisfaction survey	9.12
	Small and Medium Enterprise Consumer		9.08
	Average Consumer		7.57

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.



» Total Coverage of Free 4G Telecommunication in Remote Areas

Chunghwa Telecom accelerated the construction of mobile networks in 2017. In addition to having the greatest number of 4G base stations in the industry, achieved by a growth of 40%, we also provide the only four carrier aggregation (4CA) service all across Taiwan High-Speed Rail and in the 20 most popular commercial areas in the country. Chunghwa Telecom provides the most comprehensive service with wide bandwidth and all their customers enjoy the smoothest Internet operation available.

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 the towns, and continue to go deep into the mountain areas and off-shore islands. Of the 747 remote villages and areas in Taiwan 736 have 4G LTE coverage.

We have the widest bandwidth at 180 MHz and will continue to use our bandwidth advantage to enhance Internet speed, expand network capacity and provide the most reliable mobile service. To support the “DIGI+ Program” initiative introduced by the Executive Yuan, we expect to increase the 1Gbps network coverage to 72% by 2020.

Expand Wireless Hotspots

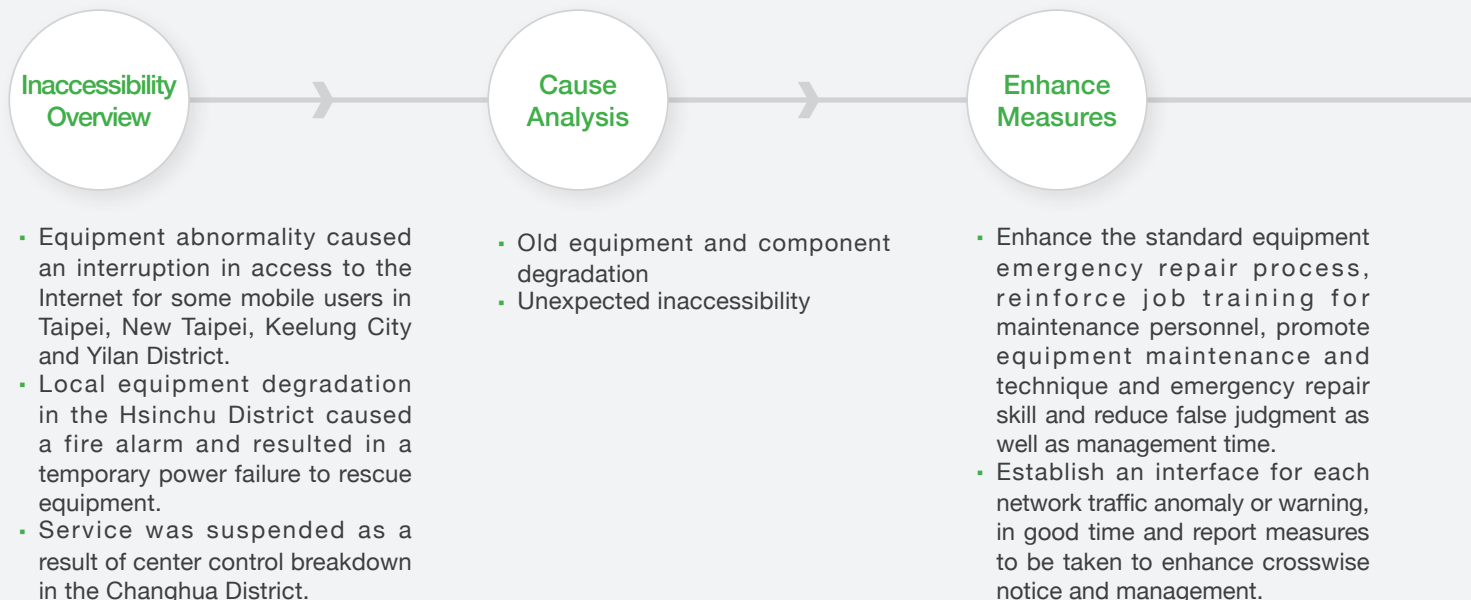
We have also supported the government initiative for the promotion of free wireless Internet services on a nationwide scale. By making a reasonable Wi-Fi rental package available, as well as a robust user authentication platform and a nationwide maintenance/monitoring system, we have helped the government deploy free Wi-Fi hotspots all over the country. By the end of 2017, we had installed more than 59,000 public Wi-Fi hotspots, giving users access to stable high-bandwidth in a densely covered Wi-Fi service.

Our contributions to social events in 2017 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 2,200 hotspots for the 2017 Universiade, 107 hotspots for New Year's Eve festivity, 180 for the Lantern Festival and about 147 for other activities. The company participated in 28 festive occasions and spent more than NT\$ 2 million.



2017 Material Web Inaccessibility Incidents and Response

In accordance with related business management regulation announced by the NCC in 2017, we voluntarily disclosed and described the circumstances and damage treatment concerning the material web inaccessibility incidents with follow-up repair services on the Company website.





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.

Response Measures	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.
Occurrence of Disaster	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.
Special Cases	Areas that are enclosed and accessible only through one road, such as on the Suhua Highway, are covered using multiple base stations so that even if one station were to be damaged in a natural disaster, other paired stations may still function to maintain contact with the area by phone.

Disaster Reporting 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 330,000 SMS alerts in 2017. The role of this service in disaster prevention and notification was outstanding. 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 flooding or an outbreak of disease, fast and correctly to specific regions simultaneously. As long as a mobile phone is open to the PWS function all our 3G and 4G customers will receive messages about disasters. During 2017, the PWS transmitted more than 14,000 alert messages.

In March 2017, we assisted the New Taipei City Government in organizing the "All-out Defense Mobilization Drill," the Taoyuan City Government, Taiwan Power Company and CPC Corporation in organizing the "Executive Yuan Disaster Prevention and Rescue Practice Evaluation and Field Drill" and also participated in the "Nuclear Safety Drill No. 23" at Taiwan Power Company's 2nd nuclear plant in September. We messaged reports to the residents in specific regions through the "Emergency Response SMS System." In October, we assisted the Changhua County Government and Directorate General of Highways, MOTC in organizing the first "Baguashan Tunnel Both-way Enclosed Disaster Prevention Drill" within 12 years. We also helped the government units and the public to increase the awareness of the need for action in the case of a disaster and also the need for emergency response capabilities.





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 2017, Chunghwa Telecom incurred NT\$ 3.5 million in fines and administrative penalties on seven 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."

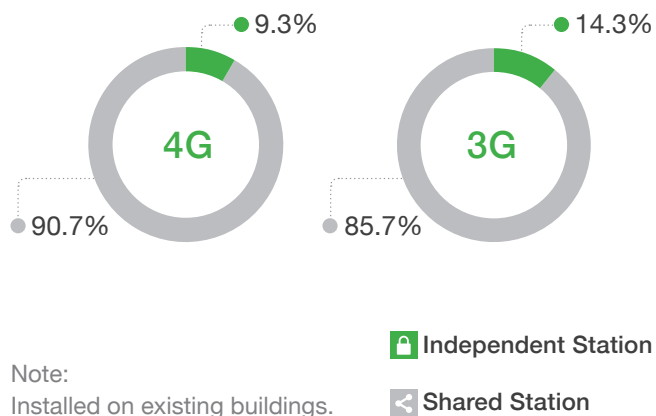
The measurement of the electromagnetic radiation in the environment conforms to the standard of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which must be lower than $0.45 \mu\text{W}/\text{cm}^2$ at 900MHz and less than $0.9 \mu\text{W}/\text{cm}^2$ at 1,800MHz. Any resident 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 0900-580-010.

Advocate the Accurate Understanding of Electromagnetic Waves

Chunghwa Telecom has been working closely with the Taiwan Telecommunication 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 19 county/city governments nationwide in hosting 33 seminars on the topic of electromagnetic waves and 158 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.

Types of Base Stations Installed by CHT





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
Resources Committed	<ul style="list-style-type: none"> An average of 11 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. "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 one customer service person participated in the program each month.
Prevention of Fraud on Network / Mobile Devices	<ul style="list-style-type: none"> A two-way, SMS-based authentication system was introduced for small payments. A scam alert was added to all two-way SMS authentication messages.
Progress Description in 2017	<ul style="list-style-type: none"> The hotline received 235,692 calls, and 18,992 cases of fraud were referred to the authorities. The Company assisted the Criminal Investigation Bureau, National Policy Agency in disconnecting 723 phone numbers, and successfully stopped 1,903 scams.

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
Anti-Virus and Anti-Hacker	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."
Adult Content	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.
Usage Time Control	The "HiNet Online Time Management Service" and mobile phone "3G Talk Without Worries" programs, give parents effective control of the mobile phone and Internet use.
MOD Parental Lock	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 Adult Content Gatekeeper Won the APAC Online Safety Summit Award

As an industry leader in online safety, Chunghwa Telecom participated in the online safety solutions forum at the 2017 APAC Online Safety Summit. The "Adult Content Gatekeeper," a filter that blocks inappropriate content, won the Online Safety Summit Award.

An investigation of child and youth sexual exploitation conducted by The Garden of Hope Foundation, showed increasing sexual exploitation using the Internet as the medium. Interviews conducted with children showed that 11.6% of those interviewed reported that they had been in touch with the sex industry through pornography sites. The Internet has become a dark route used in the sexual exploitation of children and youth and has thrived as the technology developed.

The Chunghwa Telecom "Adult Content Gatekeeper" has a complete blacklist database, that includes Chinese, English, Japanese, French and other languages, and we use reports from the national Internet content protection institution iWIN for updates. By providing direct filtration from the generator room end, we prevent connection to websites containing six types of harmful content such as pornography, violence, suicide, gambling, weapons and drugs. We effectively protect the network environment of children and youth by this investment in professional information security in the APAC region.

CHT Adult Content Gatekeeper: <http://hicare.hinet.net/intro-a.php>



SMART-I



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



- 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 Strategies and 5-Year Plan”



- 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 the “Supply Chain CSR Audit and Assistance.”



- CHT Supplier CSR Interchange Meeting
- Visit and interchange sustainable environment
- Targets low-carbon industries and promotes solar energy



Completes **100%** of the Following Targets in 2020:

- “Tier 1 suppliers” CSR current status assessment
- “Critical tier 1 suppliers” educational training of carbon management knowledge and ESG on-site audits

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



GRI

GHG emissions **832,987.46** t-CO₂e

GRI

A CHT photovoltaic system with a total capacity of **527** kWp

GRI

Implement the “Suppliers CSR second-party audit” on **10** suppliers



The Green Corporation Pioneer

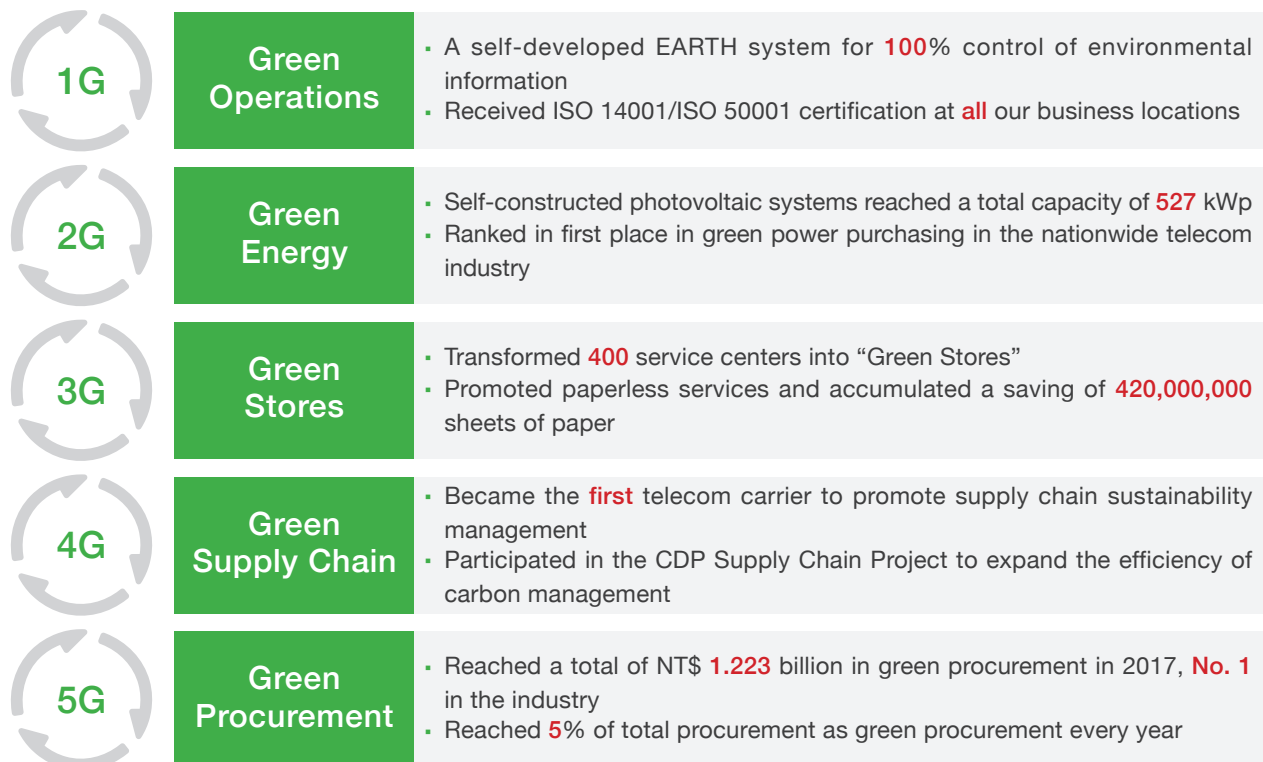
The SDGs CHT contributes to in this section



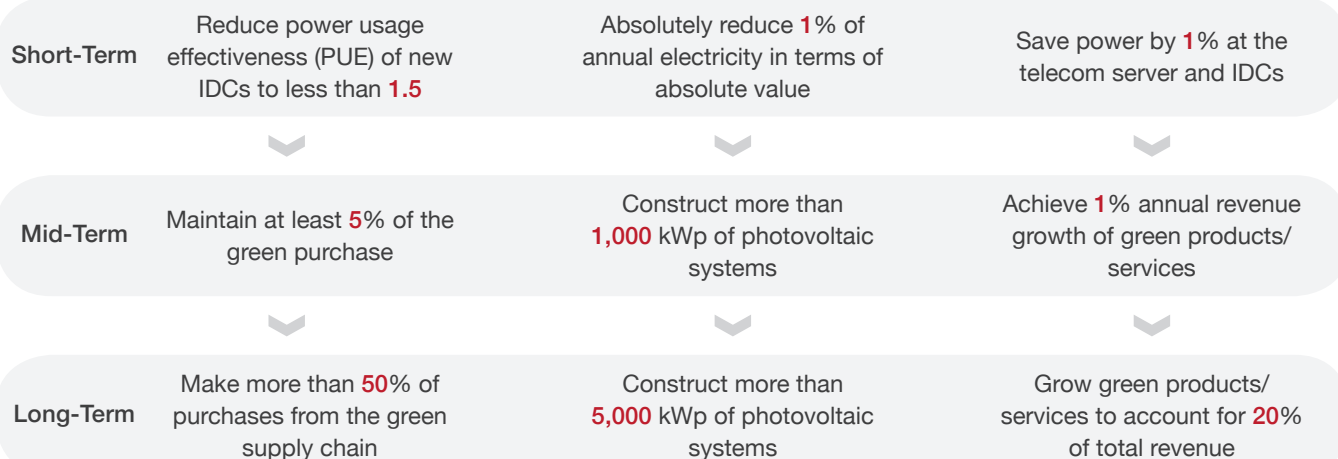
The 5G Green Enterprise

Although telecommunication 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.



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) initiatives: “Green Operations, Green Energy, Green Stores, Green Supply Chain, and Green Procurement” that aim to address financial success, sustainability and social responsibility.



1G Green Operations

Chunghwa Telecom has set themselves 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 environmental 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.

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 **60,429** electricity accounts and **2,704,535** units of electricity payment data under management.

Water Management



Request centralized payment of electricity bill; there are more than **1,285** water accounts and **101,572** units of water payment data under management.

Carbon Emission Management



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

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 **67,326** 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 **16,563,292** entries made.

E-Invoice Value-Added Center Service

Chunghwa Telecom’s e-invoice value-added center service allows corporate customers to store invoices permanently as digital files on a cloud server for ease of access. Alternative printed copies of invoices have been downsized to no larger than 5 x 8 cm, and only one sheet of paper is printed regardless of the number of items purchased. As a result, the amount of pulp used has been reduced to somewhere between 1/3 and 1/4, which has effectively reduced business costs.

For example, a business that prints 3.8 million digital invoice pages per month would be able to save 4,600 trees in a year, and given the average carbon absorption capacity of 10-20 kg per tree, the solution could reduce carbon emission by 90,000 kg a year. In 2017, 676 Chunghwa Telecom customers were using the digital invoice system, which generated annual revenue of NT\$ 5.7 million.



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. Nineteen hostels had been certified as Environmental Friendly Accommodation by 2017.

Environmental Management Expenses

Item	2015	2016	2017
Environmental management expense (NT\$ thousand)	275,975	286,734	300,722
Accounted percentage of turnover (%)	0.13	0.12	0.15



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 2017, the Company had 45 solar power stations around Taiwan with a total capacity of 527 kWp.

Snatching Green Energy Business and the Largest Scale Solar Power Plant Tender

In 2017, Chunghwa Telecom received a tender for a new solar power plant to be established in the Changhua Coastal area of the Taiwan Power Company currently the largest scale of Solar Power Plant in Taiwan, at 140 hectares. It is expected to be finished in 2019 and it is estimated that the facility will increase our revenue by about NT\$ 5.8 billion.

The solar panel landscape environment designed for the new solar power plant uses images of local protected animals, the Chinese white dolphin (*Sousa chinensis*) and the little tern (*Sternula albifrons*) and has used the concept of green building for the substation design. It will become one of the most magnificent sights in the Changhua Coastal Industrial Park and the best nationwide location for energy education.

We established a smart energy office in 2015 to fully develop the green power market for solar power, wind power and marsh gas power. As of September, 2017, we had 373 sites operating which generated 103 MW of electricity. We have applied ICT and IoT to include the solar power plant systems in the cloud intelligent platform iEN to monitor power generation and to send alerts to maintenance staff about any malfunctions that might occur.

First in Green Power Procurement

Driven by care towards environmental sustainability, Chunghwa Telecom actively supports the government's Green Power Purchasing System and bought 4 million kWh of green electricity in 2016, followed by another 6 million kWh in 2017. We shall continue with our firm resolve to promote renewable energy sources and will assist the government in the creation of a green energy economy by making a serious contribution to the industrial development of a green energy supply and environmental protection.

Year	Total Electricity Consumption (10,000 kWh) (A)	General Consumption (10,000 kWh) (B)	Business Consumption - Meter Rate Lighting Service (10,000 kWh) (C)	Business Consumption - Flat Rate Lighting Service (10,000 kWh) (D)	Business Consumption Increment (10,000 kWh) (E)	Business Consumption Increment Rate (F)
2007	135,180	9,420	125,151	609	NA	NA
2015	142,092	8,571	125,740	7,781	178	0.13%
2016	140,438	109,590	24,980	5,867	-	-
2017	136,269	108,525	22,289	5,455	-3,103	-11.18%

Note: 1. The method of calculation was modified in 2016 to more efficiently present power usage. This modification resulted in a significant change in data under columns B-F, but total power usage actually decreased compared to 2015.
 2. General consumption: office buildings and employee dormitories.
 3. Business consumption: base stations, depot, electric welding and public telephone, which are not CHT-owned property.
 4. A=B+C+D, General consumption mainly includes the power consumption of office building. Business consumption increment includes flat and meter rate lighting service.
 5. E=Business consumption this year - Business consumption last year; F=E/A
 6. This table presents electricity consumption with customer ID, other consumption without customer ID is covered by greenhouse gas inventory.

Energy Saving 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 is our scientific approach to reducing energy, carbon emission and protection of the environment.

Electricity Consumption of IDCs

Year	2015	2016	2017
Power usage (10,000 kWh)	14,539	15,210	16,065



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.

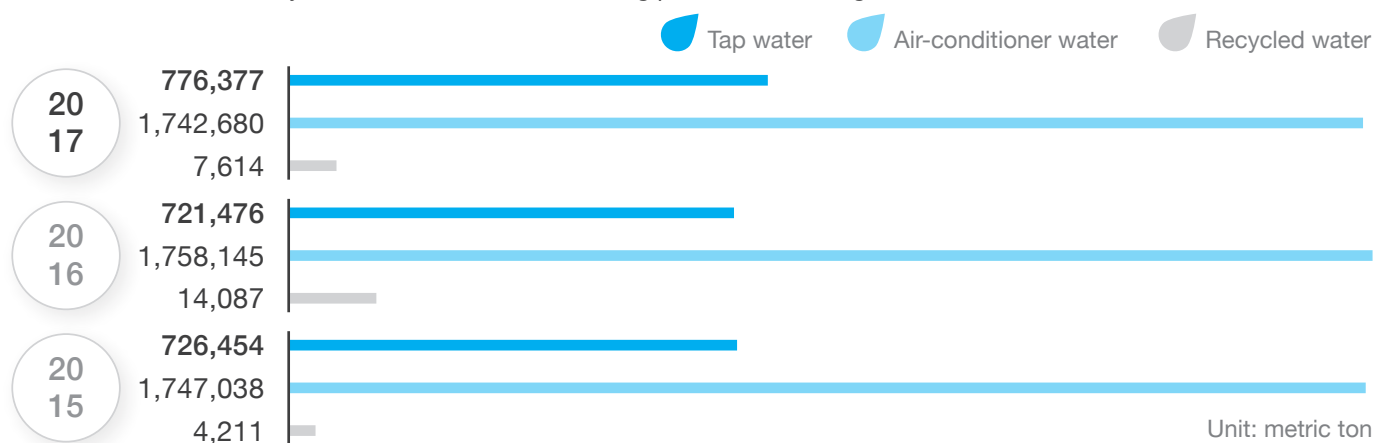
The management and analysis information interface can be used to promote water conservation measures and set concrete management goals. We also promote water-saving measures to increase efficiency in water use:

- 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



Recycling of Water Resources

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.



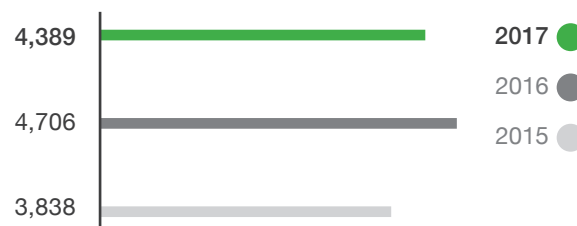


Waste Management

Chunghwa Telecom understands the importance of resources reduction, recycling and reuse and has combined a five-year environmental sustainability development plan with 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.

The weight of daily waste
(metric ton)



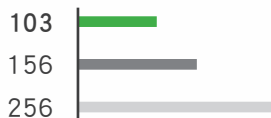
Industrial Waste

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 environmental impact.

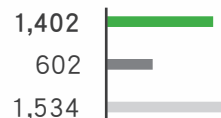
Scrapped lead-acid batteries from each business unit are auctioned on site, and the “Announcement and Delivery Slip for Removal and Disposal of Waste Lead-Acid Batteries” is retained for reference. The gradual rise in raw material prices has also caused the recycling and reuse value of scrapped lead-acid batteries to increase. A total of 32,264 lead-acid batteries with a total weight of 2,065,674 kg were scrapped and sold for NT\$ 38,496 thousand in 2017. 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.

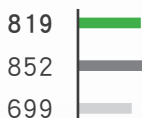
Plastic-Filled Cable
(metric ton)



Ordinary Cable
(metric ton)



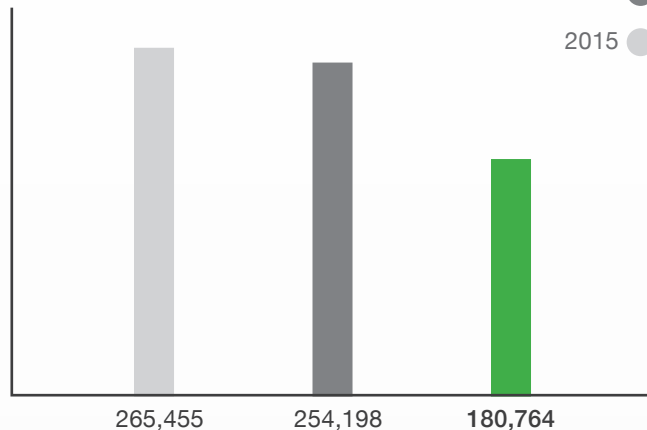
Miscellaneous Hardware
(metric ton)



Batteries
(PC)



Miscellaneous Hardware
(NT\$ thousand)



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 that are 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. Customers are encouraged to purchase green products from our “Chunghwa Telecom Green Stores.” In 2017, green revenue was NT\$ **7,795.2** million, which was **3.5%** of the total revenue.

Good Results in Cross-Industry Marketing

The Company has had a cross-industry alliance with China Motors since 2016 to promote the “e-Moving electric vehicle/ bicycle” preferential plan at all branches. All Chunghwa Telecom indoor phone or broadband customers can select and purchase e-moving products at the direct branches. By 2017 we had sold 1,496 e-moving vehicles and sales performance in cross-industry marketing was good.

Paperless Receipt Service

We have been promoting the use of electronic billing since 2001 to conserve energy, and reduce carbon emission by eliminating the use of paper for bills. In 2017, we offered the “paperless receipt service” to satisfy customer need and also contribute to a reduction of global warming. The service saved **568** million sheets of paper and an estimated 51,703 trees, it had also reduced carbon emission by 10,237 metric tons by the end of 2017.

Year	2015	2016	2017
The ratio of customers applying for combined bills	88%	88%	89%
The ratio of customers applying for e-bills	18%	18%	19%
The quantity of paper saved (1,000 sheets)	416,318	434,164	568,730
Reduction of carbon emission volume (metric ton)	7,494	7,815	10,237

- Note: 1. From 2017 onwards, the calculation is based on the quantity of paper saved and reduction of carbon emission by the use of e-bills, combined bills and paperless receipts.
2. The elimination of each bill saves 2.5 sheets of printed A4 paper and an envelope. Total amount of paper saved: 18,957,696 records * 12 months * 2.5 = 568,730 thousand sheets of paper.
3. One sheet of A4 paper generates 18 grams of CO₂; the amount of carbon emission reduced: 568,730,000 sheets * 18 grams CO₂ = 10,237 metric tons CO₂.

4G The 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).

The trend towards greenness in enterprises is propelled by two forces: “market and non-market.” Non-market forces come from government regulations, the market forces from supplier management. To co-exist with the environment, businesses must implement “green practices” throughout the entire supply chain. Chunghwa Telecom has been implementing such measures since 2008, and at the end of 2016, we introduced our proprietary “Green” product label and invited all our suppliers to apply for certification. This made it possible to ensure the use of energy-saving, or green energy products throughout the supply chain, from raw materials and production to packaging. In 2017, we were first in the industry to join the “CDP Supply Chain Project” to strengthen, integrate and analyze greenhouse gas emission by suppliers using the CDP platform to ensure carbon management information transparency in the Chunghwa Telecom supply chain.

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 have been explained in detail in the five-year plan mentioned above. 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.

	2015	2016	2017
Green procurement total (NT\$ million)	1,525	1,379	1,223
Accounted percentage of turnover	6.55%	5.62%	4.45%

2017 Environmental Performance



Environmental Information Disclosures

- Published CSR reports and the disclosure of environmental data to respond to the Dow Jones Sustainability Index (DJSI) every year.
- Execution of an annual greenhouse gas inventory and acquisition of ISO 14064-1 verification and certifications.
- Responded to the annual Carbon Disclosure Project (CDP) questionnaire.
- Responded to related national rating questionnaires (including Common Wealth and Global View Magazines).



Improve Energy Use Efficiency

- Merged and exploited data center spaces.
- Saved cooling energy: implemented some energy saving with **6,037** HP inverter module, sensible heat air conditioners of **33,116** RT, **9,130** highly efficient air conditioners, **2,668** RT ventilation air conditioners and **618** natural ventilation air conditioners by the end of 2017.
- Used green materials for newly constructed data centers and buildings.
- Installed solar water heaters in Telecommunications Hostels.
- Set up rainwater, underground, and condensed cooling water recycling systems for the reuse of water resources.
- Replaced lamps in the public areas and internal office buildings with environmentally-friendly LED bulbs.



Implement Green Energy

- Constructed more than **527** kWp of photovoltaic systems by the end of 2017.
- Constructed a total capacity of **17.6** kW wind power plan.
- Voluntarily supported "MOEA's green energy trial program" by purchasing **six million** kWh of green power.



Autonomous Environmental Protection

- Replaced old vehicles with environmentally friendly ones, and used electric vehicles in trials.
- Sponsored the construction of the YouBike station at the corner of Xinyi Road and Hangzhou South Road with a donation of NT\$ **1.85** million.
- Promoted clean homes, energy-saving offices, car-free days, and paperless Office Document Automation System (ODAS).
- The Taiwan Energy Conservation Patrol: focus is on increasing energy efficiency within small and medium enterprises and vulnerable social institutions.
- Set waste reduction and recycling goals.



Value-Added Products and Services

- Promoted e-bill with a marketing section.
- 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.
- iEN smart energy-saving services and promotion of 8 energy-saving products.
- Mobile device recycling: recycle bins are available at all service centers in line with the promotion of waste recycling.
- Green Stores: Aim to transform **400** service centers nationwide into "Green Stores" in 2018, and sell **3** or more environmentally certified products.
- Assisted suppliers with applications for eco-friendly product labels on their mobile communication products: Provided the related necessary information to suppliers for eco-friendly product labels.

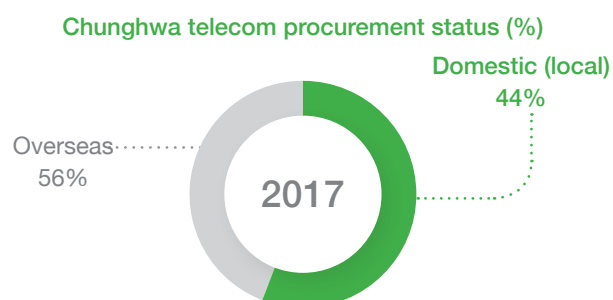
Sustainable Supply Chain

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 ESG supply chain regulations 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. We strive to establish a better connection to the world on our path towards the development of sustainability.

ESG Management Supply Chain Strategy

Strategy	Management Target	2017 Result
Integrate ESG principles into Chunghwa Telecom supplier assessment	Complete 100% of “tier 1 suppliers” CSR current status assessment in 2020	87% of suppliers completed the CSR survey questionnaire
Ensure ESG conduct of the suppliers complies with “Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co Ltd.”	Complete 100% of “critical tier 1 suppliers” ESG on-site visits and audits in 2020	CSR on-site visits and audit rate reached 84.65%
Continue communication activities to promote supplier climate change adaptation measures and emissions data management	Complete 100% of “critical tier 1 suppliers” carbon management knowledge, and education in 2020 Collect information on climate change and carbon emission from suppliers at least once a year.	The first Taiwan telecom carrier to participate in the CDP Supply Chain Project

The Chunghwa Telecom suppliers fall into three categories: property, labor and engineering. Apart from professional network communications 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 56% in 2017.



Note: Overseas suppliers include “foreign corporations, with branch offices in Taiwan and agents.”

We promote corporate social responsibilities on two levels. (1) For new suppliers just starting to learn about corporate social responsibilities, we offer encouragement, education and support during their development of the proper awareness for CSR. (2) For established suppliers who are fully aware of the need for CSR, we conduct third-party audits, issue online CSR questionnaires, organize conferences, and launch sustainability campaigns as means to engage them in a winning relationship.

	Number of Suppliers	Accounted Percentage of Turnover (%)
Tier 1 suppliers	1,471	98.32
Critical tier 1 suppliers	146	86.02
Critical non-tier 1 suppliers	28	-

Note: 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.

Overview of the Supply Chain ESG Management Results

Item	Description	2017 Target	2017 Target	2018 Target
Online Supplier CSR Status Questionnaire (%)	Require suppliers with purchase amounts of more than NT\$ 5 million to fill in the "Supplier CSR Status Questionnaire," items include: <ul style="list-style-type: none"> Corporate Ethics Labor Environment Occupational Health & Safety 	88%	87%*	88%
CHT's procurement staff subjected to CSR-related training (%)	Actions have been taken to ensure that all procurement personnel understand and comply strictly with "Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co Ltd."	100%	100%	100%
CHT suppliers bound by contracts with CSR-related terms (%)	All procurement contracts specifically require suppliers to comply with "Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co Ltd."	100%	100%	100%
Suppliers without violations against environmental protection laws (%)	Learn about supplier environmental management practices through online questionnaires	96%	98%	98%
Supplier CSR Audits	Use supplier CSR Audits to ensure that none of its critical suppliers are prone to environmental, forced labor or human rights risks.	100%	100%	100%
Audits on civil engineering/cable contractors	A total of 173 audits were conducted on 75 contractors. At the end of 2017, 43 suppliers were found to have committed violations. They were fined NT\$ 2,202 thousand.			
Safety and health on-site inspections	The Northern and Southern Taiwan Business Groups and the Mobile Business Group all have health and safety officers assigned to inspect suppliers on-site at least three times a week. Any defects discovered were notified to the relevant departments and followed up for improvements. A total of 8,580 inspections were conducted on 563 suppliers in 2017.			

Note: Due to a slight increase (0.2%) in the recovery rate of the 2017 online questionnaire compared to that of 2016, we did not reach the target (88%).

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 relationship.

Chunghwa Telecom 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
Rewards top-performing suppliers	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.
Training of professional skills	Our Telecommunication 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 2017, the institute organized 57 classes and trained 1,483 workers; 912 of whom had obtained certification.



CSR On-Site Audits and Capacity Promotion

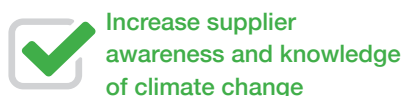
To promote awareness of CSR and ESG management in supply chain partners, SGS-Taiwan has been subject to tier 1 supplier on-site audits since 2010 in accordance with ESG supply chain principles drafted by Chunghwa Telecom. Their existing occupational safety and health provisions resulted in an on-site audit rate of 84.65% in 2017. We have undertaken to insist on an audit rate of 100% in our critical tier 1 supplier ESG on-site audits so that all our supply chain partners will be in compliance with ESG management requirements before 2023.

CHT Management Indicator	Method	Ratio
Supplier ESG auditing ratio per year	Occupational safety and health on-site audits	38.27%
Percentage of suppliers assessed in ESG in the last 3 years	Second party audits + engineering / Cable audits	Critical tier 1 suppliers: 46.38% Critical tier 1 suppliers + Critical non-tier 1 suppliers: 40%

The Guidance of Supply Chain Partners in a Response to Climate Change

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.

We made Climate Change the main theme of our supplier CSR Interchange Meeting in 2017. We invited a CDP representative and people from advanced domestic enterprises with forward-looking carbon management to share how to identify risks and opportunities brought by the climate change issue. We also formally activated and announced our membership of 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 putting 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 the environment. Our three goals for the supply chain carbon management are:



Increase supplier awareness and knowledge of climate change

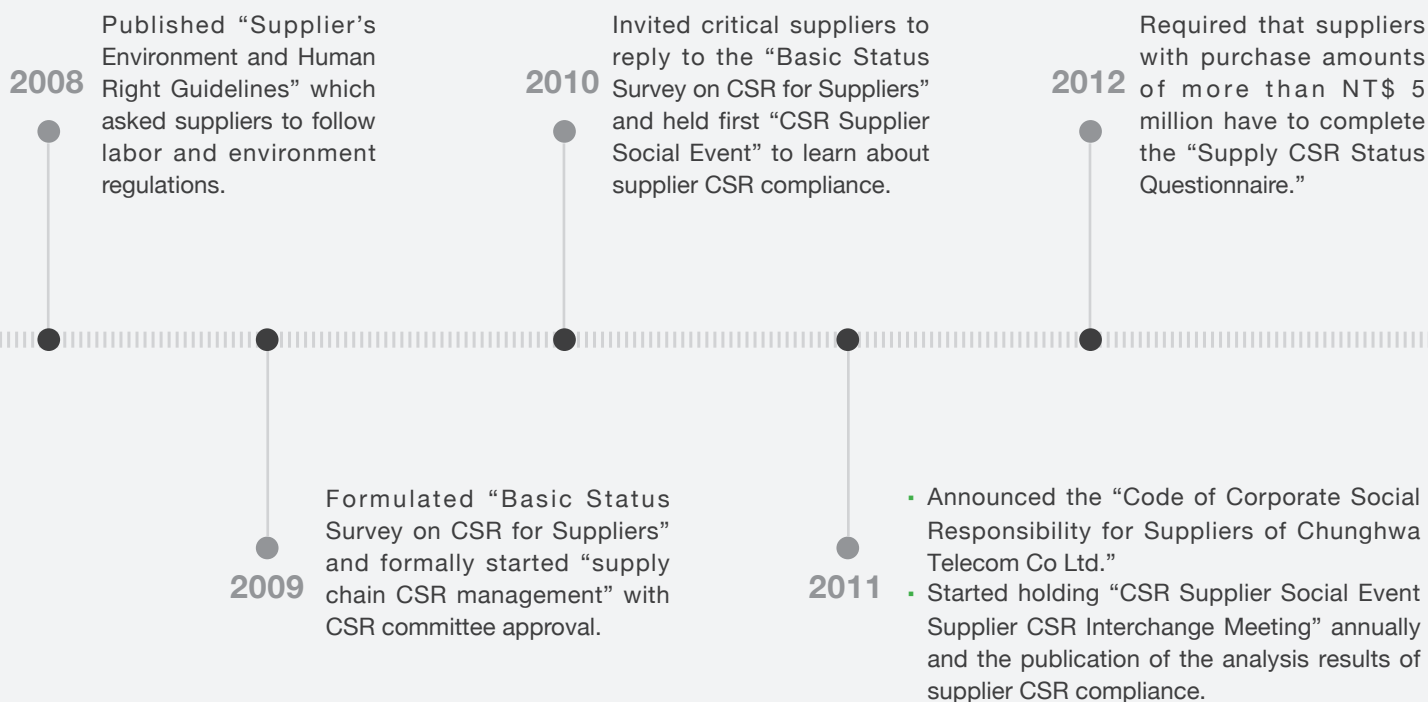


Collect greenhouse gas emission information



Communicate and encourage changes in the behavior of suppliers

Supply Chain CSR Management



2017 Supplier CSR Interchange Meeting

Chunghwa Telecom was the first industry-leader to promote supply chain ESG management action at a meeting in 2010. Regular Interchange meetings have been held every year and by 2017 seven had been held. The 2017 interchange meeting was hosted by President Chi-Mau Sheih, and hundreds of important supplier representatives participated. Before the meeting began, we formally announced our membership of the CDP Supply Chain Project. We will be using a scientific quantification method to manage supply chain carbon emission in the future and will assist our supply partners to increase their carbon management capacity and understand the real risks of carbon emission as well as associated business opportunities.



We made climate change the theme of the 2017 Interchange meeting and the invited speakers were: Wan-Yu Song of the CDP Supply Chain Project, Qi-Ming Peng, President of WeatherRisk Explore Inc, and Li-Wei Lin a director from AU Optronics Corp. They shared their ideas with participating suppliers about how their enterprises had understood and responded to the impact of the climate change issue after the “Paris Agreement” took effect. Five suppliers received commendation during the meeting with respect to the “Suppliers CSR second-party audit” and the online questionnaire “Information Disclosure.” They were: Sercomm Corporation, D-Link Corporation (TAIWAN), Ta Ya Electric Wire & Cable Co Ltd, CTC Union Technologies Co Ltd, and Interactive Digital Technologies Inc. They received trophies in appreciation of their cooperation and support. Our supply chain management is about to reach the next phase which is aligned with the international low-carbon economy and this will guide the supplier chain towards low-carbon sustainability.

2014

Commissioned SGS-Taiwan, a third party inspection institution, to launch the “Suppliers CSR second-party audit.”

2015

Established the “Chunghwa Telecom Co Ltd Procurement Grievance Procedures” to give suppliers the means to raise complaints regarding Chunghwa Telecom purchasing activities in an open and transparent purchasing environment.

2013

- Became the first telecom service provider to implement the “Supply Chain CSR Audit and Assistance.”
- Stipulated the “Chunghwa Telecom’s Operating Guidelines for Qualifying Material Suppliers” to manage the implementation of supplier CSR and ethical business practice.

2016

Organized the first “Sustainable Environmental Visit.”

» 2017



- Implemented the “Suppliers CSR second-party audit” continuously and held the “Sustainable Environmental Visit.”
- Formally announced the CDP Supply Chain Project membership and became the first domestic telecom carrier to participate on the international platform and once again created a sustainable value chain milestone.



» SMART-I



Minimize the digital divide and create digital opportunities



The LBG assessment of investment in the community



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



- Training volunteers for the visually impaired
- Corporate volunteer action



Short-Term

Effort to make telecom services more accessible by adding locations to the Digital Good Neighbors program

Long-Term

Social investment will reach 1% of revenues by 2025



GRI

Social investment: NT\$ **1,164,080** thousand

GRI

Digital Good Neighbors: **92** locations



The Social Value Guide

The SDGs CHT contributes to in this section





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 sustainabilities.

In 2017, we promoted the “5I SDGs” initiative: “I Helping, I Sharing, I Learning, I Programming 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. Expanding partnerships in collaboration with NPO/NGO, helped us support the sharing of knowledge and technology resources. This enabled us to create a connection between the underprivileged and other diverse groups in this digital era. Technology allows us to link to the good cycle and realize a win-win situation for digital human rights and an innovative economy at the same time.



Spirit

Win-win is beneficial to the implementation of CSR; beneficial to the digital economy and beneficial to global sustainability development by connection with SDGs.



Vision

To construct a digital inclusion society, we use ICT technology as an instrument and corporate volunteers as the point to go deep into Taiwan communities to promote and popularize establishments. We also increase social innovation and information equality through R&D innovation and actual practices as well.



Goal

Using service popularization, ICT technology R&D and corporate volunteers, we will complete the following goals:

- To promote and popularize service establishments and provide accessible and sufficient service support
- Cultivate digital information literacy in all groups
- R&D or purchase information assistance measures for the underprivileged

Corporate Volunteer Participation in 2017 Taipei Marathon

The “2017 Taipei Marathon” started on December the 17th and attracted more than 10 thousand participants. CHT leads the corporate sports culture internally, in order to present its support of the sports industry, we recruited corporate volunteers to respond to the event. More than 500 of our employees signed up within a week. After extensive selections and draws, we finally selected 50 corporate volunteers to act as support persons to the runners at the Renai-Xinsheng intersection supply depot, which is about five kilometers from the site, and encouraged them with actual practices.

The Chunghwa Telecom Chairman Yu Cheng said: “We are dedicated to promote sports fashion and build a healthy enterprise culture. Through the guidance of managers and help from volunteers, we encourage employees to exercise regularly to maintain a sustainable and healthy corporate culture. We share our internal successful experience to push popularization of exercise nationwide, and we'll keep recruiting corporate volunteers to improve our social responsibilities. In the future, Chunghwa Telecom will continue to lead corporate volunteers to do more different tasks and help to create a happy and healthy Taiwan.”





Video record
of the event



5I SDGs Corporate Volunteer Actions and Goals

	Targets	5I	Corporate Volunteers Actions
 <p>1 NO POVERTY</p>	<ul style="list-style-type: none"> By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters 	I Sharing	<ul style="list-style-type: none"> Economic support in remote areas Sustainable local traveling Ecology tours IoT disaster prevention
 <p>2 ZERO HUNGER</p>	<ul style="list-style-type: none"> By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment 	I Sharing	<ul style="list-style-type: none"> Economy support in remote areas
 <p>3 GOOD HEALTH AND WELL-BEING</p>	<ul style="list-style-type: none"> By 2020, halve the number of global deaths and injuries from road traffic accidents By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination 	I Sharing	<ul style="list-style-type: none"> Corporate volunteers of Digital Good Neighbors promote sex education, the prevention of drug abuse, AIDS, alcoholism, and reduction of the death and injury rate of road accidents
 <p>4 QUALITY EDUCATION</p>	<ul style="list-style-type: none"> By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrollment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries 	I Programming I Learning I Helping	<ul style="list-style-type: none"> Online distance tutoring PC teaching for the visually impaired Social innovation service Scholarships
 <p>6 CLEAN WATER AND SANITATION</p>	<ul style="list-style-type: none"> By 2030, achieve universal and equitable access to safe and affordable drinking water for all By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity 	I Protecting	<ul style="list-style-type: none"> Environmental education promotion Sewage water re-usage Mountains, forests, wetlands and rivers adoption near business locations
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<ul style="list-style-type: none"> By 2030, ensure universal access to affordable, reliable and modern energy services By 2030, increase substantially the share of renewable energy in the global energy mix 	I Protecting	<ul style="list-style-type: none"> Establishment of Renewable energy sources



Targets		51	Corporate Volunteers Actions
8 DECENT WORK AND ECONOMIC GROWTH 	<ul style="list-style-type: none"> Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization 	I Protecting	<ul style="list-style-type: none"> Support of social enterprise Protection of labor rights Sustainable local travel Volunteer ecology tour guide
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<ul style="list-style-type: none"> Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020 	I Sharing	<ul style="list-style-type: none"> Co-constructed base stations, popularized service applications after the construction of the hardware facility
10 REDUCED INEQUALITIES 	<ul style="list-style-type: none"> By 2030, progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard 	I Sharing I Helping	<ul style="list-style-type: none"> Economy support in remote areas Protection of labor rights
11 SUSTAINABLE CITIES AND COMMUNITIES 	<ul style="list-style-type: none"> By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries Strengthen efforts to protect and safeguard the world's cultural and natural heritage By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels 	I Helping	<ul style="list-style-type: none"> Smart city, smart urban and rural products and services Smart navigation Aboriginal culture preservation IoT and circular economy Disaster prevention in cities and communities
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	<ul style="list-style-type: none"> By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse Promote public procurement practices that are sustainable, in accordance with national policies and priorities Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products 	I Protecting	<ul style="list-style-type: none"> Promotion of good environmental habits Reduction of office waste Supply chain management Sustainable local travel
13 CLIMATE ACTION 	<ul style="list-style-type: none"> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning 	I Protecting	<ul style="list-style-type: none"> Environmental education promotions
14 LIFE BELOW WATER 	<ul style="list-style-type: none"> By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution 	I Protecting	<ul style="list-style-type: none"> Coastal cleanup volunteer Sustainable local travel

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.

In 2017 Chunghwa Telecom established 35 sites for accessibility to telecom services in long-term support of a government initiative to protect fundamental rights to communications.

Chunghwa Telecom Digital Inclusion Strategy



Strategy 1 Minimize the Digital Divide

Chunghwa Telecom Foundation Digital Good Neighbors

- The Digital Good Neighbors was located in **92** places which is **1.2** times of growth compared to 2016

The annual investment of telecommunications universal service is approximately 8.6 hundred million

- Telephone services for more than **230,000** homes in **85** rural communities in Taiwan.
- Data communication service for more than **110,000** households
- More than **53,000** public telephones installed across 22 counties/cities
- Data connection service for more than **500** high schools, primary schools, and public libraries.

Preferential subsidies for the disadvantaged groups

- Care for **18,112** households of the disadvantaged groups, with subsidies amounting to NT\$ **39,054,000**

Equipment support 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 **96%**



Strategy 2 Create Digital Opportunities

Chunghwa Telecom Foundation Click Taiwan

- Click Taiwan: videos totaling more than **2,000** minutes were recorded and **44** school students went deep into **57** different villages

Hami Software Development Contest

- The innovative application challenge has been running for nearly **10** years to promote digital development in Taiwan

PC education/Network tutoring

- Read with You “Community Network Tutoring” has tutored near **2,300** students over 10 years and the tutorial hours has now reached **76,259**
- iPhone usage training courses for the visually impaired were regularly held and **50** used iPhones were donated in support of the visually impaired assistance plan

Assistance application development/Employment

- Development of accessible assistance – the Assistance App for the Visually Impaired has been downloaded **50,826** times.
- 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 social benefits and business opportunities 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.





» Minimizing the Digital Divide

In 2006, Chunghwa Telecom created the Chunghwa Telecom Foundation with the purpose of implementing corporate social responsibility, through long-term cultivation of our core competence, to communities and tribes, and the urban fringe, as well as areas with a relative lack of resources. The Foundation is a platform of resources for connection and the rearrangement of “good” materials shared to needed locations. It has become the strength that supports and assists the advancement of these local areas.

■ The Chunghwa Telecom Foundation – The Digital Good Neighbors

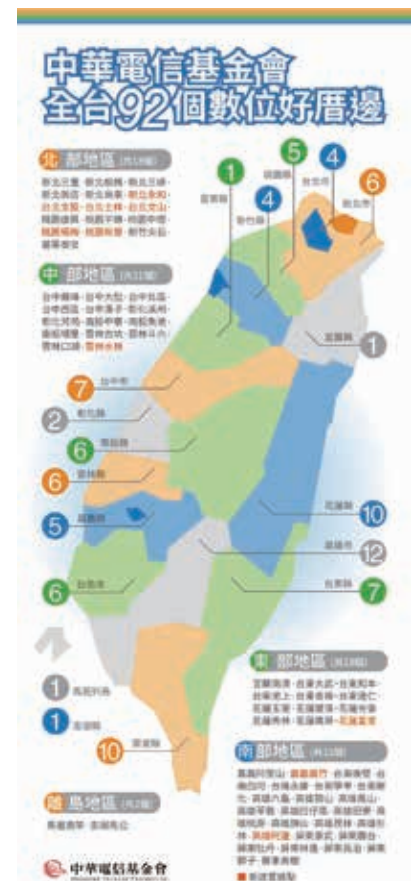
To minimize the digital divide between cities and counties, the Chunghwa Telecom Foundation collectively promotes digital application with local organizations as a resource platform. NGOs that have a demand for resources can apply to the “Digital Good Neighbors.” The foundation evaluates all local demand for digital resources, selects remote tribes that lack resources and provides senior services, child and youth education, care for the disadvantaged and new immigrants. This is done in close cooperation with local social welfare institutions to minimize the digital divide and guarantee basic digital rights to everyone.

The “Chunghwa Telecom Digital Good Neighbors” provides program resources according to local need, these include digital training courses, youth volunteer events, art and reading activities, CHT Women’s Basketball, industrial assistance, recorded video learning and more. Up to the end of 2017, we were cooperating with 92 different NGOs and our tracks were all over Taiwan. There were Chunghwa Telecom Digital Good Neighbors locations in some really far away places, including the Qalang Smangus Tribe, and in surrounding islands.

■ Continuous Promotion of Digital Application and Encourage Utilization of Digital Equipment

Although school education includes PC information courses, time is often limited and also not every household has PC hardware. We extend learning to many communities through “Digital Good Neighbors” locations and encourage “I Learning” and the utilization of digital equipment of “5I SDGs” we support. In 2017, 1,691 hours of training was given to 4,000 persons.

The Presbyterian Church in the Tainan Houbi District has cooperated with the foundation in the cultivation of video recording training courses for six years. The training starts with basic image making and composition and proceeds to storytelling, scriptwriting, interviews and filming (video) practice exercises. We have accumulated a collection of excellent student material. During the 2017 summer vacation, students combined years of learning to jointly create an MV. This was the result of comprehensive education in a local area through the auspices of the Foundation and encouraged local storytelling through videos.



In recent years, the demand for tuition in the use of mobile devices by the elderly has risen. In 2017, we initiated smartphone courses at the Yong le community in Linbian Township, Pingtung County. We started with an introduction to the use of a mobile phone and the elderly in the community have now learned to use Facebook, Line, image software and karaoke software to enrich their daily lives and there is now a considerable amount of communication between neighbors. We encourage lifelong learning by the elderly through “live and learn.”



More “Digital Good Neighbors” >



Cultivation of Local Characteristics and Assistance in Sustainable Development

Every community has its own characteristics and we base our development direction on these characteristics and introduce different project contents to assist local sustainable development. In 2017, the foundation collaborated with the “Ifkids Theatre” in a three-day long community tour of art teaching courses for children to reveal individual learning and artistic capacity. The children also took part in dramatic performances that gave them the chance to be part of something that would become an unforgettable experience. We also promoted art popularization, and held community reading courses to cultivate independent and creative thinking abilities of the children.

To promote local business, the foundation often holds “festive gift” fairs each year and encourage corporate employees and departments to purchase products of local businesses. At the end of 2017, we invited six local businesses to hold a festive activity of selling local products as souvenirs to support high-quality local businesses.

In addition, we have long been cultivating domestic women basketball players and bring basketball to the community and tribes through “CHT Women’s Basketball Team.” To discover and cultivate more domestic potential seeded players in basketball, we held “Public Welfare 3 on 3 Basketball Event” around the nation. In 2017, three public welfare competitions were held in Taoyuan, Kaohsiung and Penghu with the participation of 548 teams.



Most Digital Good Neighbors were at inconvenient locations and funds were difficult to raise. Getting performing arts groups to come was also very difficult. Through our Art Project, we brought the art groups into these communities and tribes in 2010 to correct this situation.



We invited local businesses to attend festive gifts “pre-order fairs” to adjust to the demand and increase interaction between the industry and the consumers by physical sales.



To discover and cultivate basketball seeded players, our CHT Women’s Basketball Team participates in social activities to introduce national champion level players to the communities and tribes.

2017 Social Contribution of the Foundation

Item	Digital Learning	Digital Good Neighbors	Click Taiwan	Social Marketing	CHT Women's Basketball Team	Administrative Expense
Unit: NT\$ thousand	5,091	6,169	3,000	5,471	22,188	16,369

■ 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.

Preferential Plan	Preferential Content	2017 Preferential Amount (NT\$ thousand)	2017 Beneficiaries
Public Phone Card Subsidy	An NT\$ 100 IC public phone card for each disadvantaged local telephone applicant. Two IC public phone cards are provided for the visually impaired each year	1,850	3,594
Caring Series Rate Plan (Mobile)	<ul style="list-style-type: none"> Double communication hours at the original rate plan for the visually impaired, hearing impaired and speech impaired. 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. 	5,238	Average of 1,450
Broadband Preferential Plan for Low-income Households	<ul style="list-style-type: none"> 50% off on 16M/3M, 35M/6M, 60M/20M, 100M/40M and 100M/40M monthly rate. 50% off on ADSL 2M/64K&5M / 384K monthly rate. 	7,197	1,637
4G Mobile Data Plan for the Disabled	Disabled persons are entitled to an NT\$ 200 discount on monthly subscriptions when subscribing to the 4G 636 plan and above plus Wi-Fi hotspots for NT\$ 89.	25,766	7,925
Broadband Preferential Plan for the Disabled	<ul style="list-style-type: none"> 5% off on HiNet 16M/3M, 35M/65M, 60M/20M and 100M/40M monthly rate. 15% off on ADSL 5M /384K monthly rate. 5% off for other speed rates. 	277	671
MOD Caring Project and Project for the Socially Unfortunate	<ul style="list-style-type: none"> Platform charges: A 50% discount (NT\$ 45 / month) from the work completion date. 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. 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. 	4,098 (Two years discount estimated)	Average of 2,811
Healthy Net Plan	<ul style="list-style-type: none"> 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. 	28.5	24
Welfare Public Telephone	<ul style="list-style-type: none"> Installed 110 cm from the floor in public areas for the convenience of the disabled. 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. A slot for inserting an IC card is designed on the side of all public telephone sets for the convenience of the visually impaired. 		
Message Relay Service for the Hearing and Speech Impaired	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.		

■ Seamless Transition to 4G to Ensure Digital Equality

Because the 3G concession operation license will be suspended at the end of 2018, our “Mobile Broadband Business Operation Plan” has been approved by NCC to ensure 3G customers can have a convenient service after switching to 4G.

To satisfy rights with respect to the suspended 3G business, we will work out an accurate and simple and ethical solution for the underprivileged and the elderly. We will allocate suitable mobile phones to assist the original 3G consumers to transform smoothly into 4G to ensure their digital equality rights.

» 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 universe.

■ Chunghwa Telecom Foundation—Click Taiwan

The purpose of this program is to give college students opportunities to understand communities, tribes and local cultures. To this end, the foundation cooperated with the Department of Radio & Television of National Chengchi University in 2009 in “Click Taiwan.” During summer vacations, university students were invited to provide services for 15-20 days at various Digital Good Neighbors. They were encouraged to apply what they learned “while serving while recording” in the local communities and at the same time capture local stories on camera. The “Click Taiwan” encourages young adults to make real changes to their lives, to step outside their comfort zone and experience different things, to learn about themselves and the environment they grew up from a different perspective.

The 2017 9th “Click Taiwan” program received 364 applications from 156 departments in 76 universities nationwide. Fifty students were selected to perform services and capture stories at 23 Digital Good Neighbors in remote areas. These students came from different backgrounds, schools and departments, and had devoted themselves to community services by contributing their own specialties. This included the creation of stories, games designed for grandparent-grandchild interaction, production assistance with video material advertising tribal tours, the promotion of oral hygiene, event recording, graffiti art and photography courses. They captured real motivating stories with their cameras.

To encourage more youth participation and get a better effect, we held photography exhibition excursions through the campuses of different colleges nationwide to share theme videos within school courses. In 2017, we held 29 “Click Taiwan” campus photography exhibition tours, with the participation of more than 2,300 students. They were all encouraged to return to their hometowns to serve their local communities.



The 16-day scheme inspired my passion for life, curiosity about our land, the spirit of respect and the need to cherish the earth and the people.

National Taipei University Department of Social Work, National Pingtung University of Science and Technology Department of Business Administration



Meeting all of you was a happy and fortunate event. I carried memories, feelings and blessing with me when I went back to my ordinary life. You all made me want to be a better person.

The Department of Philosophy, Tunghai University,
National Taipei University of Education Department
of Social and Regional Development



To describe my days at Kouhu Township, I would rather say, teach us how to live a better life than “serving while recording” to describe the “Click Taiwan.”

Department of Advertising,
National Chengchi University

More “Click Taiwan” >

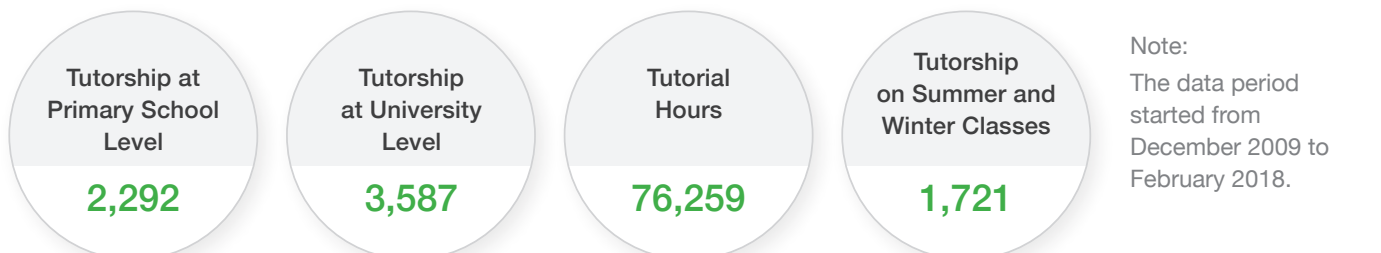




PC Education/Network Tutoring

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.”

Goal	<p>By 2022, we hope to:</p> <ul style="list-style-type: none"> Assist 2,900 in the remote areas students with network tutoring Accumulate more than 4,500 volunteers to participate in network tutoring Accumulate more than 100,000 volunteer hours for network tutoring and training
Characteristic	Online education 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.
Method	To realize the spirit of stakeholder engagement, we have cooperated with the Center of Care Services for Rural Area Education in Taiwan, and the Fu Jen Catholic University, in online education. University students helped the cause with one-on-one tutoring to take care of the school children in the rural villages and disaster zones.
Participant	Pingtung Feng Lin Church, Pingtung Chao Chou Boys Town, the Taitung Kaulahan Association, Taitung Chinese Love & Joy Charity Association, Taitung Fukid Tribe, Kaohsiung Yuanfu Community, the Tainan Yellow Ribbon Network Association, Chiayi Fu Jen High School, the Orchid Island and Matzu High Schools.
Major Result	<ul style="list-style-type: none"> University students helped the cause 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. Ten years of effort by e-Tutor partners 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 and radically improved the opportunities available to the children.





I Helping – Corporate Volunteers Training

We take advantage of corporate information and communication resources to support the visually impaired. In 2017, we collaborated with the Taiwan Telecommunications Industry Development Association to respond to the Suang Lien Foundation promotion of “Secondhand iPhones For the Visually Impaired Assistance Plan.” In addition to a donation of 50 used phones with Senao International, we also provided a free Wi-Fi training classroom for the “iPhone Course for the Visually Impaired” to ensure them the same opportunities and basic communications rights as others.

The Chunghwa Telecom corporate volunteer assistance plan entered its third stage in 2017. The corporate volunteers reset all the collected iPhones to “factory setting” status, each visually impaired persons who had completed the training was given an iPhone.



Assistance Application Development/Employment



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 2017, the App had been downloaded 50,826 times. It is one of the most convenient and useful personal assistants available.

The Senior Citizens App



“Senior Citizens App” was the first application developed by Chunghwa Telecom and the Institute for Information Industry that addresses the needs of the elderly. The App has several useful features including: phone assistance, a contact list, caller announcement, weather inquiry, health reminder, emergency contact, photo sharing, and video streaming. This App will make Smartphones and Tablets more user-friendly for older people and further minimize the digital divide.

Results Achieved

The video broadcast function that enables senior citizens to enjoy classical music over 4G has been completed. This service has been used about 4,000 times and the App had been downloaded 9,576 times by the end of 2017.



Future Target

Completion of an iOS version of the Senior Assistant App will include a push notification function to remind users of video broadcasts, news, software updates, self-development and health information.





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. This joint effort led to the unveiling of the first “Total Solution” in Taiwan. This includes research and development of a computer-assisted telephone system, the improvement and the training and supervision of talent and the development of skill in customer phone service personnel who respond to the needs of the visually impaired.

1. 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.
2. By the end of 2017, the “Total Solution” had provided eight working opportunities for the satisfaction surveyors of Chunghwa Telecom (including one visually impaired manager), who are responsible for the production of about 5,000 valid questionnaires each month. There were another fifteen customer service personnel (12 visually impaired and 3 supervisors) for the Taipei City 1999 hotline. They process an average of 16,055 calls each month.
3. We initiated new employment opportunities for persons with spinal injuries. Two with severe injury serve as 4G visual assistance service persons. They assist with image identification for the visually impaired through the 4G cloud services. This helps promote their quality of daily life and independence 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.

QR Code-Charity Donations

In 2013, the Company introduced a QR code-based mobile payment service that allows users to make donations by simply scanning the appropriate QR Code. This makes public welfare donation more intelligent. The feature enables funds to be raised through other channels, in addition to those at convenience stores and websites.



The SDGs CHT
contributions to
in this section



Public Policy Participation





In 2017, Chunghwa Telecom donated about NT\$ **440 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	Qualification
The Chinese Institute of Electrical Engineering	Presenting opinions on the telecom policies of the government through the telecom symposium held by the institute, and we sponsor the activities of the institute to support the industries.	Member
Taiwan Intelligent Aerotropolis Association	Chunghwa Telecom leads the planning and operation of the association to develop new business opportunities and the industrial prowess of Taiwan, and develops the kind of skills needed for exporting solutions around the world.	Member
Taiwan Telecommunication Industry Development Association	The platform serves for interchange among the industry peers. With collective consultation and discussion on important issues, this association plays a role as the bridge between the industry and the competent authority. A mobile communications construction group has been established to discuss items such as the co-construction of base stations, shared stations or antenna port preservation.	Member
Chinese International Economic Cooperation Association	We are invited to deliver addresses on special topics and assist in the promotion of international exchange and business joint venture. We cooperate in product distribution to promote business and media exposure at conferences held in Taiwan.	Member
TCCDA (Taiwan Customer Service Center Development Association)	Organizes frequent seminars and introduces the latest customer service system techniques, operation management, and the concept of service and business innovation. This is helpful to Chunghwa Telecom for the improvement of management and customer service.	Member
Pacific Telecommunications Council (PTC)	Contact with worldwide telecom corporations at regular intervals for business deals in nearby locations. This provides substantial results in overseas business expansion.	Member
Business Council for Sustainable Development of Taiwan (BCSD-Taiwan)	Good for the review of sustainable corporate development strategy and the introduction of related management tools. Controls the dynamics of the international development of CSR issues and is helpful with other-than financial performance information disclosure.	Member
Cloud Computing & IoT Association in Taiwan	Helps to get a grip on the information of the government cloud and business opportunity and consultation with the government on the cloud industry through the association. In addition, it also increases international and cross-strait interaction opportunities.	Member
Taiwan Electromagnetic Industry-Academia Consortium	The research consortium organized by the university faculties specializes in electromagnetics across Taiwan and has strong potential for the research and development of 4G/5G wireless technology.	Member

Public Policy Participation 1- TIAA 2017 Foresight, Innovation, Intelligent Aerotropolis Forum

In accordance with the government decision to implement the “Taoyuan Aerotropolis Plan,” we invited 70 international and national leaders, representing the Intelligent Aerotropolis industrial ecosystem, to establish the “Taiwan Intelligent Aerotropolis Association (TIAA).” Having envisioned “Forge a city of smart logistics and of industrial advance technologies,” the TIAA exists to offer insightful advice for the development of the Taoyuan Aerotropolis.

TIAA had already completed a proposal for “Regulatory Guidelines for Establishing Taiwan as the Asia Silicon Valley” and made policy recommendations about its realization. Representatives from the Executive Yuan Technology Report Office and Taoyuan City Government were invited to the forum for a briefing on the TIAA recommendation, so that the industry participants, government officials and the academia could achieve consensus about the “Asian Silicon Valley.” In addition, TIAA collaborated with the Taoyuan City Government to hold the “Foresight, Innovation, Intelligent Aerotropolis Forum” in 2017, which attracted more than 300 government officials and academics.

Taiwan Intelligent Aerotropolis Association: <http://www.tiaa.com.tw/>



Public Policy Participation 2 – Paying Attention to Communications Convergence Development

Chunghwa Telecom operations are very closely linked to changes in government policies or regulations. The Company is in regular contact with government agencies and authorities to ensure they are informed about any possible changes in important policies and regulations. The most important is concern about ICT industry competitiveness and “Communications Convergence Plans.”

The National Communications Commission (NCC) announced new policy guidelines in August 2016 that include the adjustment and re-drafting of the existing regulatory framework for digital convergence. In April 2017, the NCC passed drafts of the “Telecommunications Management Act” and the “Digital Communication Act” and reported to the Executive Yuan for deliberation. The Executive Yuan passed the two drafts in November and submitted them to the Legislative Yuan. The drafts are now being examined by the Transportation Committee of the Legislative Yuan. Chunghwa Telecom will keep monitoring the situation concerning these amendments and express an opinion when appropriate.



Public Policy Participation 3 — Supporting Development of the Gaming Industry

Chunghwa Telecom supports the government in the development of the gaming industry and supported the really big gaming competition in 2017. In addition to arranging HiNet high-speed broadband at the semi-finals and the finale in six municipalities, we also broadcast the competition through the Internet and live broadcast platform.

We will continue to connect the resources of game-related industrial chains through our strength in communications and firmly support Taiwan gamers and potential gamers in building a high-quality gaming environment. In addition to driving the growth momentum of the Taiwan gaming industry, we also fully support our local gamers.



Public Policy Participation 4 — Live Broadcast from the Legislative Yuan on the MOD Platform

Chunghwa Telecom has the biggest audio-visual platform MOD in Taiwan that provides abundant visual content and a strong public information communication function. This indirectly promotes information transparency in Parliamentary procedures and helps to achieve the government goal of transparency.

The Legislative Yuan completed the establishment of a live broadcast facility in February 2017. It can broadcast directly through the Chunghwa Telecom MOD, cable and wireless television and the IVOD parliamentary procedures broadcast system. Current figures show an audience of 16 million people watch Congress through the exclusive 123 and 124 channels. The parliamentary procedures broadcast system not only covers the Legislative Yuan meetings but records and broadcasts committee meetings and consultations amongst political parties. MOD also has a watch on-demand function to play past proceedings. The general public can check the situation in Congress and watch the development of Laws through the Internet at any time.



Public Policy Participation 5 – Sponsoring the Taiwan Lantern Festival for 20 Consecutive Years

Chunghwa Telecom has been sponsoring the main Taiwan Lantern Festival for 20 consecutive years. Since 1999 we have continued to light up the hearts of the people of Taiwan.

In 2017, the main lantern of the Taiwan Lantern Festival was designed to demonstrate three main themes of “Friendliness to the Earth,” “Cultural Diversity ”and “Indigenous Hometown.” The spirit of the festival was extended to sub-themes such as “LOHAS Sustainability.” We also reinforced the 4G quality all around Taiwan during the festival.

We listen and care about the demands of our stakeholders. We arranged for services at all the 12 different festival locations around Taiwan and the network equipment was monitored by Chunghwa Telecom engineers throughout the event. Through the widest range of mobile networks, the largest number of base stations and the maximum 4G bandwidth, the public can take pictures, check in and share information more smoothly.



Public Policy Participation 6 – Support Equipment for Major Events

Chunghwa Telecom has been supporting major sports events and competitions in Taiwan for a long time. We provide flawless communication equipment and digital services and spare no effort in providing the highest level of service. In 2017, we sponsored the Summer Universiade with the social participation amount of NT\$ 100 million. We've achieved the following:

1. Planned the network construction and transmission for 80 different event locations in Taipei, New Taipei, Taoyuan and Hsinchu.
2. Deployed more than 400 circuits and mobilized more than 2,500 technicians and engineers.
3. Constructed international and national network system for media filing and exclusive optical fibers and VPN network for the competition broadcast.
4. During the Taipei 2017 Universiade, the IDC cloud information center at Banqiao operated for 24 hours without a break and provided excellent quality, security, information protection and monitoring to ensure network and information safety.





CSR Performance Overview

	Indicator	2015	2016	2017
Economic Contribution	Earnings per share	5.52	5.16	5.01
	Capital expenditure (NT\$ 100 million)	250.8	235.2	268.8
	Proportion of local procurement (%)	71	49	56
Human Capital	Total number of employees (person)	23,141	22,654	22,406
	Female employee ratio (%)	28.25	28.47	28.43
	Female executive ratio (%)	25.16	25.41	25.86
	Average employee training hours (hours)	47	46	43
Energy consumption	Total energy consumption (MWh)	142,092	140,438	136,269
	Total energy consumption (GJ)	5,115,312	5,055,768	4,905,684
Renewable Energy	Solar Power Stations Capacity (kWp)	214	419	527
Greenhouse Gases	Total emissions (Scope 1 + Scope 2) (t-CO ₂ e)	834,745.37	839,172.07	832,977.46
	Scope 1 emissions (t-CO ₂ e)	26,994.30	27,345.62	30,873.98
	Scope 2 emissions (t-CO ₂ e)	807,750.98	811,862.45	802,113.48
	Scope 3 emissions (kg-CO ₂ e)	263,495	240,879	267,133
Waste	General waste (metric tons)	3,838	4,706	4,389
	Recycling lead storage battery (piece)	32,311	21,781	32,264
Water	Total water consumption (metric tons)	2,473,493	2,479,621	2,519,057
	Recycled water (metric tons)	4,211	14,087	7,614
Social Investment	Total amount of social investment (NT\$ thousand)	910,230	1,038,431	1,164,080
	Corporate volunteer service hours (hours)	36,049	13,436	14,201
	Telecom fee concessions for disadvantaged group (NT\$ thousand)	35,192	33,435	39,054



Assurance Statement



ASSURANCE STATEMENT

SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE CHUNGHWA TELECOM CO., LTD.'s CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2017

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 2017 (hereinafter referred to as CSR Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the text, and data in accompanying tables, contained in this report.

The information in the CHT's CSR Report of 2017 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 2017.

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 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 Global Reporting Initiative Sustainability Reporting Standards (2016)
- 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 has 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, EICC, 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 2017 verified is accurate, reliable and provides a fair and balanced representation of CHT sustainability activities in 01/01/2017 to 12/31/2017.

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. The report also appropriately responds to the content elements requirements of The IIRC International <IR> Framework.

AA1000 ACCOUNTABILITY PRINCIPLES (2008) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

Inclusivity

CHT has demonstrated a great 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.

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 (2016) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

The report, CHT's CSR Report of 2017, 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.

Signed:

For and on behalf of SGS Taiwan Ltd.



David Huang, Director
Taipei, Taiwan
13 June, 2018
WWW.SGS.COM



AA1000
Licensed Assurance Provider
000-8



GRI Standards Index

» The Management Approach and Its Components

Material Topic	How We Manage the Topic
Economic Performance	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.
Anti-Corruption	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.
Anti-competitive Behavior	
Environmental Compliance	We have created an “Environmental Sustainability Team” under the “CSR Committee” that specializes in determining short, medium and long-term environmental goals. The team exists to make sure that issues such as energy conservation, carbon reduction, and environmental protection are addressed in the Company’s operational plans, and to outline codes of conduct, manuals, green energy standards and greenhouse gas reduction targets.
Employment	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.
Customer Health and Safety	All products and services of Chunghwa Telecom are offered with user instructions that describe product nature and applicable information. Impacts of excessive usage have been taken into consideration during the design phase and gentle reminders are given at the time of the sale.
Marketing and Labeling	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.
Customer Privacy	We have a Personal Information Protection Task Force created under the Information Strategy Committee; its duties are to execute the Committee’s policies and perform personal information risk assessments monthly. All key business activities that are have prone to information risks have been audited and certified by a third party.
Socioeconomic Compliance	Decent management and compliance with the law is the foundation of our operations, to ensure that all operations are carried out in accordance with social and economic standards, Chunghwa Telecom and its institutions all operate in accordance with business-related regulations.

Purpose of the Management Approach	Policy	Goal & Target (Page Number)	Grievance Mechanism
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"	16	<ul style="list-style-type: none"> Shareholder hotline: 2394-1845 Investor hotline: 23445488
To effectively manage and ensure that all operating activities are compliant with commercial, marketing, and integrity principles, and to eliminate corruption.	"Business Integrity Principles," "Behavior Guidelines," "Corporate Governance Principles"	17	<ul style="list-style-type: none"> Complaint Investigation Committee Grievance hotline: 0800-080998
To ensure that the Company's operations are free from violations of environmental regulations.	-	82-83	-
To ensure that employees' employment and work rights are protected.	"Employment Contract," "Business Integrity Principles," "Behavior Guidelines," "Corporate Governance Principles"	55	<ul style="list-style-type: none"> Complaint Investigation Committee Grievance hotline: 0800-080998
To ensure that the products and services offered do not pose any health and safety risk to consumers.	"Distribution Sales Aid Management Guidelines," "Distribution Sales Aid Management Policy," "Marketing Policy"	72-73	<ul style="list-style-type: none"> Telecom service center: 0800-080-123
To protect consumers' rights to information and ensure the clarity and transparency of marketing information.	"Distribution Sales Aid Management Guidelines," "Distribution Sales Aid Management Policy," "Marketing Policy"	72	<ul style="list-style-type: none"> Telecom service center: 0800-080-123
To ensure that customers' personal information is strictly protected.	"Customer Personal Information Gathering Advice Clause," "Information Security Policy," "Information Security Management Policy and Implementation Rules"	74	<ul style="list-style-type: none"> Telecom service center: 0800-080-123
To ensure that the Company's operations are free from violations of environmental regulations.	"Business Integrity Principles," "Behavioral Guidelines," "Corporate Governance Principles," "Distribution Sales Aid Management Guidelines," "Distribution Sales Aid Management Policy," "Marketing Policy," NCC's "Regulations for Administration of Base Stations of Mobile Communications Network Businesses"	72,80	<ul style="list-style-type: none"> Complaint Investigation Committee Grievance hotline: 0800-080998

» Evaluation of the Management Approach

Material Topic	Mechanism for Evaluation	Result of the Evaluation (Page Number)	Adjustment
Economic Performance	Independent directors, supervisor system, internal audit and evaluation by the relevant authority	16	None
Anti-corruption	Internal audit, communication/grievance system (including hotlines, emails, and specialized departments), annual online tests, TWSE corporate governance evaluation	17	None
Anti-competitive Behavior	Internal audit, communication/grievance system (including hotlines, emails, and specialized departments), annual online tests, TWSE corporate governance evaluation	17	None
Environmental Compliance	Corporate Governance Evaluation	82	None
Labor/Management Relations	TWSE Corporate Governance Evaluation, Employment Contract	55	None
Customer Health and Safety	TWSE Corporate Governance Evaluation, NCC's "Regulations for Administration of Base Stations of Mobile Communications Network Businesses"	72	None
Marketing and Labeling	NCC's telecommunication service quality survey, communication/consumer complaint report	72	None
Customer Privacy	Grievance system, system certification (ISO 27001, BS 10012), internal auditor certification, TWSE corporate governance evaluation	74	None
Socioeconomic Compliance	TWSE Corporate Governance Evaluation, NCC's telecommunication service quality survey, communication/consumer complaint report	72	None

GRI 103 Management Approach	Disclosure Item	Page Number
	103-1 Explanation of the material topic and its boundary	6-9, 114-115
	103-2 The management approach and its components	114-115
	103-3 Evaluation of the management approach	116

General Disclosures

Changes in Reporting	Disclosure Item	Page Number/ URL and Comment	Identified Omission and Explanation	External Assurance
Organizational Profile				
102-1	Name of the organization	Chunghwa Telecom		v
102-2	Activities, brands, products, and services	7-9		v
102-3	Location of headquarters	7		v
102-4	Location of operations	7		v
102-5	Ownership and legal form	7		v
102-6	Markets served	7		v
102-7	Scale of the organization	16		v
102-8	Information on employees and other workers	56-57		v
102-9	Supply chain	12-13		v
102-10	Significant changes to the organization and its supply chain	None		v
102-11	Precautionary Principle or approach	36-45		v
102-12	External initiatives	17,95-97		v
102-13	Membership of associations	107-110		v
Strategy				
102-14	Statement from senior decision-maker	4-5		v
Ethics and Integrity				
102-16	Values, principles, standards, and norms of behavior	17		v
Governance				
102-18	Governance structures	14		v
Stakeholder Engagement				
102-40	List of stakeholder groups	32-33		v
102-41	Collective bargaining agreements	58		v
102-42	Identifying and selecting stakeholders	32-33		v
102-43	Approach to stakeholder engagement	32-35		v
102-44	Key topics and concerns raised	32-35		v
Reporting Practice				
102-45	Entities included in the consolidated financial statements	Please refer to CHT's 2017 Annual Report p.127		v
102-46	Defining report content and topic Boundaries	28		v
102-47	List of material topics	30		v
102-48	Restatements of information	None		v
102-49	Changes in reporting	None		v
102-50	Reporting period	2017/1/1-2017/12/31		v
102-51	Date of most recent report	2017/8/31		v
102-52	Reporting cycle	Annual		v
102-53	Contact point for questions regarding the report	1		v
102-54	Claims of reporting in accordance with the GRI Standards	Core		v
102-55	GRI content index	114		v
102-56	External assurance	112-113		v

Topic-specific Disclosures

Topic-specific Disclosure	Disclosure Item	Page Number/ URL and Comment	Identified Omission and Explanation	External Assurance
201 Economic Performance				
201-1	Direct economic value generated and distributed	16		v
201-3	Financial implications and other risks and opportunities due to climate change	67		v
*202 Market Presence				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	55		v
205 Anti-corruption				
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	85		v
302-4	Reduction of energy consumption	84-89		v
302-5	Reduction in energy requirements of products and services	41,84-89		v
*305 Emissions				
305-1	Direct (Scope 1) GHG emissions	42		v
305-2	Energy indirect (Scope 2) GHG emissions	42		v
305-3	Other indirect (Scope 3) GHG emissions	42		v
305-5	Reduction of GHG emissions	40-43		v
307 Environmental Compliance				
307-1	Non-compliance with environmental laws and regulations	None		v
*401 Employment				
401-1	New employee hires and employee turnover	57		v
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	65-67		v
401-3	Parental leave	67		v

Topic-specific Disclosure	Disclosure Item	Page Number/ URL and Comment	Identified Omission and Explanation	External Assurance
402 Labor/Management Relations				
402-1	Minimum notice periods regarding operational changes	58		v
*403 Occupational Health and Safety				
403-1	Workers representation in formal joint management-worker health and safety committees	62		v
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	64		v
403-4	Health and safety topics covered in formal agreements with trade unions	https://goo.gl/hiH48K Health and safety topics make up 6.5% of trade unions.		v
*405 Diversity and Equal Opportunity				
405-1	Diversity of governance bodies and employees	14,58		v
405-2	Ratio of basic salary and remuneration of women to men	56		v
*407 Freedom of Association and Collective Bargaining				
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	None		v
*409 Forced or Compulsory Labor				
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	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 Labeling				
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	74		v
419 Socioeconomic Compliance				
419-1	Non-compliance with laws and regulations in the social and economic area	80		v

Note: Topics marked with * have been disclosed voluntarily, and are not part of the material topics identified in 2017.

Telecommunication Sector Specific Indicators

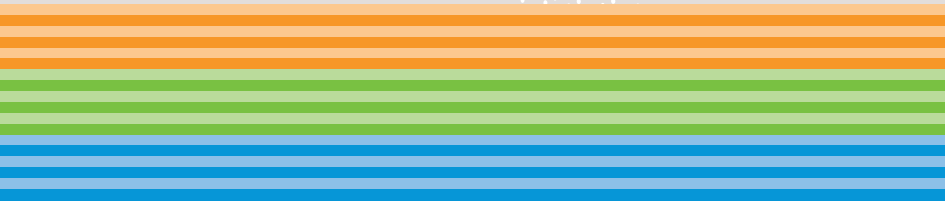
DMA and Indicators	Disclosure Item	Page Number and Comment	Identified Omission and Explanation	External Assurance
SUB-CATEGORY: INTERNAL OPERATIONS				
MATERIAL ASPECT: Investment				
DMA 98	IO1	Capital investment in telecommunication network infrastructure broken down by country/region	78	v
	IO2	Net 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.	98	v
MATERIAL ASPECT: Health and Safety				
DMA 80	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.	80	v
	IO4	Compliance with ICNIRP (International Commission on Non-Ionizing Radiation Protection) standards on exposure to radiofrequency (RF) emissions from handsets	80	v
	IO5	Compliance with ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines on exposure to radiofrequency (RF) emissions from base stations	80	v
	IO6	Policies and practices with respect to Specific Absorption Rate (SAR) of handsets.	80	v
MATERIAL ASPECT: Infrastructure				
DMA 80	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.	80	v
	IO8	Number and percentage of stand-alone sites, shared sites, and sites on existing structures.	80	v
SUB-CATEGORY: PROVIDING ACCESS				
MATERIAL ASPECT: Access to Telecommunication Products and Services: Bridging the Digital Divide				
DMA 94	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.	78-79	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.	78-79	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.	79	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.	78	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.	101	v
	PA6	Programs to provide and maintain telecommunication products and services	79	v
MATERIAL ASPECT: Access to Content				
DMA 104	PA7	Policies and practices to manage human rights issues relating to access and use of telecommunications products and services.	71,104-105	v
MATERIAL ASPECT: Customer Relations				
DMA 72	PA8	Policies and practices to publicly communicate on EMF related issues. Include information provides at points of sales material.	80	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.	72 http://www.emome.net/cell_phone_plans/monthly_rate_plan	v
	PA11	Initiatives to inform customers about product features and applications that will promote responsible, efficient, cost-effective, and environmentally preferable use.	72-73	v
SUB-CATEGORY: Technology Applications				
MATERIAL ASPECT: Resource Efficiency				
DMA 48	TA1	Provide examples of the resource efficiency of telecommunication products and services delivered.	49	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)	48-53	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.	48-53	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.	48-53	v
	TA5	Description of practices relating to intellectual property rights and open source technologies.	50	v



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