Welcome to Chunghwa Telecom’s 15th Environmental, Social, Governance (ESG) Report. This report is published in both Chinese and English on a dedicated ESG website. This Report discloses our efforts and results in practicing corporate sustainability in 2021, so that stakeholders that care for us may better understand and trust in the results of our commitment in corporate sustainability management.


### Reporting Period and Scope

This report discloses the Company’s ESG management policies, material issues, countermeasures, initiatives and results between January 1 and December 31, 2021. The scope of Report encompasses 100% the operating sites of Chunghwa Telecom, while sections with different scope of disclosure shall be noted. However, to ensure complete coverage, parts of the report include descriptions of initiatives and results from 2020 to 2022.

### References

<table>
<thead>
<tr>
<th>Issuing Organization</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Global Reporting Initiative, GRI</td>
<td>GRI Standards: Core option</td>
</tr>
<tr>
<td>The Global Reporting Initiative, GRI</td>
<td>G3.1 Telecommunications Sector Supplement</td>
</tr>
<tr>
<td>The International Integrated Reporting Council, IIRC</td>
<td>International &lt;IR&gt; Framework</td>
</tr>
<tr>
<td>Sustainability Accounting Standards Board, SASB</td>
<td>Telecommunication Services Sustainability Accounting Standard, SASB</td>
</tr>
</tbody>
</table>

### How to Read the Report

<table>
<thead>
<tr>
<th>S</th>
<th>M</th>
<th>A</th>
<th>R</th>
<th>T</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Management</td>
<td>Action</td>
<td>Response</td>
<td>Target</td>
<td>Indicator</td>
</tr>
<tr>
<td>Develop strategies and commitments</td>
<td>Management mindsets and mechanisms</td>
<td>Important projects and actions</td>
<td>Stakeholder requests and responses</td>
<td>Future outlook, targets and plans</td>
<td>The GRI, SASB, and Chunghwa Telecom’s own Indicators</td>
</tr>
</tbody>
</table>

### 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 (2018) Type 2 High Assurance Standards and requirements of the Integrated Reporting Framework and Telecommunication Services Sustainability Accounting Standard, SASB.

### Feedback

If you have any feedback to share, please do not hesitate to contact us through:

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Telephone: +886-2-2344-2780  Email: chtcsr@cht.com.tw
Message from the Chairman

Welcome to the 15th ESG Report published by Chunghwa Telecom Co., Ltd. Over the last two years, Taiwan has been continuously sustaining impacts from the COVID-19 pandemic, which brought tremendous challenges to enterprises regarding employee health protection as well as maintenance of business and supply chain continuity. Therefore, upholding the spirit of “Always Ahead,” Chunghwa Telecom utilized its technological prowess in ICT innovation, assisting and supporting governments to promote various epidemic hi-tech prevention measures. Aside from the effective protection of the health and safety of the public across Taiwan, our outstanding advantages in innovation were also reflected in our operational performance. The financial performance of Chunghwa Telecom in 2021 reached a new height of the last 4 years. Despite the epidemic outbreak, we continued to uphold and create shareholder value with our premium operational quality.

The year 2021 marked a critical year for the organizational transformation promotion of Chunghwa Telecom. With the “customer-centric” organizational framework, we officially inaugurated the three major business groups, i.e. Consumer Business Group, Enterprise Business Group, and International Business Group, combined with three technical groups, i.e. Network Technology Group, Information Technology Group, and Telecom Laboratoires. Upholding the tri-directional strategy of “Transformation X 5G X Sustainability,” we offer digital transformation solutions tailored to our clients. Through independent R&D, extensive alliance, or investment, we continue to develop emerging businesses like cybersecurity, cloud services, Artificial Intelligence, big data, and blockchain to help different industries to upgrade themselves on the wave of digitalization. As such, in the epoch of digital economy, we lead the industries in Taiwan to digital transformation and produce corporate values of sustainability in terms of Environmental, Social, and Governance (ESG).

Chunghwa Telecom’s investment and commitment in ESG sustainability has won accolades from our vast stakeholders, including:

1. Included in the Dow Jones Sustainability Index (DJSI) for 10 consecutive years
2. Awarded Top 5% of the Corporate Governance Evaluation from the Taiwan Stock Exchange Corporation for the 4th time
3. Included in the Taiwan Sustainability Index (TWSSI)
4. Included in the FTSE4Good Emerging Index
5. Role Model Award in “Comprehensive ESG Performance” and the First Prize in “Social Innovation” from Global Views Monthly Corporate Social Responsibility Awards
6. Top 20 in the Large Enterprises, 2021 Excellence in Corporate Social Responsibility Award from CommonWealth Magazine
7. Top Ten Domestic Corporates and six performance awards of Taiwan Corporate Sustainability Awards
8. English Report Award and Special Award for Pandemic Response from Global Corporate Sustainability Awards

With the strategy of “digital inclusion” and the years of experience in ESG promotion combined, Chunghwa Telecom proposed the special initiative “5I SDG.” Centering around the axes of “I Helping, I Sharing, I Learning, I Technology, and I Protecting,” we implemented various leading ESG action plans with our corporate volunteers across Taiwan, including the largest 5G X ABC AI talent empowerment action and 5G Plastic Free Day initiative to reduce marine debris and effectively raise the public awareness of environmental sustainability to safeguard the marine environment. Chunghwa Telecom Foundation worked with social enterprises to explore new models for community revitalization together with local communities. In addition, the supply chain sustainability rating system was promoted to assemble supplier partners of sustainability to align ourselves with the economy that is sustainable, net-zero, and low-carbon. Through a comprehensive alignment with the UN Sustainable Development Goals (SDGs), we demonstrated the sustainability value and contribution of Chunghwa Telecom to the world.

In light of the concern of corporate ESG by institutional investors worldwide and the trend of net-zero emissions requirement, Chunghwa Telecom has established its vision for sustainable development “green low-carbon, digital transformation, integrity and transparency” and committed to the target of net-zero emissions by 2050. With our ICT core competences, we exercise our five sustainability pillars, “Digital Economy Motivator,” “Creative Industry Pilot,” “Happiness Value Protector,” “Green Corporation Pioneer,” and “Social Value Guide.” ESG action plans have been formulated and are being implemented to fulfill our corporate vision of sustainability and create more positive social impacts.

To achieve the target of net-zero emissions, we set our target, i.e. reduce the carbon emissions by 50% by 2030 compared to 2020 levels. Also, a series of emission reduction actions were planned, including phaseout of aged infrastructure, development of network virtualization, service vehicle electrification, green energy procurement, and renewable energy investment, so as to cut the carbon emissions.

We plan to attain the target of 100% IDCs using renewable energy by 2030, continue to form alliances with strategic partners, and practice “network/digital empowerment” to resolve the digital divide in the SMEs. As for the value chain, through the comprehensive promotion of “Sustainable, Low-carbon Supply Chain” and CO2 Supply Chain Program membership, combined with the Sustainable Partner Certification, we call on enterprises and supplier partners to jointly save energy and reduce emissions to march toward the goal of carbon neutrality for the value chain.

Chunghwa Telecom is more than just a telecom carrier. With the philosophy of sustainability and innovation, we shall continue to utilize our core expertise, technologies, resources, competences, and features to resolve social issues as an ICT enterprise that is sustainable, low-carbon, and customer-centric. We exercise sustainable development and create more positive social impacts together with Taiwan. Meanwhile, we look forward to your continuous supports and encouragements to Chunghwa Telecom.

Chairman & CEO
Chunghwa Telecom Co., Ltd.

Sheh Chi-ma
### 2021 ESG Milestones

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 1</td>
<td>Taipei Golden Eagle Micro-Movie Festival from Taiwan Institute for Sustainable Energy</td>
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<td>Feb 2</td>
<td>Outstanding Entity, National CIP Designated Exercise for Critical Infrastructure from the Executive Yuan</td>
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<td>Mar 3</td>
<td>Opensignal_No. 1 in Taiwan in Download Speed Experience, Video Experience, Games Experience, and Voice App Experience of the Global Mobile Network Experience Awards</td>
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<td>Outstanding in “BGP Offense and Defense Exercise” of the National Communications Commission</td>
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<td>Apr 4</td>
<td>“Fastest Mobile Network,” “Best Mobile Coverage,” and Best Mobile Network in Taiwan during Q3-Q4 2020 of Speedtest Awards 2020</td>
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<td>Fastest 5G Service and Best Mobile Network Award in Telecom Rating of Excellence Magazine</td>
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<td>May 5</td>
<td>Awarded Top 5% of the Corporate Governance Evaluation from the Taiwan Stock Exchange Corporation</td>
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<td>Role Model Award in “Comprehensive ESG Performance” and the First Prize in “Social Innovation” from Global Views Monthly Corporate Social Responsibility Awards</td>
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<td>Platinum Awards in Reader’s Digest Trusted Brand for the Category of 4G Internet Service Provider and Phone Service</td>
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<td>Jun 6</td>
<td>One of FTSE4Good TIP Taiwan ESG Index Constituents, Taiwan Index Plus Corporation</td>
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<tr>
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<td>Top 20 Companies in the 1st Greater China Business Sustainability Index, Chinese University of Hong Kong &amp; National Chengchi University</td>
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<td>Jul 7</td>
<td>“Fastest 5G Mobile Network” and “Best Mobile Coverage” in Taiwan during Q1-Q2 2021 of Speedtest Awards 2020</td>
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<td>Winner in the Inter-entity Supply Contracts Cloud Services Ranking 2021 for 7 consecutive years and the 1st Place in the Cloud Virtual Resources Supplier Category from IDB, MOEA</td>
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<td>Aug 8</td>
<td>Amazon Web Services_AWS Rising Star Partner of the Year - AWS IoT Partner of the Year</td>
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<tr>
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<td>Microsoft_2021 Top Innovative Partner</td>
</tr>
<tr>
<td>Sep 9</td>
<td>Asiawmoney_Asia’s Outstanding Companies Poll 2021 - Telecommunication Service</td>
</tr>
<tr>
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<td>Frost &amp; Sullivan Best Practices Awards_Taiwan Telecommunication Services Company of The Year, Taiwan Mobile Data Services Company of the Year, Taiwan Data Center Services Company of The Year</td>
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<td>No. 11 in the Large Enterprises, Excellence in Corporate Social Responsibility Award from Common-Wealth Magazine</td>
</tr>
<tr>
<td>Oct 10</td>
<td>3 Golds, 1 Silver, and 1 Bronze Awards from Taiwan Sustainability Action Awards</td>
</tr>
<tr>
<td></td>
<td>Outstanding Enterprises – First Prize (ICT Services), Best Products – Yushan Award from The National Brand Yushan Award</td>
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<tr>
<td>Nov 11</td>
<td>Inclusion in the Emerging Market Index of Dow Jones Sustainability Index (DJSI) Emerging Market Index</td>
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<td>The first telecom operator in Taiwan to pass TCFD and BS 8001 Conformity Statement from British Standards Institution (BSI)</td>
</tr>
<tr>
<td></td>
<td>Taiwan Corporate Sustainability Awards_The Most Prestigious Sustainability Awards – Top Ten Domestic Corporates, and six Awards in Best Performance of Specific Categories</td>
</tr>
<tr>
<td></td>
<td>English Report Award and Special Award for Pandemic Response from Global Corporate Sustainability Awards</td>
</tr>
<tr>
<td></td>
<td>Sponsorship Award Gold Class, Sponsorship Award Long-Term Sponsorship Award, and Promotion Award Gold Class from Sports Activist Awards, Sports Administration, Ministry of Education</td>
</tr>
<tr>
<td>Dec 12</td>
<td>S&amp;P Global Ratings “AA” long-term issuer credit ratings, top of the global telecom services; Taiwan Ratings “twAAA” long-term issuer credit ratings</td>
</tr>
<tr>
<td></td>
<td>The highest honor of The Asset ESG Corporate Award - Jade Award</td>
</tr>
<tr>
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<td>Frost &amp; Sullivan First edition of “Private 5G Network, Taiwan in Customer Value Leadership”</td>
</tr>
<tr>
<td></td>
<td>One of FTSE4Good TIP Taiwan ESG Index Constituents</td>
</tr>
<tr>
<td></td>
<td>Customer Service Excellence Awards</td>
</tr>
</tbody>
</table>
As COVID-19 rampaged worldwide in 2021, either enterprises or individuals had suffered severe impact. As a local leading enterprise, under the stewardship of our Chairman, we "deployed preemptively" and "improved on a rolling basis" comprehensively. Hence, we established the Command Center, joined the national team of epidemic prevention, and stipulated CHT Preparedness and Contingency Plan in Response to COVID-19 as the "overall solution" for epidemic prevention response. The national team of epidemic prevention of CHT supported the disadvantaged and demonstrated its social care while put its ICT advantages to good use, applying various advanced ICT in the works of epidemic prevention. Through a systematic application, we facilitated the government to accomplish tasks in the most timely, accurate, thorough manner in epidemic prevention efforts. As such, CHT was further recognized as the "champion in technology for the national team of epidemic prevention" by President Tsai.

Employees

In response to the COVID-19 epidemic, with the internal epidemic prevention plan formulated, we promulgated "epidemic prevention measures for different levels of epidemic situations", issued "requirement for all personnel to have temperature checkup and sanitation with alcohol sanitizer before entering the facilities", conducted "random inspection of epidemic prevention measures", "tracking and caring for the personnel that are listed as identified contacts", "preparation of epidemic prevention promotion materials", and enacted Ten Epidemic Prevention Measures as follows.

1. Personal Health Record for Hiking Go

With CHT Personal Health Record (Personal Health Record App) and the Enterprise Healthcare System (EHS) combined, the campaign "Personal Health Record for Hiking Go" was organized at venues like Chunghwa Telecom Laboratories and CHT Data Business Group to conduct health promotion activities via the easiest and simplest "hiking" and encourage employees to keep a habit of regular exercise in their everyday life. Hence, we could establish a new workplace health culture in the post-pandemic era to boost our health to fight against the pandemic. There were approximately 1,500 participants in 2021.

2. Bidirectional SMS Body Temperature Reporting System

To track and care for the health of employees, body and mind, Chunghwa Telecom Laboratories especially developed the "Bidirectional SMS Body Temperature Reporting System" for employees to implement self-health management and report their body temperatures. Health managers would initiate health tracking and care for any employee reporting to have fever or respiratory symptoms to ensure employees' physical and mental health and prevent cluster infection at workplace. In 2021, approximately 2,500 employees participated in the autonomous body temperature reporting.

Epidemic Prevention Policies and Measures

Our Epidemic Policies

1. The triage and compartmentalization and WFH policies were enforced upon Level 2 and 3 Epidemic Alert for business continuity; WFH application was available for employee with children of age 12 or under subject to school/class closure.

2. In line with the government’s epidemic prevention policies, a minimum of 4 hours of official leave was granted to employee to receive their first, second, or third dose of COVID-19 vaccine.

Our Epidemic Prevention Measures

1. Preventive interventions were taken for notified incidents at risk of infection (environment disinfection, footprint investigation, and personnel triage and compartmentalization), and corporate health managers track and care for personnel health until case closed.

2. Proactive procurement of epidemic prevention insurance for employees: We procured epidemic prevention insurance proactively for all employees, with a total number of 20,945 employees insured in 2021 and a total amount of NT$11.08 million.

3. The epidemic prevention information released by the Central Epidemic Command Center and contingency plans of other enterprises were collected continuously to improve the epidemic response plan of the Company on a rolling basis; the epidemic prevention guidelines were stipulated, released, and implemented under supervision as follows:

   (1) 1/28 Amendment to the Business Continuity Plans on a rolling basis for all Groups completed
   (2) 5/18 "Procedures for Confirm Cases of COVID-19 or Individuals in Contact with the Confirm Cases" stipulated
   (3) 5/19 "Epidemic Levels, Alert Criteria, and Epidemic Prevention Works in Different Stages" and "Epidemic Prevention Measures at Present" amended
   (4) 6/3 "COVID-19 Prevention Report Ticket" revised
   (5) 6/17 "Caring Procedures for Employees Subject to Home Isolation or as Confirmed Cases of COVID-19" stipulated
   (6) 7/12 "Regulations Governing the Use of at-Home Rapid Antigen Test Kit" stipulated
   (7) 12/15 "Enhanced COVID-19 Vaccination Measures of the Company in line with the CECC Policy"

4. Employees were encouraged to be vaccinated with a half-day official leave per dose to reduce the risk of infection among employees and the spread in communities and workplace.
Corporate Clients

To reduce the risk of contact for customers over the counter, we provided the free customer service hotline 24/7, developed an Interactive Voice Response (IVR) System. Various online service channels. Customers could also conduct business at home without worries via diverse self-help channels such as paperless application processes. Regarding the traffic demand improvement, CHT launched the 2G/1G bidirectional Giga-level ultra-broadband Internet services, first in the industry, to meet the high traffic demand from working/learning from home in the post-pandemic era.

In addition, in light of the delayed school opening for epidemic prevention, “ibobby smart voice service” of Chunghwa Telecom offered services like storytelling and music and became a quality AI assistant to parents during the pandemic period. Aside from utilization of voice service to keep children company and receiving the latest information on epidemic prevention, it was linked with “Pick Me Up” service to learn about the ETA of parents to school accurately to reduce the risks of cross infection in student pick-up.

Corporate Clients

Our featured corporate services of “meeting, working, and access to corporate networks at ease even away from the office” that offered services for Business, Amazon Chime, Amazon WorkSpaces solution, and SSL VPN remote secure access service, along with rigorous cybersecurity monitoring, assisted businesses to operate as usual while reducing the operating costs during the epidemic.

Society

We actively partook in the focused works of government’s epidemic prevention effort, which could fall into the eight categories as follows. None of them were in violation of laws pertaining to the personal information.

1 Quarantine Cellphone

In compliance with the “Quarantine and Tracking for Entry” demands from the Centers for Disease Control (CECC), Chunghwa Telecom swiftly developed and assembled the quarantine cellphones in overtime hours for Health Centers nationwide (offshore islands included) to issue them to specific individuals subject to home isolation/quarantine. A total of 3,360 cellphones for emergency purposes were assembled, including 2,400 quarantine cellphones, 200 cellphones for the police departments, and 760 cellphones for the civil administration and health department.

2 Development and maintenance of Epidemic Monitor and Management System

We Self-developed “Epidemic Monitor and Management System”, through the address of the dedicated cellphone or home quarantined persons’ cellphone to determine if the quarantined individuals were staying at the designated locations.

It integrated data of telecom operators for Taiwan CDC to learn about the whereabouts of individuals under home isolation/quarantine.

3 MOHW quarantine communication equipment deployment

- Communication service has been urgently deployed for 12 quarantine areas since February 2020, with 43 300M HiNet FTTx Broadband lines, 1 100M lines, 4 dedicated lines, 230 MOD set-top boxes, and 163 Wi-Fi devices.
- Mobile service base station capacity expansion and signals were installed for 7 quarantine areas in the remote areas.

4 Use of Big data analytics

- Quarantine route estimation: the technology of big data analytics was utilized to estimate the key loci of the confirmed cases/individuals at high risks as well as the list of potentially exposed individuals for Taiwan CDC to follow up and send warning text messages in order to effectively reduce the risk of virus spread.
- Crowding hotspot warning: the information of crowding attraction hotspots throughout the country was available for the public and the police department’s reference.

5 Guaranty of telecommunication quality for epidemic prevention

- The signals and covered facilities nearby the designated isolation hospitals for communicable diseases were boosted to ensure a good quality of the mobile signals.
- Dedicated lines, MOD, Wi-Fi equipment, and mobile base stations were added to enhance the communication quality in the quarantined areas.

6 ICT epidemic prevention

- SMS Real Name Registration System: The SMS Real Name Registration System was established for the MOHW to significantly reduce difficulties in the outbreak investigation, along with 30 million SMS messages donated.
- Paperless night market transaction: Electronic payment App “Hi QR PAY” was promoted in collaboration with the Yunlin County Government, that cashless transaction services were introduced for contact-free payment for local shops, SMEs, micro-enterprises, and night market vendors.
- Offsite working/Work from Home: Epidemic prevention plans with cybersecurity at the core were offered for enterprises with needs of offsite working; broadband Internet environment of “triple networks” with fixed line, mobile network, and Wi-Fi services combined were available for corporate employees and students taking classes from home. A total of 40,000 free 45-day prepaid cards were provided to the Ministry of Education for the disadvantaged students in the rural areas.
- Pulse Oximetry Platform: The COVID-19 Pulse Oximetry Cloud-based Platform was established in collaboration with the National Yang Ming Chiao Tung University to realize a cloud-based automated monitoring and warning service for blood oxygen saturation tracking and timely intervention, which has come online at the dedicated wards of New Taipei City Hospital, New Taipei City Government.

7 Discounts for telecom service fees

The telecom rates of the businesses and schools impacted by the epidemic were lowered moderately to reduce the burdens thereto, while 40,000 Prepaid SIM Cards were provided to especially economically-disadvantaged students, free of charge.

8 Support to Taiwan CDC Toll-free Hotline 1922, NIA’s 0800 Foreigners In Taiwan Hotline, SMS Real Name Registration System, and 1955 Counseling and Protection Hotline for Foreign Workers

- 718 personnel were mobilized to support Taiwan CDC toll-free hotline 1922 and NIA’s Foreigners In Taiwan Hotline with up to over 500 individuals allocated in a day; up to 9.87 million calls to Taiwan CDC toll-free hotline 1922 throughout the year with an average answer rate of 73.2%.
- 93,000 calls to the customer service hotline of the SMS Real Name Registration System with an average answer rate of 88.3%.
- 83,000 calls to 1955 Counseling and Protection Hotline for Foreign Workers (part-time subsidy) with an average answer rate of 100%.
Chunghwa Telecom (TAIEX:2412, NYSE: CHT) is the largest integrated telecom carrier in Taiwan. The head office is located at 21-3, Section 1, Xinyi Road, Taipei with more than 691 locations in 22 counties and cities in Taiwan. Our major business include fixed and mobile communications, broadband access and the Internet. We also provide corporate customers with information and communication services, including big data, information security, cloud and Internet Data Center. 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.

Since 2006, Chunghwa Telecom upholds the service philosophy of “bridge the digital divide, implement environmental sustainability, and care for the disadvantaged”. Hence, the core technologies, resources, competencies, and features of the Company have been leveraged to implement the brand spirit of “Always Ahead” on the three fronts of Environmental, Social, and Governance. We demonstrate our determination in sustainable operation with our actions to fulfill our corporate social responsibility on all fronts. In recent years, our active efforts in ESG were constantly recognized by professional institutes at home and abroad.

For 2021, Chunghwa Telecom’s consolidated net income was NT$ 210,300,000 thousand and its annual earnings per share was NT$ 4.61.

The only telecom operator to have a labor director elected.

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

Chunghwa Telecom established a Sustainable Development Committee for stipulation of various sustainability policies through its four groups.

Main businesses of branch offices and reinvestment companies: Please refer to p.17, 137-140 in the 2021 Annual Report.

The SDGs CHT contributes to in this chapter:

- Three Telecom Laws
- Main businesses of branch offices and reinvestment companies: Please refer to p.17, 137-140 in the 2021 Annual Report.

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


To link sustainability performance with the remuneration of the Board Directors, Chunghwa Telecom implemented a soft incorporation of sustainable development strategies and targets into its review of compensation.
Chunghwa Telecom implemented the “customer-centric” organizational transformation. On January 1, 2022, the Consumer Business Group was established as one of the three major customer-centric business groups together with the Enterprise Business Group and the International Business Group. Meanwhile, the Network Technology Group was established to integrate mobile network and fixed line businesses. Also, the Data Communication Business Group was renamed as the Information Technology Group on April 30, 2022. Together with the Telecommunication Laboratories, the three technical groups are formed to support the business promotion of three business groups. Hence, we may secure the greatest advantage through the organizational resource integration and overall business synergy to elevate the corporate competitiveness for the prospect of yet another brilliant business performance.
Industry Value Chain and Critical Sustainability Performance

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

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

Moving forward, Chunghwa Telecom shall continue to better itself in services of fixed network, mobile, data, and eICT while strengthening the partnership with its suppliers throughout the supply chain to form a closer industrial ecosphere to introduce more quality services.
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 sustainability development strategies. The 10th Board has 13 directors. To date, there are 3 female and 10 male directors, including 4 male and 1 female independent directors. Directors’ tenure is three years (May 27, 2022 to May 26, 2025). All of the independent directors are included in the Audit Committee to ensure the independence of governance and the perspectives of the stakeholders.

To meet the needs of Chunghwa Telecom’s business development, the Board of Directors of Chunghwa Telecom shall comprise experts and scholars in the industries as well as in the fields of finance and accounting, management, etc.; the members of the Board of Directors shall include one or more talent in the fields of innovation capacity, business experience, legal expertise, and ICT, respectively. In addition, gender equality in the composition of the Board of Directors is highlighted. The target of female independent directors of the Board of Directors shall include one or more talent in the fields of innovation capacity, business experience, legal expertise, and ICT, respectively. Also, on the 16th meeting of the 9th Board of Directors, also, on the 16th meeting of the 9th Board of Directors on January 25, 2022, the 9th Board of Directors resolved that the Audit Committee of the 9th Board of Directors. Also, on the 16th meeting of the 9th Board of Directors on January 25, 2022, the 9th Board of Directors resolved that the Audit Committee of the 9th Board of Directors.

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

To ensure an effective operation of sustainable management, along with encouragement to senior managers to attain the corporate vision and its short-/mid-/long-term strategic targets, we included ESG Sustainable Development in the Directions Governing Performances of Senior Managers of Chunghwa Telecom, integrated in the key performance indicators for the corporate performance, departmental performance, and individual performance.

Corporate Strategy Committee
Consists of 7 board members, who are responsible for mid and long-term development plans and other critical issues, as well as major investment and mergers and acquisitions, major reorganization of the Company, applications for or returns of business licenses, annual operating plans and budget compilations and revisions, capital increases or decreases, and other strategic decisions. The resolutions are submitted to the BoD for final approval.

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

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

Governance Procedures of the Board of Directors for the ESG Topics in 2021
In line with the regulatory amendments, CSR has been officially revised as ESG. The CSR Committee of the Company was also restructured as the “Sustainable Development Committee.” On July 27, 2021, it reported the “ESG Implementation Plan” on the 14th meeting of the Corporate Strategy Committee of the 9th Board of Directors. Also, on the 16th meeting of the 9th Board of Directors on January 25, 2022, the ESG strategy was incorporated in the 2022 Business Plan, which included the ESG implementation progress in 2021 as well as the goal and mid-to-long-term strategic targets for 2022. The topics are as follows:

1. Fully integrate ESG strategies with the Company’s business plan
2. Focus on driving the most relevant UN sustainability goals of the Company
3. Collaborate with like-minded partners to drive the ecosystem for ESG promotion
4. Enhancing investment in the emerging business of energy efficiency and carbon reduction (e.g. smart energy and smart healthcare)
5. Strengthening investment in bridging the digital divide in the rural areas, disadvantaged groups, and SMEs
6. The pursuit of fairness and justice in governance, and to establish a culture of accountability for senior managers with clearly defined rewards and punishments
7. ESG communication and coordination with stakeholders for alignment within and without

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

Director compensation: Please refer to p.36-39 of the Company’s 2021 Annual Report.

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

CHT Board of Directors

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-50 Years Old (person)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Above 51 Years Old (person)</td>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

* For more information about the Board of Directors, please visit here
Continuing Education of the Board of Directors: Please refer to the 2021 Annual Report on p.80-82.

* ESG = Environmental, Social, and Governance

* Corporate Social Responsibility (CSR)
Avoidance of Conflict of Interest

Chunghwa Telecom’s Chairman is concurrently the CEO. The election of directors comply with relevant laws and regulations, which suggests the directors are nominated by the Board and shareholders who meet the statutory shareholding requirements, and the announcement of director nomination and nomination process are conducted in accordance with the statutory procedures. In order to avoid conflicts of interest in the highest governance body, we conduct strict controls in accordance with the following procedures, including:

All the new directors shall sign the Consent to act as a director, and to comply with Article 23 of the Company Act, to exercise the due care of a good administrator in conducting the business operation of the Company.

Due to the directors’ high ethical standards and self-discipline, and under the operation of the mechanism, no conflict of interest has occurred since the Board of Directors was established. Moreover, the Board has adopted 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 of the BoD also evaluates on a regular basis.

Performance Evaluation for the Board of Directors

To implement corporate governance and enhance the functions of the Board of Directors, performance objectives are set forth to improve the operation of the Board of Directors. In 2019, at the 2nd meeting of the 9th Board of Directors, the Company adopted the Regulations Governing the Performance Evaluation of the Board of Directors of Chunghwa Telecom Co., Ltd. that details rigidly the cycle, period and scope of the performance evaluation of the Board of Directors as well as the evaluation procedures, evaluation indexes, scoring criteria, and other matters of compliance. The self-evaluation for the Directors on the Board as well as the self-evaluation on the performance of functional committees is conducted on an annual basis, while the performance evaluation by external, independent, professional institutions or external teams of experts and scholars is carried out once every 3 years.

* Regulations Governing the Performance Evaluation of the Board of Directors of Chunghwa Telecom
* Results of the 2021 Board Performance Evaluation

Protection of Shareholders’ Interests

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 effectively.

Shareholder Structure of Chunghwa Telecom

<table>
<thead>
<tr>
<th>Government</th>
<th>Financial Institutions</th>
<th>Other Legal Entities</th>
<th>Individual</th>
<th>Foreign Institutions and Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.70%</td>
<td>17.03%</td>
<td>8.16%</td>
<td>18.01%</td>
<td>16.10%</td>
</tr>
</tbody>
</table>

Unit: Shareholding ratio 2021/8/26 (the most recent book closure date)

Creating Value for Shareholders

Chunghwa Telecom business operations have been stable for years. Profitability and financial completeness have been uninterrupted. We pay our taxes honestly year after year, following the law, and make solid contributions to the country. Despite the existence of many challenges in the telecom operation environment, we maintain complete focus on our field and create value for the shareholders. Chunghwa Telecom generated consolidated revenues totaling NT$3210.5 billion in 2021.

Owing to the impact by replacement and competition from free messaging Apps and VoIP technology, the revenue from voice service tumbled; ICT projects were completed as scheduled in line with the quality requirement, which benefited the revenues from tender projects. The overall revenue in 2021 was flat compared to that of 2020. Net income attributable to the parent company amounted to NT$35.8 billion while EPS reached NT$4.61 in 2021.

In 2021, Chunghwa Telecom income tax was the equivalent of an effective tax rate of 19.26%. The deviation from statutory 20% tax rate was mainly attributed to the provisions of Article 42 of Income Tax Act, in that net dividends or net earnings recognized from local invested businesses are exempt from income tax. In addition, the application can also be made for tax preference pursuant to Article 10 of the Statute for Industrial Innovation as well.

Economic Performances

<table>
<thead>
<tr>
<th>Total number of employees in the Company including subsidiaries</th>
<th>31,903 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid-up capital</td>
<td>77,574</td>
</tr>
<tr>
<td>Revenues</td>
<td>210,478</td>
</tr>
<tr>
<td>Operating cost</td>
<td>135,111</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>30,068</td>
</tr>
<tr>
<td>* Employee salaries and benefits</td>
<td>44,673</td>
</tr>
<tr>
<td>Dividends paid to shareholders</td>
<td>33,404</td>
</tr>
<tr>
<td>Income tax paid</td>
<td>8,155</td>
</tr>
<tr>
<td>* Expenses of social investment /donations</td>
<td>1,153</td>
</tr>
<tr>
<td>Retained economic value</td>
<td>3,740</td>
</tr>
</tbody>
</table>

1. * Operating costs and expenses included
2. * Social investment: Not-for-profit or business marketing costs or expenditures, including universal access services, education and learning, children welfare, telecom services sponsorship, charity advertising sponsorship, venue rental, contributions in cash and in kind, corporate volunteers, epidemic prevention projects, etc.
3. * Retained economic value – revenues – operating costs - operating expenses – income tax paid
**Highest Moral Standard**

We have set up the Code of Ethics of Chunghwa Telecom Co. and Ltd. Ethical Corporate Management Best Practice Principle. These are formulated as basic ethical guidelines to ensure that all employees engage in all activities with the highest standard.

Meanwhile, to implement "Code of Conduct" in Chunghwa Telecom, we also passed the rigorous check procedures of SGS-Taiwan and obtained Certificate of Conformity for Code of Conduct (CoC) from the external third party for three years in a row.

## Prevention of Corruption

In response to the emphasis on prevention of corruption and money laundering, to exercise our responsibility as a citizen in the international community, and to meet the demands of investors, we promulgated the amended "Anti-Corruption and Anti-Money Laundering Policy" on September 22, 2021.

In terms of governance, effective accounting and internal control systems have been formulated. Audits are carried out regularly each year. Since 2021, the performance with the Procedures for Ethical Operation and Guidelines for Conducts has been listed as necessary items in the corporate-level audit in the annual auditing plan, which covers the relevant policies, mechanisms, promotion, and trainings. Also, the results of the compliance audit are included in the internal audit report and submitted to the Board of Directors.

In terms of system, the ethical corporate management policy is integrated with the performance appraisal of employees and human resource policy. A specific, effective reward and penalty system has been established. "Guidelines for Personnel Evaluation" and "Standards Governing the Administrative Responsibilities and Discipline of Chunghwa Telecom Personnel" have been stipulated as the reference in employee performance appraisal. In the event of matters worthy of reward or actions to be disciplined, the rewards or disciplinary actions will be issued promptly in line with the regulations. Meanwhile, a secure and rigorous employee reporting mechanism is established. The information regarding employee hotline and other means for complaints or report is made available to employees at the Enterprise Information Portal. There were 67 complaints received in 2021, of which 66 were closed and 1 being verified and addressed as of April 2022. All cases were in line with the processing progress. There were 6 incidents of the Code of Conduct violations in 2021, and all of which were investigated, deliberated, and addressed in accordance with the operating procedures and handling principles, serving as reminders for personnel to abide by the regulations and uphold the corporate disciplines and shareholders’ interests.

In terms of execution, all operation regulations and the importance of risk assessment management are promoted to all employees from time to time, making sure compliance with regulations is observed throughout operations. In 2021, for the promotion and test of regulations in the Ethical Corporate Management Best Practice Principles, education courses on "Code of Conduct" and "Ethical Corporate Management Best Practice Principles" were administered to all employees via e-learning. Employees in 2021 were 100% trained.

As for reasons otherwise, except Maternity Leave, Occupational Sickness Leave, and Long-term Sick Leave, 20,091 employees have 100% completed the test. In 2022, we plan to increase the number of case studies, strengthening employees’ awareness of ethics and integrity with various news involving violations of laws or regulations or corruption.

Externally, we also demand stakeholders conducting business with Chunghwa Telecom, such as suppliers and contractors, to abide by ethical standards equivalent to that of the CHT employees. Meanwhile, the internal audit departments will audit the Company, contractors, suppliers, and clients for compliance with relevant laws and regulations from time to time.

### The Internal Audit System

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

### 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 Orders submission system, Annual Reports, ESG Reports, press conferences and investor conferences to facilitate transparent communications with stakeholders. Furthermore, measures have been taken to ensure the timely, quality, balance, and credibility of the information disclosed. In the 7th Corporate Governance Evaluation, we were recognized as the top 5% for the sixth time as well as the top 10% in "The electronics industry with a market value of 10 billion TWD or more" of the TWSE- and TPEx-listed companies in the Evaluation!

### 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. Committed to compliance with relevant regulations, there was zero case fined by the Fair Trade Commission in 2021.

### Supporting Global ESG 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 practices, 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 feedback and improvements by relevant departments. Chunghwa Telecom Training Institute organizes human rights-related courses on a yearly basis and whenever there is a change in labor regulations and policies.

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ESG Management

Chunghwa Telecom introduced the CSR management mechanisms in 2006. In 2021, the "CSR Committee” was restructured as the "Sustainable Development Committee” with a mission to develop future ESG strategies and abide by the vision and cause of sustainable development, along with a focus on the aspects of environmental sustainability, social responsibility, and corporate governance. The CHT Chairman and the President serve as the Chairperson and Vice Chairperson of the Sustainable Development Committee, who are also members of the Board of Directors.

Our vision for sustainable development is to pilot smart living and facilitate sustainable development with “Greening & Decarbonization, Digital & Empowerment, Integrity & Transparency.” The unique corporate resources and expertise are utilized to practice the brand spirit of “Always Ahead” via four groups. We are committed to sustainability topics such as “creation of social value, decarbonization, digital & empowerment, integrity & transparency.” The unique corporate resources and expertise are utilized to practice the brand spirit of “Always Ahead” via four groups. We are committed to sustainability topics such as “creation of social value, decarbonization, digital & empowerment, integrity & transparency.”

ESG Targets by 2030

The key strategy is to raise the efficiency of energy used as well as procure renewable energy.
1. 50% cut of carbon emissions compared to that of 2020
2. 100% renewable energy used in IDCs

The key strategy is introduction of gender equality in recruitment interview and training, Learning - Establishment of education support ecosystem, and creation of product marketing teams in the rural areas.
1. 50% of female managers (Director or above) raised to 30%
2. Cumulative 22,000 individuals from the disadvantaged groups in the rural areas benefited from the digital empowerment/cumulative 19,000 SMES with digital environments or new business models established

The key strategy is to strengthen ESG implementation as well as improve and better the transparency and transparency of the Chinese and English contents on the official website in alignment with the focus areas of MSCI ESG Ratings, and link the accountability of senior managers with material ESG topics.
1. "AAA" of MSCI ESG Ratings attained in two phases ("AA" by 2025)
2. 30% of the variable compensation of the senior managers tied with ESG indicators (2025)

Sustainable Development Committee

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

Under the CHT Sustainable Development Committee, "Environmental Group", "Social Group 1", "Social Group 2", and "Governance Group", which are supervised by four SEVPs of the headquarters. The President calls an inter-group meeting quarterly. The Committee convenes every half a year to review the management strategies of the Company and sets related performance targets.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative</td>
<td>Chi-Mau Sheih, Chairman</td>
</tr>
<tr>
<td>Mechanism</td>
<td>Sustainable Development Committee is responsible for coordinating each plan and supervising the progress of the policies approved by the Board of Directors. It also semiannually reports the relevant issues and the results of communicating with stakeholders to the Board. The Board is in charge of the final performance evaluation every year.</td>
</tr>
</tbody>
</table>
| Execution | - The Corporate Communications Department and Corporate Planning Department are designated as Secretariat.  
- Externally, the Secretariat is responsible for the ESG Report and information disclosure, various ratings and awards, exhibition participation and media communication; internally, it coordinates inter-group cooperation, target management/review and tracking, and performance evaluation design.  
- Four groups set the annual targets and Objective Key Results (OKRs) and promote and implement various sustainable development works together with business groups and the respective institutions.  
- Results of the Committee and various stages are included in the materials for the Board of Directors. |
| Meeting Frequency | Once every half a year for the Committee, quarterly for inter-group meeting, and monthly for group meeting. |
| Report Approval | Reports are submitted to the Chairman for final approval after the managements’ (SEVP) review. |
| Execution Results in 2021 | The resolution of restructuring as the "Sustainable Development Committee” adopted with the targets of net-zero by 2050 and sustainable development goals by 2030 set, which was reported on the 14th meeting of the 9th Board of Directors to put corporate sustainability into practice. |
## Internalization and Communication of ESG

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

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

<table>
<thead>
<tr>
<th>Channel</th>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administrative sustainability performance</strong></td>
<td>Annual Evaluation</td>
<td>We set energy reduction targets and link the results with employees’ performance bonuses.</td>
</tr>
<tr>
<td></td>
<td>Online test on CoC</td>
<td>All our employees are required to take the “Chunghwa Telecom Code of Business Conduct Test” each year.</td>
</tr>
<tr>
<td></td>
<td>Reporting mechanism</td>
<td>Once an employee is found to violate corporate regulations, it will affect his/her performance bonuses.</td>
</tr>
<tr>
<td><strong>ESG Report workshop</strong></td>
<td>ESG Report workshop</td>
<td>Internal training on new ways of preparing reports is held from time to time.</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>Official website and Social media</td>
<td>To coordinate with modern stakeholders’ communication pattern, we established dedicated ESG multimedia webpages on the official website, YouTube channel and a Facebook fan page as ways of communicating with our stakeholders.</td>
</tr>
</tbody>
</table>
The result of our ESG input has been the creation of profit in corporate operation and a maximization of shareholder value. Our shareholder structure allows us to carry on a broad citizen responsibility. Our position in the ICT industry and the innovative products and services we provide give us the opportunity to use technology and innovation to control the risks and grasp opportunities. Our innovative products and services have a positive economic influence on the value chain, create sustainable value for the industry and the public and greatly minimize the negative impact on the environment.

2
SUSTAINABILITY VALUE STRATEGY

The SDGs CHT contributes to in this chapter:

Six Main Capitals -
"Financial Capital, Human Capital, Intellectual Capital, Manufactured Capital, Social Capital and Natural Capital"

Five Major Forces -

SIX MAIN CAPITALS CREATE SUSTAINABILITY VALUE ................................. 30

FIVE MAJOR FORCES DRIVE THE SUSTAINABLE CYCLE ........................... 30

CREATING SUSTAINABLE VALUE ................................................................. 32

Vision-
"Digital economy transformation, Industrial innovation, Talent startup, Happy corporation, Considerate services, Transform into green corporation thoroughly, and Connect · Hope · Technology"
Six Main Capitals Create Sustainability Value 30

Five Major Forces Drive the Sustainable Cycle 30

Creating Sustainable Value 32

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**Six Main Capitals Create Sustainability Value**

- **Financial Capital**
  - Share capital 77,574,465 thousand
  - Capital expenditures 35,333,028 thousand

- **Human Capital**

- **Intellectual Capital**
  - R&D expenses 3,687,747 thousand
  - Marketing expenses 20,944,091 thousand

- **Manufactured Capital**
  - Equipment installation and maintenance expenses 33,533,000 thousand
  - Cell tower installation expenses 15,946,145 thousand

- **Social Capital**
  - Social investment 675,030 thousand
  - Universal telecom services 478,784 thousand

- **Natural Capital**
  - Green procurement 14,994,826 thousand
  - Environmental management expenses 330,550 thousand

---

**Five Major Forces Drive the Sustainable Cycle**

- **The Digital Economy Motivator**
  - Become a leading brand of 5G telecom services
  - Inspire innovative applications; create new business models

- **The Creative Industry Pilot**
  - Invest and incubate startups
  - Encourage innovation and entrepreneurship internally

- **The Happiness Value Protector**
  - Create a healthy, happy workplace
  - Protect information, labor, and human rights
  - Provide quality, innovative services

- **The Green Corporation Pioneer**
  - 5G (Green) Actions
  - Establish green, low-carbon supply chains

- **The Social Value Guide**
  - SI SDGs digital inclusion initiative
  - Corporate volunteer works everywhere

---

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

Our ESG issues and actions have created sound economic, environmental and social value since 2006. Although we have made serious efforts to adapt quantized data when setting up and managing ESG 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 ESG performance.

Shareholders / Investors
- EPS NT$ 4.01
- Consolidated revenue NT$ 210.8 billion
- Selected for the Emerging Index of the Dow Jones Sustainability Index for the 10th time

Employees
- Employee salary and benefits are NT$ 44,673,314 thousand
- The average training hours per person are 56.73 hours
- The total training cost is NT$ 451,380 thousand
- The occupational injury rate per thousand workers is 1.83 for men and 0.1 for women
- We have 388 employees with disabilities (the legal amount is 155 people)
- 51 indigenous employees
- The employee engagement score is 90.2 (out of 100)

Clients / Customers
- We have more than 42 thousand public Wi-Fi hotspots
- The customer satisfaction score is 7.84 (10-point scale)
- The customer hotline service satisfaction score is 4.75 (5-point scale)

Supply Chain Partners
- 34 certified Gold-tier sustainable partners
- The local procurement percentage takes up 80% of the total procurement
- The green procurement amount is NT$ 14,994,826 thousand

Communities / NPO
- We provide the disadvantaged groups' communication for 76,905 households
- The subsidy amount is NT$ 211,098 thousand
- Coverage rate of the 12Mbps universal broadband service is over 96.66%
- The voice assistant App for the blind has been viewed over 297 million times since 2013
- The location of digital good neighbor has accumulated to 89 places
- The total service hours of the corporate volunteer service are 78,008 hours
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 ESG topics. This purpose has improved the quality of our actions and disclosures.

The annual material topics are determined through the following process: internal feedback, external questionnaires, topic identification by the ESG Secretariat, topic analysis by the four ESG working groups, ranking the topics, and finally, confirming the results.

We have a set of procedures in place to identify, engage, interact, and communicate with stakeholders through various channels based on the Stakeholder Engagement Standard (AA 1000SES:2015).
2021 Material Topics and Impacts

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

The Materiality Matrix

<table>
<thead>
<tr>
<th>Material Topics</th>
<th>Entity</th>
<th>CHT</th>
<th>Honghwa Subsidiary</th>
<th>CHT Security Subsidiary</th>
<th>Engineering Suppliers</th>
<th>Equipment Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Performance</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Presence</td>
<td>●</td>
<td></td>
<td>▲ ▲</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-corruption</td>
<td>●</td>
<td></td>
<td>▲ ▲</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Compliance</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor / Management Relations</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Health and Safety</td>
<td>●</td>
<td></td>
<td>▲ ▲</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversity and Equal Opportunity</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-discrimination</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing and Labelling</td>
<td>●</td>
<td></td>
<td>▲</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Privacy</td>
<td>●</td>
<td></td>
<td>▲ ▲</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socioeconomic Compliance</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

Process for Determining Material Topics

STEP 1 Confiming the determining process for material topics
The ESG Secretariat calls for the ESG working groups to confirm the material topics determining process of the current year. We perform through feedback and external questionnaires.

STEP 2 Information collecting / Topic identification
The ESG Secretariat is responsible for identifying ESG topics while considering CHT’s short-, mid-, and long-term achievement and referring to the material it collects including international guidelines, such as the GRI Standards, sustainability rating surveys, international benchmark business information and the news related to CHT in 2021.

STEP 3 Analysis / Prioritizing
The ESG working groups analyze topics and hold discussions based on internal consideration, industry status, industry chain practice, and advice from stakeholders. The topics are prioritized according to urgency and seriousness and the level of impact.

STEP 4 Result confirmation / Materiality matrix
Members of the ESG working groups were invited to consider the relevance between the topics and the actual operation according to internal and external information. The 2021 topic identification results were confirmed and a materiality matrix was prepared for submission to the Sustainable Development Committee for approval.
2021 Material Topics Description

**ESG Aspect**

<table>
<thead>
<tr>
<th>Material Topics</th>
<th>Meaning to CHT</th>
<th>Topic Corresponding to the GRI Standards</th>
<th>Goals</th>
<th>Key Results in 2021</th>
<th>Topic Corresponding to UN SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Climate Change</td>
<td></td>
<td>Energy</td>
<td>Short-term (2022)</td>
<td>Procurement of 50 million kWh or more of renewable energy</td>
<td>Mid-/Long-Term (2023-2030)</td>
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<tr>
<td>Mitigation and Adaptation</td>
<td></td>
<td>Customer Privacy</td>
<td>Short-term (2022)</td>
<td>No cybersecurity or privacy breach in 2021</td>
<td>Mid-/Long-Term (2023-2030)</td>
</tr>
<tr>
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<tr>
<td>We have continued to strengthen our processes and systems in response to external security threats and regulatory changes, and constantly refine information security systems and management strategies for consumer data protection.</td>
<td>Mid-/Long-Term (2023-2030)</td>
<td>100% information assets inclusion and log collection with reference to NIST CSF</td>
<td>Vulnerability intelligence, warning, and joint defense mechanisms established with high-risk vulnerability handled and responded within 7 days, CHT reached 100% completed in 2021</td>
<td>No discrimination cases in 2021</td>
<td></td>
</tr>
<tr>
<td><strong>Society</strong></td>
<td></td>
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<tr>
<td>We view our employees as the most important partners, materially protect their rights at work, sign the Collective Bargaining Agreement with the labor unions, and are committed to offering a friendly workplace of equality and diversity for our employees.</td>
<td>Mid-/Long-Term (2023-2030)</td>
<td>Product and service promotion information is 100% compliant with laws and internal regulations</td>
<td>No violation of laws concerns on health, safety, or product labeling in 2021</td>
<td>No violation of laws concerns on health, safety, or product labeling in 2021</td>
<td></td>
</tr>
<tr>
<td>Accurate Product Labelling</td>
<td></td>
<td>Marketing and Labelling</td>
<td>Short-term (2022)</td>
<td>0 cases of major information labeling or deception</td>
<td>Mid-/Long-Term (2023-2030)</td>
</tr>
<tr>
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</tr>
<tr>
<td>Friendly Workplace of Diversity and Inclusion</td>
<td></td>
<td>Labor/Management Relations Non-discrimination Diversity and Equal Opportunity</td>
<td>Short-term (2022)</td>
<td>No discrimination cases</td>
<td>Mid-/Long-Term (2023-2030)</td>
</tr>
<tr>
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<tr>
<td>With remuneration above the statutory standards and the industry average, we stress on the well-being of our employees, encourage our employees with actions for them to focus on work without distraction, and share our business results.</td>
<td>Mid-/Long-Term (2023-2030)</td>
<td>Average employee salaries remain in the top 5% of the industry</td>
<td>Collectivity Agreement coverage maintained over 95%</td>
<td>No discrimination cases in 2021</td>
<td></td>
</tr>
<tr>
<td><strong>Corporate Governance</strong></td>
<td></td>
<td>Occupation and Safety</td>
<td>Short-term (2022)</td>
<td>0 major violations</td>
<td>Mid-/Long-Term (2023-2030)</td>
</tr>
<tr>
<td>The upright operation is the core value CHT insists on. We make the employees strictly follow the laws and regulations through policies and propaganda.</td>
<td>Mid-/Long-Term (2023-2030)</td>
<td>Maintain validity of ISO 45001 Occupational Health and Safety Management at all institutions</td>
<td>collective agreement coverage maintained over 95%</td>
<td>All 27 institutions complete ISO 45001 verification in 2021</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>SGC Application and Innovative ICT Services</td>
<td></td>
<td>Socioeconomic Compliance Environmental Compliance Anti-corruption</td>
<td>Short-term (2022)</td>
<td>0 major violations</td>
<td>Mid-/Long-Term (2023-2030)</td>
</tr>
<tr>
<td>Due to impacts from the global industrial chains, Chunghwa Telecom more proactively strengthens its core businesses, introducing momentum to drive revenues via innovative ICT products and services while elevating shareholders' willingness to hold shares in the long run.</td>
<td>Mid-/Long-Term (2023-2030)</td>
<td>Maintain the number of independent directors above 35%</td>
<td>MSCI ESG rating to AAA in two phases (A4 by 2020)</td>
<td>Family members are also entitled to checkups at the same rate, and a total of 932 persons participated in 2021</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2021 Material Topics and Impacts 36</td>
<td>Stakeholders Engagement 40</td>
<td>Economic Performance</td>
<td>Short-term (2022)</td>
<td>“Customer-centric” organization-structure initiated with an aim to become the Leader in Smart Living and Agent of Digital Economy Empowerment to build the next-generation cloud-based intelligent networks</td>
<td>Mid-/Long-Term (2023-2030)</td>
</tr>
<tr>
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</tbody>
</table>

For details of the management policies for the material topics, please refer to p.158-159.
We have always thought that "Chunghwa Telecom can do more." As the leading brand in Taiwan telecom industry, CHT focuses on industry development and competition. In addition to good products, services and profits, we also give back to society. We also pay close attention to the voices of our internal and external stakeholders before making careful responses to the needs of society.

The identification of the stakeholders and their issues is a very important part of the ESG practice. In the initial meeting of ESG 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 ESG activities and information disclosure, we consult the opinion of relevant mechanisms include:

- “Consultation meeting with external professionals” for ESG report
- Regular invitation of external professionals to the “ESG Conference” and relevant forums
- The “ESG Supplier Conference” is held every year
- Specialists designated for ESG and the CHT Foundation
- CHT was the first to create “ESG videos” and the CHT official YouTube ESG program to record the implementation of ESG action

Influenced by CHT

May affect CHT’s operational performance

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Meaning to Chunghwa Telecom</th>
<th>Focused Topics</th>
<th>Communication Channel</th>
<th>Communication Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Shareholders / Investors</td>
<td>As shareholders / investors are our stockholders, we must be accountable to them.</td>
<td>Economic Performance, Anti-corruption</td>
<td>Shareholders’ meeting, Shareholder hotline/ mail, Earning results conference</td>
<td>Annually, Quarterly, Nonperiodic</td>
</tr>
<tr>
<td>B Employees</td>
<td>Employees are critical to the sustainable development and they are the driving force for sustainable growth.</td>
<td>Market Presence, Anti-corruption, Labor/Management Relations, Non-discrimination, Diversity and Equal Opportunity, Occupational Health and Safety</td>
<td>E-mail, Telephone call, Online forum, Labor employer meeting, Negotiation meeting</td>
<td>Real-time, Annually, Nonperiodic</td>
</tr>
<tr>
<td>C Clients / Customers</td>
<td>Only when customers prefer the products and services of Chunghwa Telecom could we have value for existence.</td>
<td>Customer Privacy, Marketing and Labelling</td>
<td>Service hotline, Customer service center</td>
<td>Real-time</td>
</tr>
<tr>
<td>D Suppliers</td>
<td>The large product and service chain of Chunghwa Telecom relies on the stable support of the suppliers.</td>
<td>Occupational Health and Safety</td>
<td>E-mail, Hotline, ESG Supplier Conference, Supplier Training, Survey</td>
<td>Real-time, Annually, Nonperiodic</td>
</tr>
<tr>
<td>E Communities / NPOs</td>
<td>We wish to reciprocate for society with our professional standing in telecom and create a better future.</td>
<td>Energy, Environmental Compliance</td>
<td>E-mail, Hotline, Stakeholder forum</td>
<td>Real-time, Nonperiodic</td>
</tr>
<tr>
<td>F Media / Accreditation Institutes</td>
<td>We have learned and grown with the media and accreditation institutes through their mentorship in sustainable development.</td>
<td>Energy, Anti-corruption</td>
<td>E-mail, Hotline, Press release, Press conference, Survey</td>
<td>Real-time, Nonperiodic</td>
</tr>
<tr>
<td>G Competent Authorities</td>
<td>Our products, services and related marketing behaviors are subject to audits by the competent authority.</td>
<td>Anti-corruption, Energy, Environmental Compliance, Socioeconomic Compliance</td>
<td>Public hearing/press conference, E-mail, Official document, Meeting, Telephone call, Visit</td>
<td>Real-time, Nonperiodic</td>
</tr>
<tr>
<td>H Competitors</td>
<td>As the leading brand in the telecom industry in Taiwan, we strive to engage in fair competition in the industry for a healthy development of the industry.</td>
<td>Market Presence, Marketing and Labelling</td>
<td>Official document, Meeting, Telephone call</td>
<td>Real-time, Nonperiodic</td>
</tr>
</tbody>
</table>
In light of the issue of net-zero emissions as a trend in the world and a focus in the industry, the 2021 Chunghwa Telecom ESG Partner Exchange, themed with “the strategies for net-zero sustainable development for the ICT industry,” invited domestic industrial representatives and experts to probe into the sustainable development and net-zero emissions strategies for all participants.

Chunghwa Telecom was the first domestic telecom operator that proposed “sustainable supply chain” initiative. In the Exchange, President Shun Chieh Chang from the Sustainable Alliance for Low-carbon Economy (SALcE) was specifically invited as the facilitator. Together with four panelists: President Tan Ho Chen of Taiwan Ecological Engineering Foundation, Secretary-General Tsai Chi Kuo of Taiwan Academy of Corporate Sustainability, Senior COO Stephen Pao of SGS-Taiwan, and President Shui-Yi Kuo of Chunghwa Telecom, they shared the sustainability thinking we ought to have for the ICT industry to march toward the net-zero and how enterprises can seize opportunities to create low-carbon sustainability business opportunities during the transition to a low-carbon economy.

For an ongoing sustainability influence, CHT established the “Supplier Sustainability Rating” system, first in the industry. The “Certificates of Sustainability Rating” were presented by President Kuo to 8 outstanding suppliers, including FOCI Fiber Optic Communications, Inc., Chunghwa System Integration, Hold Key Electric Wire & Cable, Co., Ltd., Arcadyn Technology Corporation, Din Yi Technology Inc., International Integrated Systems, Inc., SYSTEX Corporation, and Kinmax Technology Inc., which passed the rigorous audits by SGS-Taiwan and received the “Gold-tier Certificates.” “ESG Information Disclosure Awards” were presented to 3 supplier partners, i.e. Teamplus Technology Inc., Stark Inforcom Inc., and Kinmax Technology Inc. The “CDP Award” of the year went to CTBC Financial Holding Co., Ltd.

Moving forward, Chunghwa Telecom shall uphold the spirit of extensive alliance in sustainability to join hands with its huge army of supplier partners to exercise corporate social responsibility, bridge to the international development, create low-carbon opportunities together, and ultimately forge the sustainable future of ICT industry through “Customer-centric Value Creation.”
CHT places emphasis on the control of the corporate operation and sustainability risk. In 2016, the Company established a Risk Management Committee with the President as convener and high rank managers as members. The committee supervises risk management throughout the organization and is responsible for prioritizing identified risks, formulating response strategies to key risk issues, and reporting to the board of directors when deemed necessary. Through control of the mechanism at each level, potential risks and loss to the Company can be minimized.

SUSTAINABILITY RISKS AND OPPORTUNITIES

EMERGING RISKS 47
EMERGING OPPORTUNITIES 48
CLIMATE CHANGE RISKS AND OPPORTUNITIES 50
CYBERSECURITY RISKS 57

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

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

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

The first telecom operator in the world to pass "TCFD Conformity Check" by BSI with the highest grade obtained for 2 consecutive years.

CHT is actively looking into the development of renewable energy, self-built or for solar energy.

The SDGs CHT contributes to in this chapter:

7. AFFORDABLE AND CLEAN ENERGY
9. INDUSTRY, INNOVATION AND INFRASTRUCTURE
11. SUSTAINABLE CITIES AND COMMUNITIES
13. CLIMATE ACTION
CHT Risk Management Organization Structure

CHT continues with advanced technological research and development to take advantage of 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.

CHT Risk Management Organization Structure

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Aspect</td>
<td>“Risk Management Committee” was established in 2016 to inform the Audit Committee of significant risk incident and related information. The Committee reports to the Board of Directors at least once a year.</td>
</tr>
<tr>
<td>Strategic Aspect</td>
<td>The Board (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.</td>
</tr>
<tr>
<td>Management</td>
<td>Four management targets: strategic goals, operative goals, financial reports, and compliance. The Enterprise Risk Management (ERM) system was established for the regular control of the risks from each division and business. Management is conducted on a rolling basis in response to environmental changes with enhanced execution of sensitivity analyses and stress tests for focused businesses. Potential losses are reduced to the minimum through risk acceptance, risk transfer, risk reduction, and risk avoidance.</td>
</tr>
<tr>
<td>Assessment Tool</td>
<td>We use the Risk Analysis Matrix as our assessment tool to assess legal, network maintenance, market and financial operation risks, etc. For the major operational items and relative ESG issues, including climate-related risks, we enhance the performance of sensitivity analysis and the pressure test. Pursuant to Recommendations of the Task Force on Climate-related Financial Disclosures (referred to as “TCFD Framework” hereinafter), we analyzed the scope of operation, upstream and downstream, as well as the climate-related risks and opportunities throughout the life cycles of assets in the short-, mid-, and long-terms.</td>
</tr>
<tr>
<td>Audit Aspect</td>
<td>Risk Management Committee promotes implementation of risk management efforts of the Company and evaluates performances in risk management. The Auditor reviews the risks and reports to the BoD.</td>
</tr>
<tr>
<td>Feedback and Improvement</td>
<td>Risk status is followed up monthly and reported to the Risk Management Committee and the Audit Committee generally. 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.</td>
</tr>
<tr>
<td>Implementation Outcomes In 2021</td>
<td>3 meetings were convened with focuses on the corporate-level risks tied with the objectives in the BP and deliberations on directions of material risk topics. “2021 Risk Management Promotion” was reported on the Board of Directors meeting in May.</td>
</tr>
</tbody>
</table>

For more information about Risk Management, please refer to 2021 Annual Report p.125-134.
Emerging Opportunities

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

In the face of the trends of user-friendliness and rapid launch of diversified emerging technological applications, security perimeters are blurred as a result. Meanwhile, openness and softwareization increase the chance of exposure as well, which in turn poses a threat to security. Hence, apart from taking user experience and service functions into consideration, corporations are to employ the concept of Secured by Design in the beginning of development in order to effectively reduce potential information security risks.

CHT spares no effort in the refinement of cybersecurity technology. In response to the government’s cybersecurity automatization and industry innovation policies, in 2017, CHT founded Chungwha Cybersecurity International, a subsidiary dedicated to the development of integrated cybersecurity solutions especially for emerging technologies. We hope that our endeavors will encourage other companies to follow suit, while effectively broadening opportunities in information security and driving the growth of revenues apart from the reinforcement of national cybersecurity defense capability.

Opportunity Factor

 IoT / Big Data

Potential Business Opportunity

International research institute Gartner predicts that the IoT product and service providers will create a marginal benefit of US$6 trillion in 2025.

Countermeasures

- We developed the IoT intelligent internet platform on our own, combining 5 main services, including information security, big data, the blockchain, AI, and AR.

Opportunity Factor

 Development of 5G

Potential Business Opportunity

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

Countermeasures

- Launching "Taiwan 5G Industry Development Alliance - CHT leading team" with the 5G office in DoIT, ITRI, and III.
- CHT Pilot Team extends laboratory testing to practical "5G Testing and Training Site." All industries in Taiwan can take advantage of this environment to develop innovative applications and grasp the opportunities.
- Participate in the Asia Silicon Valley Development Plan of the National Development Council to offer open 5G network system integration and reliability verification services, establish the demo site for domestic open 5G networks, promote domestic open 5G networks, and promote open flexible 5G networks and reliability verification mechanisms; create the National Team of Open Network of Taiwan with the R&D prowess of the ICT industry in Taiwan integrated for the international competition and the next industry of trillion dollars' worth.
- With the advantages of the largest customer base of 5G services and the largest bandwidth available, we work with ICT manufacturers and relevant 5G product suppliers at home and abroad in line with the philosophy of Extensive Alliance to invest in the market of applications for the private 5G networks and build the 5G venues with the high bandwidth, low latency, and great connectivity of the 5G private networks.

Opportunity Factor

 Climate Change (low carbon products and services)

Potential Business Opportunity

- The World Economic Forum (WEF) predicted that of the potential risks in the next decade, four out of the top five risks are environmental issues, especially the “extreme weather.”
- Businesses around the globe are investing in low carbon emission infrastructure, including green energy, electric automobiles, and smart cities to reduce reliance on electricity.
- The bonds issued by green enterprises worldwide in 2021 were up to $416.5 billion, worth accounting for 3.51% of the corporate bonds issued globally and rising.

Countermeasures

- Green Product and Service Program — we provide businesses with energy-saving technology and services.
- We reduce carbon footprints through innovative green services, cloud products, and other technologies and build smart cities through technology by tapping into our core advantages in the ICT industry.
- We are building a cloud service platform that enables clients to access real-time data regarding their energy usage and equipment status so that failures can be predicted and prevented.
- We developed the Green ICT technology for deployment in renewable energy. As of 2021, either the installed solar PV capacity for CHT itself or for others continued to rise significantly.
- The sustainable development bond of NT$2.5 billions’ worth was issued in 2022 as the first sustainable development bond issued by the domestic telecom operator. The fund raised shall be directed to green buildings, comprehensive VoIP for tele- phone networks, and extensive broadband construction in the offshore islands and rural areas to bridge the urban-rural divide, so as to realize the carbon reduction for all via technology.

Opportunity Factor

 Information Security Management

Potential Business Opportunity

- Popularization of emerging technological applications (e.g. IoT, AI, and cloud services) as well as diversified attacks by hackers boost the challenge of protection against cybersecurity threat while create new opportunities in the cybersecurity area.
- The Executive Yuan announced the Cybersecurity Industry Development Action Plan. The gross output of the industry is expected to exceed NT$ 78 billion dollars by 2025.
- Gartner pointed out that the global cybersecurity market accounted for approximately 3.32% of the global IT expenditures and rising.

Countermeasures

- The cyber intelligence joint defense platform we developed and key emerging technologies like MEC security monitoring offer an environment for 5G and IoT that is more secured and reliable.
- Developing inter-disciplinary financial security solutions, such as blockchain and CloudHSM, we strive to become a cybersecurity service provider for digital finance.
- With our current IT solutions, we offer complex solutions for clients using ICS/OT infrastructure connected to a hybrid network.
- As a managed security service provider (MSSP), we dedicated to the provision of a wide range of cybersecurity solutions. In addition to extending our market reach within the border, we are actively seeking business opportunities overseas.
- With quality domestic and international products integrated, ISP networks utilized, and advantages in channels and R&D, we offer overall solutions to big corporations and become the leader in the cybersecurity industrial chain integration.
Climate Change Risks and Opportunities

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

The Supervisory Responsibility of the Board of Directors

In 2021, in line with the organizational transformation and the ESG trend, Chunghwa Telecom officially renamed the CSR Committee as the "Sustainable Development Committee" with the Chairman and President serving as the Chairperson and Vice Chairperson. Also, the President serves as the Convenor of the "Risk Management Committee." With the dual mechanisms, we ensure that risks and opportunities related to climate change can be fully deliberated and reviewed in the Sustainable Development Committee and the Board of Directors. In addition, with the existing internal control and risk management mechanisms combined, the links between the climate change topics and the Board of Directors’ responsibility in the oversight thereof is strengthened through the report to the Board of Directors every half a year.

The Role of Management

The “Environmental Group” is set up under the CHT Sustainable Development Committee, responsible for the strategic planning for environmental sustainability, climate change, carbon management, and environmental protection actions as well as execution of action plans. Pursuant to the ESG vision and carbon management strategies laid out by the Board of Directors and the Sustainable Development Committee, in line with the needs of international institutional investors, rating agencies, and key stakeholders, it plans, enforces, and manages execution of various climate change and carbon management action plans. The relevant mechanisms include:

- **Target Setting:** Target setting for the net-zero emissions, GHG reductions, and climate resilience improvement of CHT.
- **Strategic Planning:** Strengthening the carbon management competencies of the Company and its supply chain with mitigation and adaptation at the core, along with improvement of climate resilience of the telecommunication infrastructure and communication equipment, to ensure business continuity.
- **Solutions:** Oversight and proposal of innovative solutions to reduce GHG emissions from itself and the industrial chain; planning and execution of “Action Plans for Adaptation to Climate Change in the next 20 Years for Chunghwa Telecom Communication Networks” to deploy climate change adaptation actions.

CHT Climate Change Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mitigation</th>
<th>Adaptation</th>
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<tbody>
<tr>
<td>Description</td>
<td>Attainment of net-zero emissions is the foremost mission, along with facilitation to partners, upstream and downstream, to collectively realize the target of 1.5°C set in the Paris Agreement.</td>
<td>Improvement of the climate resilience for the infrastructure and communication equipment of the Company is the foremost mission to ensure business continuity in the Company.</td>
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</table>

To analyze the future impacts of climate change on the Company, we employed the Sustainable Development Scenario (SDS) proposed by the International Energy Agency (IEA) and the RCP 2.6 scenario proposed by the Intergovernmental Panel on Climate Change (IPCC) to conduct our climate scenarios analysis.

CHT Climate Change Scenarios for "Mitigation and Adaptation"

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mitigation</th>
<th>Adaptation</th>
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</thead>
<tbody>
<tr>
<td>Description</td>
<td>Energy efficiency improvement: IDCs and base stations are our primary sources of energy consumption. Hence, a series of energy-efficiency plans are deployed. For instance, with the advantage of the fixed-line facilities combined, the 5G construction was deployed with the &quot;C-RAN&quot; architecture, which is low in failure rate, easy for maintenance, and more energy efficient. <strong>Use of Renewable energy:</strong> Aside from active installation of renewable energy capacities, we also work with external entities to build their solar power plants, which not just complies with the renewable energy development policy of the country but also contributes to our revenue.</td>
<td>Our climate adaptation strategy is to elevate the climate resiliency of facilities/equipment to reduce threats from extreme weather events. Hence, the Action Plans for Adaptation to Climate Change in the next 20 Years for Chunghwa Telecom Communication Networks was proposed and relevant budgets were allocated to carry out focused improvement and adaptation projects for equipment at high climate risk in order to improve the climate resiliency of the Company.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Climate Scenario</th>
<th>Sustainable Development Scenario, SDS</th>
<th>IPCC RCP 2.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy efficiency improvement: IDCs and base stations are our primary sources of energy consumption. Hence, a series of energy-efficiency plans are deployed. For instance, with the advantage of the fixed-line facilities combined, the 5G construction was deployed with the &quot;C-RAN&quot; architecture, which is low in failure rate, easy for maintenance, and more energy efficient. <strong>Use of Renewable energy:</strong> Aside from active installation of renewable energy capacities, we also work with external entities to build their solar power plants, which not just complies with the renewable energy development policy of the country but also contributes to our revenue.</td>
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</table>

In addition, based on the physical risk topics under the IPCC RCP2.6 scenario, the impact levels to the Company were identified. Material and potential Climate risk topics are managed and supervised continuously to the level of preemptive preparedness to strengthen our capacity for climate disasters.
We classified risks related to the industry as transition risks and physical risks and established the list of topics of risks and opportunities by combing through the industrial risk management reports worldwide as well as the regulations and policies in Taiwan. Also, to capture changes to the climate change risks, the risk assessment results are reviewed yearly to adjust our climate change strategies, reduce risk impacts, and seize climate opportunities. There are 15 risk topics identified in 2021, which include 10 transition risks and 5 physical risks.

Referring to the ISO 31000 risk management guidelines, the strategy group assess the hazard caused by each climate-related risk (risk hazard = likelihood × impact), through Delphi method, which investigates the professional experience of senior executives in related departments, and focuses on the likelihood from five levels, which are “very unlikely”, “unlikely”, “probable”, “likely”, to “very likely”, and the degree of impact is divided into five levels based on the proportion of CHT’s paid-in capital, which are “extremely high”, “very high”, “high”, “moderate”, and “minor”. A total of 4 high risks, 2 medium risks, and 9 low risks were identified in the assessment.

<table>
<thead>
<tr>
<th>No.</th>
<th>Risk</th>
<th>Risk level</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Increased sustainability laws and regulations (e.g. Renewable Energy Development Act)</td>
<td>High</td>
<td>Short- and Mid-term</td>
</tr>
<tr>
<td>R2</td>
<td>Increased electricity bill derived from changes to the energy mix in Taiwan</td>
<td>High</td>
<td>Short- and Mid-term</td>
</tr>
<tr>
<td>R3</td>
<td>Increased costs from GHG emissions (e.g. additional costs of carbon fee in line with the regulations)</td>
<td>High</td>
<td>Short-, Mid- and Long term</td>
</tr>
<tr>
<td>R4</td>
<td>More costs required to achieve net-zero emissions due to rise of carbon credit prices</td>
<td>Medium</td>
<td>Mid- and Long-term</td>
</tr>
<tr>
<td>R5</td>
<td>Replacement with equipment of lower energy consumption (e.g. electric vehicles) to improve energy efficiency</td>
<td>Medium</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R6</td>
<td>Failed new technology investment (e.g. a technology developed not meeting the low-carbon benefits, rendering failure of the new technology invested)</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R7</td>
<td>Miss the involvement in the low-carbon R&amp;D trend for failure of investment in the low-carbon transformation technologies</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R8</td>
<td>Changes in customer behaviors (e.g. elevated consumer awareness for climate change or shift in product/service demands)</td>
<td>Low</td>
<td>Mid- and Long-term</td>
</tr>
<tr>
<td>R9</td>
<td>Impact to reputation arising from supplier carbon reduction performance lower than expected</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R10</td>
<td>Impact to reputation from litigation risks</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R11</td>
<td>Facility/equipment damages arising from an increased frequency and severity of severe typhoons</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R12</td>
<td>Facility/equipment damages by floods due to an increased frequency and severity of torrential rain</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R13</td>
<td>Product supply disruption/delay arising from impacts to supplier operation and production due to extreme weather events</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R14</td>
<td>Increased energy consumption due to rising average temperature</td>
<td>High</td>
<td>Short-, Mid- and Long-term</td>
</tr>
<tr>
<td>R15</td>
<td>Operational assets are damaged owing to the rise of sea level covering the low-lying coastal areas</td>
<td>Low</td>
<td>Short-, Mid- and Long-term</td>
</tr>
</tbody>
</table>

The short-term is 2021-2025; the mid-term is 2026-2030; and the long-term is 2031-2050.
Increased electricity bill derived from changes to the energy mix in Taiwan

**Risk Impact Summary:** In line with the renewable energy development policy in Taiwan, an accelerated use of renewable energy in the energy mix and a rising cost in electricity shall be a future trend. The Ministry of Economic Affairs estimated that the energy price will rise by 30% by 2025. CHT has a high demand in electricity consumption. The operating cost will rise as a result.

**Risk Responses:** With a high demand in electricity, we know for sure an increased electricity bill will pose a significant impact on the operating costs. Therefore, we attach important to corporate actions for energy saving and energy efficiency improvement. Take the IDCs for example, the self-developed Intelligent Environment Network (iEN) Service and the Power Operation Supervisory System (PSS) for IDCs are used to dynamically manage energy online to achieve the benefits of carbon reduction and environmental protection via technology.

Increased costs from GHG emissions
(e.g. additional costs of carbon fee in line with the regulations)

**Risk Impact Summary:** Our country has proposed the plan to achieve net-zero emissions by 2050. The Greenhouse Gas Reduction and Management Act in force sets a maximum of NT$1,500 per metric ton of carbon. Meanwhile, it is planned to enact the carbon fee mechanism (the current plan is to levy NT$100 per metric ton of carbon on the focused manufacturers). If the carbon fee is expanded to Chunghwa Telecom in the future, it will increase the operating costs of CHT.

**Risk Responses:** Pursuant to the IEA recommendations, energy efficiency improvement is an effective mean to carbon reduction. Thus, CHT set the target of net-zero emissions by 2050. Aside from active actions for energy saving and energy efficiency improvement, it also began to invest in renewable energy. As of 2021, CHT reached 4,506 kWp of installed solar PV capacity and is planning to procure renewable energy so as to cut its carbon emissions step by step.

Increased energy consumption due to rising average temperature

**Risk Impact Summary:** Based on the Taiwan Climate Change Projection Information and Adaptation Education Platform (TCCIP), MOST, it is estimated that the average temperature in Taiwan will rise by 1.35°C in 2021-2060. According to the Bureau of Energy, every 1 °C lower for air-conditioning comes with an additional 6% energy consumed. Since CHT relies on AC system to maintain IDC operation, the rising temperature will lead to rising operating costs for CHT as well.

**Risk Responses:** With the emphasis on energy efficiency, apart from the development of the Environment AllTrifier Theurgy (EARTH) system, iEN Service, and POSS to manage and cut energy consumption, the advantage of the fixed-line facilities is combined to deploy the 5G construction with the “C-RAN” architecture, which is low in failure rate, easy for maintenance, and more energy efficient.

Adoption of low-carbon technologies to raise energy efficiency

**Opportunity Impact Summary:** CHT has a high demand in electricity due to its industrial characteristics that 97.57% of the total demand and carbon emissions of the Company. CHT is subject to the relevant laws and regulations of carbon emissions in Taiwan and required to pay carbon fees, if CHT successfully achieve net-zero emissions, it may offset the regulatory requirements posed by the government and be exempted from the carbon fees.

**Opportunity Responses:** By active adoption of low-carbon technologies, for instance, we are the first domestic telecom operator to adopt the “Centralized RAN (C-RAN)” architecture for 5G deployment. Through the centralized management, we effectively reduce costs and enjoy the benefits of rapid failure response and repairment. Also, it saves the energy consumption and space for AC installation to individual sites, which comes with the benefits of efficiency and energy saving that helps in the performance of carbon reduction.

Popularization of 5G, IoT, big data, and other emerging technologies to drive industrial transformation

**Opportunity Impact Summary:** The International Telecommunication Union (ITU) pointed out that to achieve the climate goal in the Paris Agreement, the ICT sector will have to utilize its technical strengths and capabilities to contribute to the global carbon reduction efforts. Take IoT for instance, the IoT sector in Taiwan yielded approximately NT$1.76 trillion worth of output value in 2021.

**Opportunity Responses:** Active investment of resources in innovation and development to drive the low-carbon transformation in the industry:
1. Active exploration of emerging businesses; utilization of R&D resources and energy of strategic partners to build the industrial ecosystem to expand the domestic and international markets
2. Intelligence, digitalization, Network Virtualization, Software-Defined Networking (SDN) and other technologies to elevate the resource output/input ratio and effectively optimize the costs in investment and construction

GHG emissions reduction to lower operating costs

**Opportunity Impact Summary:** We have set the target of net-zero emissions. Also, with energy efficiency improvement and renewable energy as the two axes for carbon reduction, we work to cut the carbon emissions at CHT. Under the assumption that CHT is subject to the relevant laws and regulations of carbon emissions in Taiwan and required to pay carbon fees, if CHT successfully achieve net-zero emissions, it may offset the regulatory requirements posed by the government and be exempted from the carbon fees.

**Opportunity Responses:** Following the opinions from the International Energy Agency (IEA), we employ energy efficiency improvement and renewable energy as our two axes for carbon reduction to achieve our target of net-zero emissions by 2050 step by step.

In terms of energy efficiency improvement, through the self-developed management and energy-saving systems, we manage and reduce the energy consumption at CHT. In terms of renewable energy, we have achieved 4,506 kWp of self-installed solar PV capacity and are planning to procure renewable energy.
Greenhouse Gas Emissions Management

1. Indirect emissions (Category 2) are measured on a location-based method.
2. The decrease of total emission in 2021 shows that the switch from PSTN to SVG, the power consumption optimization which does not affect the network operation, the replacement of old access and high energy consumption base equipment, and reduction of IDC PUE.

GHG Inventory and Verification

Unit: t-CO2e

<table>
<thead>
<tr>
<th>Category</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct emissions (Category 1)</td>
<td>28,455.5921</td>
<td>22,192.9316</td>
<td>17,887.470</td>
</tr>
<tr>
<td>Indirect emissions (Category 2)</td>
<td>795,295.4952</td>
<td>768,128.0670</td>
<td>716,979.259</td>
</tr>
<tr>
<td>Total emissions (Category 1 + Category 2)</td>
<td>823,751.0873</td>
<td>790,320.9986</td>
<td>734,866.729</td>
</tr>
<tr>
<td>Emission intensity (t-CO2e/NT$ in million)</td>
<td>4.0</td>
<td>3.8</td>
<td>3.5</td>
</tr>
<tr>
<td>Percentage of category in revenue</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Emissions (t-CO2e)

- Upstream transportation and distribution: 571.0138
- Downstream transportation and distribution: 141.8628
- Business travel: 4,771.1007
- Employee commuting: 8,665.2226
- Purchased goods and services: 466,201.0584
- Capital goods: 364,752.9818
- Fuel- and energy-related activities: 135,568.0273
- Waste generated in operations: 1,359.3998
- Upstream leased assets: 18,492.1388
- Use of sold products: 307,742.3346
- End-of-life treatment of sold products: 383.1154
- Downstream leased assets: 145,217.4281
- Franchises: 2,969.6603

Total: 1,456,835.344

Emerging Risks 47

Cybersecurity Risks

Driven by the Industry 4.0 development and emerging network applied technologies (e.g. 5G application, softwareization, virtualization/cloudification, and IoT), cybersecurity threats have evolved into multi-faceted mixed attacks that increase challenges for enterprises in cybersecurity management.

We continue to study and analyze measures for risk protection, align ourselves with international cybersecurity standards, and establish the joint defense mechanisms with governments and international cybersecurity organizations, effectively enhancing the overall cybersecurity defense and response capabilities of the Company. Furthermore, we are actively developing key information technology and strengthening supply chain security, which not only facilitate developments of emerging businesses but also offer secured, reliable digital environment to our customers.

Corresponding Strategies

Aiming to achieve the cybersecurity vision of "establishing the most valuable, secure, reliable, and trustworthy telecom service provider that meets international standards," we uncover hidden, malicious behaviors and hunt down potential threats in time in the early stage of hacker attacks in a more proactively fashion. We implement "Cybersecurity Policy" and "Privacy Policy" right from the start. Pursuant to the spirit of ISO 27001 Information Security Management System and the Plan-Do-Check-Act (PDCA) cycle, we constantly review and improve in these regards before embedded into the everyday operations, so as to achieve the goal of "zero tolerance" for both major cybersecurity breach and privacy incidents.

In addition, to ensure the security of "ICT systems" and "critical infrastructure," with reference to the NIST Cybersecurity Framework (CSF) and in pursuance of the standards and regulations, domestically and internationally, we established "Cybersecurity and Privacy Protection Risk Management Framework" to put in place specific and effective measures for cybersecurity and privacy protection so as to prevent any potential cybersecurity risk.

Our performance of cybersecurity and privacy risk management has been incorporated into the monthly tracking by the Risk Management Committee for management. Any material risk issue will be submitted to the Audit Committee or directly reported to the Board of Directors. There was no business impact or penalty arising from cybersecurity or privacy breach as of 2021. "Cybersecurity Insurance - Data Protection Insurance" has been purchased to protect the rights of customers and investors.

Opportunities and Actions

With the goal of "Attention & Implementation of Cybersecurity by All," we have incorporated "Information Security" in the KPIs for employees. Also, we regularly conduct internal/external audits and have passed inspections by competent authorities. At present, all of the IT infrastructures of Chunghwa Telecom are 100% certified to international cybersecurity standards (ISO 27001 / ISO 27011 / ISO27017 / ISO27018 / BS10012 / CSA STAR Certifications).

For more information of Chunghwa Telecom Cybersecurity and Privacy Protection, please refer to the official website/Sustainability/Cybersecurity. For more information of Emerging Opportunities and climate change risks and opportunities, please refer to p.113-118 of our Annual Report.
Cybersecurity Management Strategy and Structure

1. To ensure an effective operation of cybersecurity management, "Cybersecurity and Privacy Protection Management Committee" has been established at Chunghwa Telecom. The Chairman represents the Board of Directors to oversee the Cybersecurity Policy. Meanwhile, the President has been appointed as the convener, and a SEVP as the Chief Information Security Officer (CISO), dedicated to the supervision of matters concerning the Company’s internal cybersecurity.

2. To ensure implementation and compliance with relevant cybersecurity regulations, meetings of "Cybersecurity Working Group" and "Privacy Protection Working Group" are held regularly. The Cybersecurity Department serves as the executive secretariat to compile the cybersecurity management performance and the reviews and improvements of issues involving cybersecurity risks; oversee and assess the compliance and effectiveness of management measures; and report to the Board of Directors.

3. The CHT SOC, established in 2013, is seasoned with experiences in large-scale hacking and defense scenarios. A department dedicated to ICT security management was approved to be set up in 2016 to exercise the policy directions laid out by the Cybersecurity and Privacy Protection Management Committee, align with the laws and regulations and technical development for new businesses, and coordinate matters concerning the companywide cybersecurity policies and regulations, risk control and management, cybersecurity surveillance and management, and joint defense, education and promotion, efficacy assessment, as well as compliance checks. The works of cybersecurity management are improved ceaselessly in line with the standards, laws, and regulations at home and abroad to reduce the corporate cybersecurity risks, promote new business development of the Company, and offer a safe and reliable digital environment to customers.

4. Under the Cybersecurity and Privacy Protection Management Committee, the "Cybersecurity and Privacy Protection Executive Committee" and dedicated units are instituted in all Business Groups (Laboratories), supervised by the Deputy Cybersecurity Supervisors of Business Groups (Laboratories), to carry out and exercise various works for cybersecurity and privacy protection.

* For more information, please refer to p.113-118 in our Annual Report. Check the Annual Report here.

Creation of the Most Valuable, Secure, and Reliable Digital Environment & Promotion of Smart Living and Digital Economy Development

Huge resources are allocated and talents are cultivated in response to the government’s policy "Cybersecurity as National Security":

Internally
We have established a sound cybersecurity management system and the security operation center to ensure the security of the critical telecom infrastructure and customers' privacy. Meanwhile, we work with national-level cybersecurity organizations domestically and internationally for mutual assistance and joint defense. In 2021, we assisted in the handling of 50,871 user incidents and shared 1,445 intelligences to lower the overall risk to hacking for the country and customers.

Externally
Pursuant to the government policies of cybersecurity autonomy and industrial innovation, we commit ourselves to the cybersecurity technology development. In 2017, CHT Security Co., Ltd. was established. With 68 cybersecurity products it developed, CHT Security Co., Ltd. is the only cybersecurity service provider with the highest rating, 5A-rated in cybersecurity services for 3 years in a row. Hence, it provides cybersecurity services to 300,000 families, over 20,000 SMEs, over 100 large corporations, and hundreds of government agencies. As a result, we consolidated the national competency in cybersecurity defense, established a basic enabling environment for digital innovation, and attained the vision of a wealthy, digital country.
In addition to the pursuit of operational value and the growth of profit for the benefit of our stakeholders, we also allocate substantial resources for the creation of sustainable value. The approach to this is five-fold: capital investment, strategy formulation, action plan, regular follow-up and performance reviews. We take all the necessary steps to ensure that each investment input has a proper sustainability result.

CHT is the first telecom company to institute sustainable supply chain management:
- Working with the Sustainable Alliance for Low-carbon Economy (SALcE) to audit and issue sustainability labels.
- Joining the Carbon Disclosure Project (CDP) in an effort to establish a sustainable supply chain.

CHT developed an IoT (Internet of Things) platform that integrates five major services—information security, big data, cloud computing, artificial intelligence (AI), and augmented reality (AR).

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

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

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

CHT is the first telecom operator to launch 5G services.

The first telecom carrier that obtained both environment management certifications, "ISO 14067 and ISO 14046".
Impact on Value Creation

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

Resource Allocated to Sustain Value Creation

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

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

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

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

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

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

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

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

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

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

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

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

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

Management
- Combined with the characteristics of 5G with high speed, low delay and large connectivity, the new ecological chain of 5G industry will be jointly built through the alliance of industrial innovation technologies at home and abroad.

ICT Products and Services
Chunghwa Telecom has been developing ICT services across borders and smart applications that integrate with networks in the cloud. Seasoned with rich industrial service experiences, it acquired the largest bandwidth in 5G bidding. With the licenses in the 3.5GHz and 28GHz bands for mobile broadband businesses, we were the first to launch the 5G services. With the high speed, low latency, and great connectivity of 5G, combined with the alliance at home and abroad for the industry’s innovative technologies, CHT built an emerging ecological chain of 5G industries. To accelerate the startups in Taiwan’s transition for internationalization, it became the one and only AWS Consulting Partner and Technology Partner for networks in Taiwan. Equipped with certificates in Amazon Web Services (AWS) DevOps Competency, AWS IoT Competency, and AWS Well-Architected, CHT successfully facilitates enterprises in building cloud environments for corporate operation with higher degrees of safety, efficiency, and flexibility.

Action
- CHT was the first telecom operator that launched 5G services.
- We are the first telecom operator that obtained dual certifications in “the regulatory standards for the testing of 5G NR” from the NCC.
- We have developed an IoT application platform using our own innovative technology.
- Five previously separate pursuits have now been combined, including IoT, AI, Big Data, AR/VR and self-driving cars.
- Certificate of Conformity for Privacy Policy issued by SGS

Target
Short-term:
- “Customer-centric” organizational structure initiated with an aim to become the Leader in Smart Living and Agent of Digital Economy Empowerment to build the next-generation cloud-based intelligent networks.

Mid-long term:
- Over 12,000 5G base stations
- Over 2.3 million users of MOD services

Response
5G consumer applications p.66-69

Indicator
- 2,577 patents accumulated
- NT$3.69 billion of investment in R&D
- 1,298 R&D employees

5G gave rise to the applied IoT technologies as well as new forms of services like the emerging industries of AI, big data, drones, AR, VR, smart home, and smart long-term care, which shall drive the economic growth worldwide. Hence, we charge ahead with technological innovations and construct the domestic 5G industrial ecosystem and the integrated applications of 13 vertical markets across 7 categories, endeavoring to offer competitive solutions through a better integration of the hardware strengths in the industry and the software energy of telecom services to embrace transformation.

* 5G Vertical Applications
5G Consumer Applications

Transportation

Integrated Priority Sign Control System

To effectively improve the efficiency of bus transport and reduce the traffic accidents of ambulances, we collaborated with Yunlin County Government, the National Cheng Kung University, and the National Taitung University of Science and Technology. The team, under the 5G+ Smart Talking City project, aimed to establish an integrated priority sign control system for buses and emergency vehicles in Taiwan. With the V2I technology, the traffic lights, roadside hardware, vehicle and cloud platforms integrated, it computes for the priority rights of way to address the issue of priority sign conflicts for different vehicles. As a result, we built a seamless connection and application for people, vehicles, and roads, offering innovative smart transportation and living for the public.

Autonomous Bus

Through the New Taipei City Autonomous Electric Bus System Trial Run Program, we worked with Kingwaytek Technology Co., Ltd. on the development of NTP autonomous electric buses – Smart Blue route, building the Route 168 as the first bus route in Taiwan run by autonomous electric buses.

This case utilizes the Cellular Vehicle-to-Everything (C-V2X) to feed the surrounding traffic sign status as well as the traffic information of other vehicles and pedestrians to the autonomous vehicle platform for computing. Aside from the cameras and LiDAR on the vehicles to learn the surrounding environment, one can also acquire traffic information via the C-V2X communication, roadside cameras and radars. After the trial run for three months without passengers and five months with passengers, the test was completed with a total of 6,618 buses, 6,758 kms, and 1,339 hours. In addition, with over 15,000 passengers, the deviation rate was lower than 2.6% with an on-time rate of 97%. The overall satisfaction rate with the ride from the public was over 90%. In the future, the autonomous bus service shall be extended and applied to tourism routes or community shuttling service step by step.

Food

Agricultural IoT and AI-powered Farming

To elevate medicine quality and build the smart human-centered medical services, we work with NTUH Hsin-Chu Branch to develop innovative applications in the 5G smart hospital. The 5G edge computing service we developed and deployed is the first case in the world to utilize the multi-access edge computing (MEC) system software, we realized the medical image feeds, mobile nursing carts, smart robotic cleaning and disinfection, inspection, and smart monitoring to boost the energy efficiency of healthcare, disease management, public health monitoring, relevant education and research.

Alliance with NTUH Hsin-Chu Branch for 5G Smart Medicine

To expand the application of the smart IoT technologies in agricultural industry and facilitate an accelerated data integration to achieve precision production and marketing management and put the idea of digital equality in practice, we participated in the agricultural IoT project of the competent agricultural authority to optimize the value communications. With the features of high speed and low latency of 5G in data transmission, we aided the timely and effective decision-making. This solution has been recognized by the 2020 Smart City and the Gold Award in the 2021 Taiwan Sustainability Action Awards (TSAAs).

5G Precision Connected Emergency System

To develop the innovative 5G applications of Smart City Taiwan 2.0, we work with Taoyuan General Hospital, Ministry of Health and Welfare. The emergency room and mobile precision medical system (out-of-hospital medical station and ambulance) are connected via the 5G network structure to resolve the conventional bottleneck in communication between the out-of-hospital emergency service and the emergency room on the hospital. Also, the ESR Situation System was built for a timely information communication to the hospital, effectively ushering in a new landscape for the medical and healthcare services in Taoyuan. Hence, we assist Taoyuan General Hospital, Ministry of Health and Welfare in effective allocation of medical resources and collectively establish the leading advantage of smart healthcare for Taoyuan.

Housing

Elderly Care for a Happy Living in Pingtung

We gave birth to the first “Dementia Friendly Community” in Taiwan with services like the anti-lost positioning service, emergency services, smart images, friendly and safe transportation, and IoT-enabled autonomous health management service for the elderly. Supported by the local government, it was expanded with services of Yunlin Tianlun D+ Card, Taitung Family Safety D+ Card, and Taipei Memory Security D+ Card available to guard the safety of more elderly to put more families at ease. This solution has been recognized by the 18th Global Views Monthly CSR Awards as an outstanding solution in the Age-friendly category.

5G Smart Yunlin

We actively deployed the energy management systems for the 1,594 classrooms across the 194 schools in Yunlin. In addition to the benefits to the schools in power usage management and electricity cost reduction, we took it further by designing a display panel for the school children to see the solar power generation and power usage on campus for the energy efficiency education of the future generations.
Chunghwa Telecom Foundation has been executing the "Little Directors" project for years. With digital applications at the core, it cultivates school children in rural areas to document local stories with their digital competency in video. In light of the outbreak in 2021, to protect the education equality in rural areas during the pandemic, we responded flexibly in line with the trend of digitalization. Combining the teleconferencing technology and broadband network service, we transformed the camp-based curriculum into a distance learning program for children in the rural areas to keep learning from home. During the journey of joint digital learning, we encouraged the children to bravely stand on the shoulder of technology. With the perspective of care for the local as the starting point and with digital images as their form of expression, they engaged social communication with the support of multimedia channels to convey and represent the beautiful values of local communities. There have been 196 Little Directors cultivated with over 70 short films produced since 2018.

In response to the advent of the 5G network era, the first “5G Innovative Application Competition” was organized in 2021 with prizes totaled NT$1.5 million. Participants developed new services in 5G application and various business arenas. Also, technical talents of the industries with interdisciplinary hands-on capabilities for innovation were uncovered. With topics derived from CHT 5G Cross-sectoral Integration Golden Circle and Special Awards for Smart Applications added (Smart Manufacturing, Smart Transportation, and Smart Healthcare) added, it drew nearly 200 teams to the competition with projects in the areas of 5G corporate network, smart transportation, smart telemedicine, smart inspection, AR corporate applications, and smart audiovisual streaming.

In the face of various work entries, the juries took creativity and novelty, completeness of works, as well as their commercialization values as the key criteria. Through the competition, we aimed to inspire more innovative 5G applications from the participants to Taiwan to create infinite possibilities for the future and build a wonderful smart living.
Apart from ongoing strengthening of the core telecom business, Chunghwa Telecom also actively invests in innovative ICT R&D to create new momentum for revenue growth. With the dedicated innovation and R&D institution, Chunghwa Telecom Laboratories, we uphold the values of “innovation, accountability, customer-oriented, and integrity.” Setting eyes on the development of advanced network communication technologies and innovative ICT applications, we transform needs of customers into convenient and useful services, endeavoring to live up to the value of “customer-centric” to foster the vision.

Overview of Chunghwa Telecom Laboratories in 2021
- 1,298 employees (nearly 6.4% of total) with 93% being R&D personnel.
- The funding for R&D totaled NT$3.69 billion, which was 1.75% of the consolidated operating revenue.
- The laboratories secured 167 new product/technical patents (152 domestic and 15 overseas) to a total of 2,577 (2,322 domestic and 255 overseas). 917 of the patents are currently in force (809 domestic and 108 overseas).
- Publication of 94 papers on journals (13 internationally and 81 domestically) and 42 papers on conferences (32 internationally and 10 domestically).

* Chunghwa Telecom Laboratories

**Innovative R&D Results in 2021**

**Freeway Bureau, MOTC**

The silver award of the “7th Expressway ETC Data Application Creative Competition in Traffic Management”

**Intelligent Transportation Society of Taiwan**

The Intelligent Transportation Paper Award from ITS Association

**Ministry of Economic Affairs**

The Silver award of 2021 Ministry of Economic Affairs Energy Saving Benchmark Award

**Taiwan External trade development council (TAITRA)**

1 gold, 2 silver, and 5 bronze medals secured at the 2021 Taiwan Innotech Expo

**The Telecom Laboratories Human Resources Structure**

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doctor</strong></td>
<td>90</td>
<td>6.9%</td>
</tr>
<tr>
<td><strong>Master</strong></td>
<td>896</td>
<td>69.0%</td>
</tr>
<tr>
<td><strong>Bachelor</strong></td>
<td>248</td>
<td>19.1%</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>6</td>
<td>0.5%</td>
</tr>
</tbody>
</table>
Innovation + Creativity to Create Sustainable Output Values

We constantly encourage creativity and innovation. To convert creativity to tangible output, drive industrial development, and boost revenues, we adopted strategies of concurrent advancement internally and externally. In response to the digital convergence and the cultural and creative trend, CHT presents Digital Innovation and Application Series themed with digital living. We uncover top-notch innovative talents through the competitions while allow creativity to be realized so as to elevate Taiwan’s soft power in innovation.

Marine Vacuum Cleaner + Energy Efficiency Environmental Service

CHT leveraged the emerging 5G technology and worked with the unmanned vessel, Marine Vacuum Cleaner, developed by Azure Alliance. With the outstanding 5G communication capability in speed and low latency, we control remotely and clean efficiently the marine debris, using technology to truly form a virtuous cycle as well as listen and respond to social needs. Thanks to the introduction of 5G technology, Marine Vacuum Cleaner can thus remove marine debris rapidly, serving as the last line of defense for the environment before waste at the port flowing to open waters, which is also in line with the sustainable development goal in “I Protecting” of Chunghwa Telecom.

In addition, to accelerate the pace of enterprises in energy-saving actions, our fervent colleagues with professional certificates and experiences in electric engineer ing, HVAC, or lighting served as corporate volunteers. Through the corporate collaboration mode, we worked with “Taiwan Energy-Saving Patrol” of Taiwan Business Council for Sustainable Development to promote the energy-saving testing service to help enterprises to obtain professional knowledge and the right ways to save energy, free of charge, so as to expand the influence of energy efficiency and carbon reduction from inside the Company to the society at large.

MOD Microfilm & Golden Short Film Contest

To cultivate talents of digital video production and film art in Taiwan, we have been working with Taipei Film Commission in organizing MOD Microfilm & Golden Short Film Contest for eight consecutive years. The first prize this year was worth NT$1 million with all the prizes totaled NT$3.9 million to encourage students and individuals interested in film shooting to shoot films for participation. In response to the isolation of the Global Village due to the pandemic worldwide and to encourage citizenry to rediscover the beauty of Taiwan, in land and people alike, the CHT Collaboration Award this year was themed with “Islandic Stories.” NT$1 million was offered as the production fund to call for plans of short film in search of quality stories local to the island named Taiwan, shedding light on more beauties of Taiwan from the perspectives of film makers. There were 243 entries with diverse topics submitted this year. Also, numerous celebrated figures in the film industry were involved in the interdisciplinary performances, including Akio Chen, winner of the Golden Bell Award for Best Actor, and Kang-Sheng Lee, winner of the Golden Horse Award for Best Leading Actor, among others. There were 20 microfilms and 5 plans selected as the finalists for the NT$1 million prize this year. The Finalist Film Festival was organized online instead. Brilliant works of the finalists were put up on MOD and Hami Video. Also, the short films series “Interviews with the Finalists” was added for people to appreciate the purposes of production and behind the scenes.

FunPark Creative Storytelling Digital Picture Book Contest

FunPark Creative Storytelling Digital Picture Book Contest has been organized for 9 consecutive years. The purpose is to cultivate children’s creative ability through the stories created and bring the stories to life through digital technologies. Owing to the pandemic, it was organized online instead this year. In addition to the Lower-grade, Middle-grade, and Higher-grade of elementary school as well as the Anti-drug group, the category of “FunPark AR Book” reflection was also added this year for children to probe into the infinite AR creativity in the 5G realm and inspire their imagination for a deeper fun in learning in order to usher in a whole new 5G AR immersive experience and fun in reading. The Apps had over 610,000 downloads. The Awarding Ceremony was broadcast as a video program for the first time. The Head of Department of Legal System of the Ministry of Justice, Mr. Yu Yuan Huang, and the Head of Department of Student Affairs and Special Education of the Ministry of Education, Mr. Lin-Huei Wu, gave their remarks in videos to encourage children and express their care for the contest.
The Happiness Value Protector

**Strategy**
- Enhanced talent recruitment with "5G + transformation" as the dual-track strategy
- Assurance of rights at work and freedom of association for all employees with the commitment of "employee at ease" to improve the labor-management communication and dialogue mechanisms

**Management**
- SGS Qualicert service certification introduced to service centers
- Signing of Employment Contract by all employees for rigorous compliance with the laws and regulations like the Labor Standards Act and regular organization of labor-management meetings
- Diversified benefits and incentives provided in the principle of "no layoff and no pay cut"

**Ensuring Employees’ Happiness**

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

**Action**
- Execution of the three-level mechanism of inspection, verification, and consultation for service center customer service quality
- Promotion of the personal information manager and auditor certification system
- Provision of various, well-rounded, and quality service channels, online and offline
- Dedicated training units and OHS management units established
- Transparent and diverse employee communication and grievance channels
- Certificate of Conformity for Corporate Code of Conduct (CoC) issued by SGS

**Response**
- Electromagnetic radiation testing service
- The only Taiwanese telecom carrier with an established union
- The first telecom carrier in Taiwan to receive ISO 45001 certificate
- Childcare allowance in place for children aged 0-6 in line with the national childbirth policy and to retain young talents

**Indicator**
- Talent in emerging technologies accounting for 26%
- The base salary at CHT as 1.3 time of that in Taiwan; the average salary at CHT as 3 folds of that in Taiwan
- Training Hours Per Capita: 6.73 hours
- "Collective Agreement" employee coverage of 99.21%
- No violation of laws concerns personal information, health, safety or product labeling

**Target**
- Short-term:
  - Extensive recruiting talents in 5G application
  - Talent incubation and sharing of corporate business achievements with employees; one-time special bonus of NT$5,000 disbursed to "recruit professionals and retain talents" in 2021
  - Making personalized high-quality products and services available to all our customers

- Mid-long term:
  - 2030: 30% of variable compensation for senior managers tied with ESG/sustainable development performance

**A Competitive Compensation System**
The "Compensation Committee" is established. The disbursement directions are stipulated, especially for the renumeration of senior managers. Also, ESG/sustainable development is incorporated in the directions, which is materially tied with the compensation to the senior management. We offer competitive compensations to talents with potential. Through a transparent remuneration policy, employees are rewarded in line with the operational performance of the Company. 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.
Benefits Expense of Full-time Non-supervisory Employees


### Item | Unit | 2020 | 2021 | YoY%
--- | --- | --- | --- | ---
Full-time Employees | Person | 20,957 | 20,322 | -3.0%
Average Salary | NTS Thousand | 1,489 | 1,507 | +1.2%
Median Salary | NTS Thousand | 1,467 | 1,478 | +1.4%

Human Resources Structure at CHT

In 2021, CHT has more than 20 thousand employees with an average age of more than 50 years old. There will be more than 5 thousand employees retiring over the next 5 years, and 50% of the employees will be eligible for retirement over the next 10 years. Current senior management is included in this retirement tide. To cope with this problem, CHT is actively cultivating new talents to ensure that knowledge is passed down, filling the manpower gap of new generations.

Chunghwa Telecom understands that the industry competition we are facing now is not only the telecommunications industry, but the changing information and communication industry chain. In the future, the recruitment direction of talents will be based on the knowledge and skill level in December 2021.

1. The number of full-time employees is calculated on a "yearly average" basis. The total number of employees of the year (including the ones on leave without pay, separated, and retired) is subtracted by the number of managers before calculating the yearly average number of employees of the year based on the months of pay to the employees in service in a year, instead of based on the number of employees at the end of a year.

Number of persons in each grade and sex salary ratio

1. All CHT employees are nationals of Republic of China (Taiwan) and full-time non-fixed term employees.
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, bonus, etc.).
4. Levels of all grades: Basic 0-10; Executive 11-16; Intermediate Executive 17; Senior Executive 18-22.

of all the employees in the reporting period, there were 20,247 non-fixed term employees. There were also 3 fixed-term employees, who were mainly responsible for works of quality assurance and labor health and safety management.
Gender Equality and Diversity

Chunghwa Telecom is committed to provision of a working environment with dignity and safety for employees. We implement employment diversity, equal pay, and impartiality in promotion opportunities, protecting employees from discrimination, harassment, or unfair treatment due to race, gender, religious belief, age, political inclination, or any condition thereof protected by the pertaining laws and regulations.

Chunghwa Telecom places great value on human rights and gender equality. In 2021, female staff accounted for 29.41% of the total, and 20.7% of the managers (senior director or above) 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 "Complain Investigation Committee" that specializes in the handling of employee complaints about harassment prevention policy and established a "Complain Investigation Committee" that specializes in the handling of employee complaints about work-related discrimination and improper behavior. The investigation committee has 5 members, 3 of whom are female. Our effective control has resulted in no incident of discrimination being reported in 2021.

Gender Equality

To eliminate all forms of discrimination against women and realize gender equality, we encourage female employees to participate on all levels and develop in all areas. Measures of two aspects are executed and implemented to raise the ratio of females:

1. Recruitment
   In the process of training for manager recruitment interview, topics of gender equality are introduced.

2. Training
   The idea of gender equality is strengthened through the training courses for all levels of managers. Also, we promote that abilities and qualification should be taken into account for position promotion to increase the capacity and willingness of female managers. In planning the Executive Development Plan (EDP), on the basis of the success profiles model, outstanding female managers are selected. Then, in line with the competency evaluation and personality assessment, the female managers are developed and cultivated individually to better their managerial competencies.

The principle of fairness is implemented across all levels to establish a working environment of gender equality without any bias against any gender, so as to prevent discrimination and ensure a smooth promotion for our female employees.
Focusing on Employee Training and Development

Our fundamental business focus is "core competitiveness, professionalism, efficiency, and touched 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. Also, it is connected with the operational benefits of the company.

Talent Cultivation and Empowerment Program

The CHT Talent Cultivation and Empowerment Program aims to achieve Attraction of new recruits, Growth of employees, Leadership of managers, Opportunities for talents, and Winning in relay, a.k.a. AGLOW as the cultivation basis. Different professional courses are designed for employees of various positions from new recruits to current employees. Relevant trainings are tailored to managers of different levels. Also, accelerated training and development are available for employees with potential for them to be management candidates.

Comprehensive Career Development Process

<table>
<thead>
<tr>
<th>W</th>
<th>Winning</th>
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<tbody>
<tr>
<td>Accelerated Relay Program</td>
<td>One year</td>
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<tr>
<td>O</td>
<td>Opportunity</td>
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<tr>
<td>Accelerated Development Program</td>
<td>One year</td>
</tr>
<tr>
<td>L</td>
<td>Leadership</td>
</tr>
<tr>
<td>Existing Managers</td>
<td>Planned in line with needs of the year</td>
</tr>
<tr>
<td>G</td>
<td>Growth</td>
</tr>
<tr>
<td>Current Employees</td>
<td>Planned in line with needs of the year</td>
</tr>
<tr>
<td>A</td>
<td>Attraction</td>
</tr>
<tr>
<td>Next-generation Employees</td>
<td>3 Days</td>
</tr>
</tbody>
</table>

Target | Development Period

Executive Development Plan, EDP

Talent Development Plan, TDP

<table>
<thead>
<tr>
<th>First-time Manager</th>
<th>Female Manager</th>
<th>Low-level Manager</th>
<th>Mid-level Manager</th>
<th>Upper-middle Manager</th>
<th>Management Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership and communication training</td>
<td>Assistance in career development and interview techniques</td>
<td></td>
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</table>

Core Function Professional Training

Interdisciplinary General Learning

First-time Job Training

Emerging Technological Talent Training

New Recruits Cultivation Program

Industrial-Academic Collaborative Cultivation

Corporate Value Establishment and Promotion

Curriculum Planning
Diverse Learning Channels

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

5G X ABC Employee Digital Empowerment Program

We aspire to become "Leader of Smart Life; Enabler of Digital Economy." To cultivate next-generation digital technological talents, we launched "5G X ABC Employee Digital Empowerment Program." Together with the commercialization of 5G networks and services, we facilitate employees to fully understand the technical features and applicable scope to expand the 5G smart applications. Through the professional education, relevant curriculum design was conducted in consideration of the respective professional levels and means for learning to actively promote 5G X ABC professionals to keep up with the new epoch of digitalization.

The professional courses in 5G X ABC Program were offered by means of internal/external trainings, including the digital general courses, offline seminars, program certification, and online livestreaming. The 5G learning map was laid out. In line with the respective professional level, the general courses, professional certifications, seminars, were designed, along with relevant online livestream courses offered during 2020-2021 in response to COVID-19. All employees completed the tests of 5G digital general courses in 2021.

5G Corporate Client Seminar
It was organized for product PMs in forms of experiences and workshops to probe into pain points and solutions tailored to different industries. A total of 5 sessions were organized for 194 participants in the duration of 2020 to 2021.

Global Public Cloud Certification Trainings Organized
Trainings and certification consultation for AWS, Azure, and GCP were organized in 2021 to help institutions to obtain 115 certificates in global public cloud services.

5G X ABC Professional Program

- In line with the 5G business development and to foster domestic industrial ecosphere and innovative application, a total of 29 employees passed the certification in the 5G smart technology application program certification. Also, 5,199 participants receive trainings in the courses of 5G Technology Study series to prepare talents necessary for the 5G development.
- 42 professional seminars were organized for 3,425 participants, including 5G and IoT Development Trends & Service Application Seminar, Digital Economy and Data Application Practices, and FinTech Data Analysis Application Seminar.

5G Testing & Training Venues Installed

Combined with activities like training courses and campus visits, totally 25 sessions of 5G training courses or seminars were organized with up to 2,650 participants involved.

Incentives for Learning
Personnel that obtained relevant certificates were rewarded with full subsidy to skill tests. A total of 316 employees were subsidized in 2021 with a total amount over NT$1.9 million. Also, additional bonuses were offered to personnel that obtained the designated certificates (e.g. public cloud certificates). A total of 108 employees received the bonuses totaling NT$240,000. For employee that obtained certification from the Training Institute or externally, the Award of Further Study for Relevant Work was created to award such employee with a NT$10,000 prize and a medal. 10 employees are awarded each year.

Dedicated Training Units

Chunghwa Telecom has founded the Telecom Training Institute that specializes in training technical as well as managerial talent to gain more core competitive advantages. A Talent Development Team has also been established, with the President as convener, to conduct regular reviews of the planning and outcome of training. This is important to ensure that the training outcome is closely aligned with the operational policy to achieve a "seamless combination of training and practice". It was awarded with "Certificate of Talent Quality-management System (TTQS) - Gold" and the "2021 National Talent Development Award" in the Organization (Institution) Category by the Workforce Development Agency, Ministry of Labor in 2021.

New Employee Orientation

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

Recruitment and Development of the New-Generation Talents

We endeavored to develop important businesses in 5G, IoT, AI, and cybersecurity. Formulating the golden trinity of Chunghwa Telecom, "Innovation First, Technology First, Talent First", we built the stage for youth to shine, fostering the values of ONE CHT.

- Recruiting professional talent in ICT, AIoT, 5G application, technology innovation, and other new business opportunities.
- The nurturing of the next-generation talent: The Company introduces new talent-training programs on a yearly basis. It provides employees with professional and diverse training options, and certifies the development of skill.
- Emerging businesses: New ICT technologies are being infused with knowledge from other fields. The Company will focus on training professionals who can adapt and apply their knowledge across several different fields of expertise such as cloud computing, big data, and product packaging to actual practices.
- Next-Generation Growth Camp: With courses combined with campus experience and challenge activities, participants could quickly learn about how the 5G technology drives the digital transformation across various vertical markets and the 5G development strategies of the Company. In 2020-2021, 9 sessions were organized (with 1 session postponed to 2022), cultivating 1,381 individuals.
Nurturing of Professional Talents

Chunghwa Telecom is dedicated to providing employees with a diverse learning environment. In 2021, Chunghwa Telecom training expenses exceeded NT$451 million and employee training sessions totaled 1,150 thousand hours. We encourage employees to commit themselves to long-term learning. Subsidies were given to 237 employees in 2021 and the Company compensation amounted to NT$3.77 million. The subsidy for advanced studies, academic degrees, or certificates is 100% applied to all employees.

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<tbody>
<tr>
<td>Total Training Expense (NT$ thousand)</td>
<td>497,901</td>
<td>493,000</td>
<td>451,380</td>
</tr>
<tr>
<td>Training Per Capita (NT$)</td>
<td>22,938</td>
<td>23,555</td>
<td>22,294</td>
</tr>
<tr>
<td>Total Training Hours</td>
<td>961,234</td>
<td>1,045,267</td>
<td>1,148,601</td>
</tr>
<tr>
<td>Training Hours Per Capita</td>
<td>44</td>
<td>50</td>
<td>57</td>
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</table>

Due to the pandemic impacts, livestreaming via Teams was adopted for certain courses. The total training hours were raised by 9.89% with a 34% increase for the average training hours per capita. Also, there was a significant reduction in the training expense per capita.

Employee Happiness at Work and Engagement Survey

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

By listening to the opinions of the employee, we get to understand their feelings and expectations. The 2021 “Happiness at Work” survey is in a hundredmark system. In total, 7,466 questionnaires were returned (37.65% response rate), 6,979 of which were determined to be valid (93.48%). The average score of “Happiness at Work” is 82.81, and the average score of “Employee Engagement” is 90.1. The measures in this survey included organization identification and welfare; core values; work and development; working environment; and management leadership culture, among which the measure for satisfaction with core values was the highest, and that with management leadership culture the lowest. Hence, we enforced improvements based on the survey results, including organizing management communication sessions and employee communication sessions, curating management leadership elevation courses and expert lectures, as well as conducting various employee experience surveys.

We successively provide specific responses to issues reflected by our employees and constantly communicate with them. Also, by improving various employee benefits and appreciating employees’ thoughts, we expect our employees to identify with the Company and work at ease to drive the corporate competitiveness. The improvement mechanisms that follow shall be ongoing listening to the voices of employees. Meanwhile, optimization assessment of the survey results will be conducted. We continue to offer competitive compensations for talents with potential, rewarding our employees the operational performance of the Company via the transparent remuneration policy.

Fair Evaluation

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

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

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

Disbursement directions are formulated for remuneration of senior management. The remuneration is exercised systematically and disclosed publicly in the Annual Report in compliance with the laws. For basic specialist position on the same level, individuals are employed with equal treatment. Also, remunerations are evaluated based on the academic backgrounds/experiences, expertise, and certificates of individuals with relevant expertise and work experiences, regardless of gender or ethnicity.

Health and Safety Management

Introduction of ISO 45001 Occupational Health and Safety and Safety Management

Chunghwa Telecom was the first telecom service provider in Taiwan to adopt the OHSAS 18001 Occupational Health and Safety Management System. In response to ISO 45001 released by ISO in 2018, we initiated the verification process for ISO 45001 promptly to align ourselves seamlessly with the global trend in health and safety. All of our 27 institutions completed the verification to ISO 45001 in 2021. We shall better our objectives in workplace safety and health management, "ongoing improvement in safety and health facilities; establishment of a safe, healthy, comfortable, and friendly working environment; reduction of work-related accidents".

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 actively participate in activities related to healthy workplace. 5 branch institutions were presented with the awards of “Healthy Workplace Certification - Health Promotion Label” in 2021. In 2019-2021, 6 branch institutions won the awards.

For more details of GRI 403 and ISO 45001 Occupational Health and Safety Management of Chunghwa Telecom, please refer to [Link]
The Dedicated Occupational Health and Safety Management Unit & Broadened Labor Participation

Dedicated occupational health and safety management units are instituted at Chunghwa Telecom and the subordinate institutions thereof in compliance with the laws. The units are responsible for formulation of occupational health and safety management plans, promotion of matters such as identification, assessment, and management of hazards in working environment and operations, implementation of autonomous inspections and environment monitoring of machinery and equipment and before operation, as well as ongoing improvement to the health and safety facilities to foster a working environment that is safe, healthy, comfortable, and friendly.

The "Labor Safety and Health Committee" has been established at all CHT institutions with labor representatives accounting for one third or above of the seats. The committee convenes quarterly to deliberate, coordinate, and advise on matters pertaining to health and safety. There is also Labor Safety and Health Department, which is responsible for the planning and implementation of labor safety and health matters.

The head office’s Labor Safety and Health Committee has 30 members, 10 members are from the labor union, accounting for 33.34%. 4 meetings were held in 2021 and 15 proposals were presented by the labor representatives, 9 were related to the refinement of safety and health management, and 6 were related to employee benefits. All of the above are solved.

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

To better provide immediate medical assistance and attend to worker health, we engaged 22 full-time nurses and contracted 19 physicians in 2021 for this specific purpose. Also, we set up health service centers at ten locations, including the Xinyi Campus (Yilan and Hualien included), Aiguo Campus, Daan Campus (Keelung included), Guoguang Campus (TTI included), Taoyuan Branch, CHT-TL (Hsinchu and Miaoli included), Taichung Branch, Taichung Branch of the Mobile Business Group (Nantou included), Changhua Branch (Yunlin included), as well as Linsen Campus (Pingtung and Taitung included), offering health services, consultation, and care.

The contracted doctors help with the on-site inspection at the offices, offer advice in line with human factors engineering for employees using computers at work, and adjust the heights of computers and chairs. The procurement of office equipment, besides in conformity to “the materials technical specifications” of the Company, is in compliance with national standards. Also, we conduct monitoring and keep records of the temperature, humidity, illuminance, noises, indoor air quality (CO2) in the working environments for our employees in order to ensure the comfortability and safety of working environments. All the monitoring results in 2021 were in line with the regulations.

24 sets of workplace health management physiological (blood pressure) measurement system are deployed in our facilities. Combined with our “Enterprise Healthcare System (EHS) and Personal Health Record,” our employees can monitor the changes in their blood pressure anytime.

Health Promotions for Senior Employees

The health checkups for the elderly in 2021 promoted autonomous health management actions from inside out. Apart from physical exercise, the support system among friends was established through the activities.

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 promotion lectures

To improve our employees’ knowledge and skills in epidemic prevention during the pandemic, Chunghwa Telecom Training Institute established “H channel” health series video-based program. Employees could access various thematic health promotion courses online. Besides in conformity with the epidemic prevention regulations, it allowed the employees to acquire knowledge and skills for epidemic prevention and healthcare. The course contents encompassed healthcare, osteoporosis, physical/mental stress management, cardiovascular disease prevention, etc. A total of 2,505 employees accessed the program in 2021.
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/countycity 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 174 training sessions in 2021 and there were 16,938 enrollments.

**The "eSafe Wizard" App**

As part of our effort to mobilize management, the eSafe Wizard App allows employees and contractors to report safety violations, and apply for operation permits. The App also allows us to remotely perform spot checks on safety compliance, moving the entire management process onto the cloud. It is completely paperless, instantaneous, and highly effective. Through the eSafe Wizard App, the completion rate of permit applications for operations (hot work, work aloft, scaffolding, power or fire protection interrupted) hit 100% (temporary work stoppages due to weather, accident with sensitive station, or postponement of prior construction excluded) while that of hazard notification reached 100% in 2021.

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**Table of Work-related Injuries and Illnesses of Employees and Non-employees in 2021**

<table>
<thead>
<tr>
<th>Types of work-related ill health</th>
<th>Workers</th>
<th>CHT</th>
<th>On-site Contractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic accidents, Fall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall, tumble, or dog bite</td>
<td></td>
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</tbody>
</table>

1. Number of hours worked: 8 hr*number of people *number of working days.
2. Fatalities as a result of work-related injury rate = (Number of fatalities as a result of work-related injury / Number of hours worked) × 1,000,000.
3. High-consequence work-related injuries rate (disabled for more than 6 months) = (Number of high-consequence work-related injuries / Number of hours worked) × 1,000,000.
4. Recordable work-related injuries rate = (Number of recordable work-related injuries / Number of hours worked) × 1,000,000.
5. Definition of On-site Contractors: individuals or organizations that work on the operation sites of Chunghwa Telecom. Statistics were compiled based on the data of HongHwa International Corp.
6. The main types of work-related ill health: traffic accidents, fall, tumble, or dog bite.
7. Traffic accidents during commute is excluded.
Health Promotion Activities
Providing a safe and healthy workplace is a basic requirement to our employees. On average, employees spend over a third of their day in workplace. Hence, apart from a wide range of benefits, including health checkup, keynote speeches, and promotional activities, we also commit ourselves in the promotion of sports in workplace and in the support to sports industry. In 2021, we spent NT$71,196 thousand on employee health care.

<table>
<thead>
<tr>
<th>Item</th>
<th>2021 Contributions</th>
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</thead>
</table>
| Health Examination of Employees and Dependents | - The Company offers much better care than required by law and employees are given the choice of various health checkup packages. A total of 19,048 employees had checkups in 2021.  
- Family members are also entitled to checkups at the same rate, and a total of 3,012 persons participated in 2021. |
| Free Influenza Vaccination | - Free influenza vaccination is available for all employees who fit the requirements for vaccination at public expense. Registration can be done online and 1,170 employees were vaccinated. |
| Employee Assistance Program (EAP) | - 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 7 visits and completed 523 service sessions in 2021. |
| Employee Health Promotion | - A total of 6,912 employees participated in 121 health seminars. 5,152 employees attended 37 educational trips. Health examinations were given to 3,726 employees in 23 sessions and 10,602 employees participated in 170 large-scale events.  
- The Company published two health-related articles each month about the concept of disease prevention. |
| Healthy Workplace | - Chungwha Telecom provides two flexible working hour sessions in the morning and afternoon: 8:00-9:00 and 17:00-18:00.  
- The periods of 07:30-9:30 and 16:00-18:00 during workdays are flexible hours for employees to come to and off work at Chungwha Telecom Laboratories as of December 15, 2021 for employees to balance between work and family, which is scheduled to expanded to other institutions in 2022.  
- Provide employees health consultation via online or phone appointment. Physicians visited the plants 34 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 evaluation of health records. Where necessary, extra consultations can be arranged between the physicians and the employees for proper guidance and healthcare.  
Thirty-minute medical consultation with a physician (30 minutes / per person) 2,605  
On-site visits by physicians 322  
Consultation with a nurse 16,693 |
| Employee Cafeteria | - Our employee cafeteria offers 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.  
- SGS, a professional audit entity, is commissioned for tests of ractopamine, animal drugs, preservatives, and sulfur dioxide. |
| Balancing Work and Life | - Chungwha Telecom has 30 hostels that provide travel accommodation, encouraging employees to achieve a balance between work and life. |
| Telecommuting | - Call Forwarding: calls forwarded from office phones  
- Instant Messaging, Video Conferencing: Teams, a teleconferencing software, used  
- Mail Delivery: mail delivery via Web mail and Exchange  
- OA Online Administrative Operation: using HiGate for telecommuting or mobilized administrative services on cellphones |
| COVID-19 Epidemic prevention leave | - “Official leave for epidemic prevention” to 95 personnel during the epidemic prevention period with a total of 4,017 hours granted.  
- “Epidemic prevention childcare leave” for taking care of children at age 12 or under without pay or impact to attendance granted to 184 employees with 12,402 hours in total.  
- Official leave for vaccination to 16,279 employees in line with the government policy for epidemic prevention with a total of 111,479 hours granted |
Building a Happy Business

Employees are the foundation for the growth and competitiveness of Chunghwa Telecom. A happy family life of employees is the essential driver to our sustainable business development. We offer a commitment to our employees refrain from making layoffs and salary reductions. In response to the government’s policy to boost birth rates, CHT is providing childcare subsidies and maternity benefits to young employees with children aged 0-6 years old.

Through the software/hardware allocated, we shall set up 16 workplace childcare support centers in 9 locations in Taipei City, New Taipei City, Taoyuan City, Taichung City, Tainan City, and Kaohsiung City to take care of the children and grandchildren of employees aged 2 to 6 years old, which are expected to open in August 2022. With services of education and childcare provided, we endeavor to foster a friendly workplace to put employees at ease so as to perform to the best of their ability and create utmost values for themselves and the Company.

<table>
<thead>
<tr>
<th>Item Activities and Description</th>
<th>Number of Participant / Beneficiaries</th>
<th>Contribution / Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternity Allowance (Company Issued)</td>
<td>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.</td>
<td>101 persons NT$13,926 Thousand</td>
</tr>
<tr>
<td>Childcare Allowance (Company Issued)</td>
<td>Employees with children aged 0 - 6 years old will automatically receive childcare allowance of NT$6,000 per year.</td>
<td>3,568 persons NT$17,426 Thousand</td>
</tr>
<tr>
<td>Sports Activity</td>
<td>Regional activities include 3 road running events, 188 hiking activities, 44 ball sports activities and 366 other activities (e.g. stair-climbing, health exercise, strolling, and health promotion lectures).</td>
<td>38 thousand persons NT$11,157 Thousand</td>
</tr>
<tr>
<td>ESOT</td>
<td>Improvement of employee welfare, enhancement of employee coherence, and sharing company achievements.</td>
<td>17,224 persons NT$12.4 Thousand / month per person</td>
</tr>
<tr>
<td>Dependent Education Subsidy</td>
<td>Twice a year (two semesters).</td>
<td>17,645 persons NT$73,954 Thousand</td>
</tr>
<tr>
<td>Wedding Subsidy</td>
<td>A wedding subsidy is available for employees who are to be lawfully married.</td>
<td>209 persons NT$552.5 Thousand, NT$52,500 per person</td>
</tr>
<tr>
<td>Childbirth Subsidy</td>
<td>Employees or their spouses are eligible for a childbirth subsidy.</td>
<td>396 persons NT$990 Thousand, NT$52,500 per person</td>
</tr>
<tr>
<td>Funeral Subsidy</td>
<td>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.</td>
<td>693 persons NT$53,465 Thousand, NT$55,000 per person</td>
</tr>
<tr>
<td>Recreation and Sports Space</td>
<td>Includes an integrated stadium, swimming pool, tennis, badminton, basketball, and table tennis courts, multifunctional event space, karaoke room, and employee dormitories.</td>
<td>Total 13,103 square meters</td>
</tr>
</tbody>
</table>

The benefits are provided to the non-fixed term employees of Chunghwa Telecom, but not for those of subsidiaries.
Better Maternity Benefits than the Legal Requisites

We have been implementing an unpaid childcare leave system since 2006 to help employees juggle their attention between work and family. The employees who have taken childcare leave are entitled to receive a six-months maternity allowance from the authority under the Employment Insurance Act. While six months expiry, the Company will further pay an additional childcare-subsidy of half assurance sum of Labor Insurance Scheme according to its policy. Employees of Chunghwa Telecom are also entitled to other privileges such as family care leave, maternity leave, menstrual leave, and a nursery room service. In 2021, 88 employees applied for unpaid childcare leave; 101 employees applied for child-care leave allowances. NT$13,926 thousand was paid out as childcare leave allowances. In 2021, the epidemic prevention childcare leave was provided additionally in response to the pandemic.

Starting from January 1, 2022, any employee with the need to care for child at age 3 or under may apply for 1 work hour reduced per workday with full pay and without impact to attendance or performance appraisal. There are approximately 1,200 employees eligible to the application in 2022. As of the end of February 2022, there were 746 applicants. Should we calculate with one work hour reduced per day for childcare and 20 days per month, it is equivalent to an additional salary payment of 2.5 days per employee per month with 30 days for childcare a year.

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.

<table>
<thead>
<tr>
<th>Year</th>
<th>Item</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>The Number Qualified for UPL for Raising Children 2021 (A)</td>
<td>842</td>
<td>369</td>
<td>1,211</td>
</tr>
<tr>
<td>2021</td>
<td>Number of Applications for UPL 2021 (B)</td>
<td>15</td>
<td>73</td>
<td>88</td>
</tr>
<tr>
<td>2021</td>
<td>Application Rate for UPL (B/A)</td>
<td>1.8%</td>
<td>19.8%</td>
<td>7.3%</td>
</tr>
<tr>
<td>2021</td>
<td>Number of Expected Reinstatement 2021 (C)</td>
<td>17</td>
<td>72</td>
<td>89</td>
</tr>
<tr>
<td>2021</td>
<td>Number of Applications for Reinstatement 2021 (D)</td>
<td>13</td>
<td>73</td>
<td>86</td>
</tr>
<tr>
<td>2021</td>
<td>Reinstatement 2021 (D/C)</td>
<td>76.5%</td>
<td>98.6%</td>
<td>96.6%</td>
</tr>
<tr>
<td>2020</td>
<td>Number of Reinstatement 2020 (E)</td>
<td>12</td>
<td>66</td>
<td>78</td>
</tr>
<tr>
<td>2020</td>
<td>One Year Retention after Reinstatement 2020 (F)</td>
<td>12</td>
<td>66</td>
<td>78</td>
</tr>
<tr>
<td>2020</td>
<td>Retention Rate 2020 (E/F)</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

1. The number of employees entitled to apply for a parental leave of absence in 2021 (A): calculated as employees who had applied for maternity leave and parental leave in 2019-2021.
2. The number of expected reinstatements 2021 (C): The number of employees who applied from 2019 to 2021 and should be reinstated in 2021.
3. The number of actual reinstatements 2021 (D): The number of employees who applied from 2019 to 2021 and were reinstated in 2021.
4. Reinstatement rate: (actual number of reinstated employees that year/number of employees who should have been reinstated that year) × 100%
5. Retention rate: (the number who continued working after reinstatement/reinstated number for the previous year) × 100%

Lifelong Learning and Training Programs

To help our employees to adapt and create quality lives after retirement, Chunghwa Telecom Training Institute was commissioned to organize “Care Program for Retirees’ Sweet, Happy Lives”. A total of 10 sessions were organized with 1,609 person-times involved in 2021. Also, we continued to contribute to “Chunghwa Telecom Retirees Association” with an amount of NT$4.5 million to support them to organize relevant activities. We also donated NT$1.5 million for travel activities and NT$300,000 for the meal expenses of all volunteers across branches during the Lunar New Year.

To help facilitate the transfer of knowledge and experience, we have stipulated “Consultant Recruitment Guidelines” to hire paid consultants and honorary consultants. Managers at a position of Senior Executive Vice President or above, or the head of Level-1 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 consultants upon the day after one-year period has expired.
Human Rights Value Protection

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

CHT is a member of the International Telecom Union and we fully comply with International Radio Regulations. The regulation concerning: freedom of communication, transparency in global roaming charges and competition, support of Telecoms in developing nations, telecom services for persons with disabilities and the freedom of speech over telecom networks. In addition, we follow the UN Guiding Principles on Business and Human Rights by conducting a human rights due diligence investigation and make sure that each human rights issue in the operational value chain is evaluated and we maintain all risk at a minimum level.

Human rights issues include anti-discrimination, gender equality, freedom of association, collective bargaining, child labor, forced or compulsory labor, and indigenous rights.
2021 Value Chain Human Rights Evaluation Results

<table>
<thead>
<tr>
<th>Subjects of the Value Chain</th>
<th>Location / Amount</th>
<th>Evaluation Mechanism</th>
<th>Evaluation Percentage</th>
<th>Description / Boosting Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHT owned institutes at 1 to 2 lower levels</td>
<td>28</td>
<td>Labor-management meeting, Collective agreement, Workers’ Union meeting, Annual human rights event inspection</td>
<td>100%</td>
<td>Certain institutions violated the social regulations and OHS, which were corrected immediately in line with regulations.</td>
</tr>
<tr>
<td>Subsidiaries</td>
<td>19</td>
<td>Annual ESG implementation inspection</td>
<td>100%</td>
<td>Some institutes were in violation of regulations. Suggestions for improvement have been provided and will be tracked and managed continuously.</td>
</tr>
<tr>
<td>Re-investment Companies</td>
<td>15</td>
<td>Annual ESG implementation inspection</td>
<td>100%</td>
<td>Some suppliers had violated the labor laws and regulations.</td>
</tr>
<tr>
<td>Upstream and Downstream Suppliers</td>
<td>Tier 1 2,020</td>
<td>ESG survey inventory, ESG second party audit, Occupational health and safety audit</td>
<td>100%</td>
<td>Some suppliers had violated the labor laws and regulations. Continue to follow-up of suppliers with identified risk to see if improvements have been made through Supplier Conference and other channels.</td>
</tr>
<tr>
<td>All consumers</td>
<td>27</td>
<td>Diverse compliant channels (including discrimination and harassment), Satisfaction survey, Personal information and privacy protection inspection, Minority group service mechanism</td>
<td>100%</td>
<td>No discrimination or harassment, or any invasion of CHT customer privacy or misuse of personal information in 2021.</td>
</tr>
</tbody>
</table>
Customer-centric

CHT promotes the "customer-centric" transformative strategies. Through the perspectives of customers, the services online and offline are integrated to carry out multiple customer experience optimization projects:

1. In response to the ever-rising customer App usage, the "CHT App (Customer Service) upgrade" project was initiated to offer diversified, digitalized service channels. In 2021, the online customer service was added to the App’s frontpage in April, with customers introduced raised by 9 folds; the recurring payment promotion came online in July with the application amount raised by 2.4 times, cutting the paperwork for application and posting for automatic payment via money transfer; the optimized fixed-line/broadband obstacle reporting service came online in September, with a 1.6 times of growth in number of report accepted.

2. To realize a smart governance and accelerate the digital transformation, the "omni-business online customer service," with AI and human text-based services combined, offers online customer services with speed, accuracy, and warmth. In addition to the provision of 24/7 online services for all businesses, customers can also engage online conversation with the bots and humans via various channels (App, web, etc.). The amount of service offered rose by 3.4 times in 2021.

3. To care for cellphone users without Internet-access, the SMS-based customer service is available for the customers to send "800" to "800" via the free SMS service. With no installation or login required, the customers can access 19 common services: 565,000 customers accessed the service in 2021.

4. Intentions of customer calls are analyzed. Through the mechanism of "business opportunity forwarded by customer service to stores," customer interests are intrigued online and directed for business conclusion offline. 56,000 business opportunities were forwarded in 2021, among which 25,000 were concluded. The customer loyalty and stickiness were improved effectively as a result.

CHT holds a very high standard for customer representatives. Besides the basic requirement of tone and manners of speech, we place even more emphasis on professional knowledge and competence. In 2021 alone, 17,917 employees received 54,441 hours of training combined.

To emphasize the "customer-first" service philosophy and offer optimal customer service experience, "The Seminar of Using Neuro-linguistic Programming (NLP) Techniques in Communication to Elevate Services" was organized for 3 sessions in the northern, central, and southern Taiwan in the early April 2021 to train 68 participants. After the seminar, the seed lecturers were arranged to conduct promotion sessions for all customer service personnel to inspire their service passion as well as improve their service philosophy and communication techniques.

The Company has 15 customer service centers, and the number of customer service personnel averages 2,300.
Pandemic Coping Measures and Mechanisms

1. Coping Measures for the Worsened Pandemic in May to August

The pandemic had escalated since May 2021. To ensure the service continuity of customer service hotline, various measures for triage and compartmentalization were initiated, including compartmentalized offline working and work from home to protect the physical and mental health of our employees and reduce the risks of cluster infection.

In addition to the introduction of the real-time interactive voice response (IVR) service for epidemic prevention and voice-guided bot verification into the customer service hotline to shorten the handling time for voice services, the customer service channels were enhanced as well. Aside from the conventional human customer service for inbound calls, the online customer service chatbot was also deployed. With the automated service, enhanced text-based chatbot recognition rate, and increased auto-service rate, we advance our customer services in the facets of diversified customer referral, human, system, and quality.

2. Response Plans for Taiwan CDC Toll-free Hotline 1922 and SMS Real Name Registration System

In response to the escalation of the pandemic domestically, the level 3 alert was in force nationwide. There came the issues with the government-funded vaccination and the COVID-19 Vaccination Reservation system as well as the spiked calls to the Taiwan CDC Toll-free Hotline 1922. To support the government in the epidemic prevention efforts and relieve the burden to the Taiwan CDC Toll-free Hotline 1922, improvements such as the automatic SMS message service during busy line and online SMS message service, collection of FAQs for timely business promotion, and streamlined single line call log were introduced via IVR service to reduce the waiting time for callers. During the darkest hours from May to August, we actively trained the full-time CHT employees and HongHwa store staff for further support, provided incentive measures like capacity improvement contest, and replenished the fixed-term contract workers to significantly improve our capacity.

Concerning the changing landscape of COVID-19, the daily situation report of the Toll-free Hotline 1922 was initiated, and emergency response meetings were organized from time to time, to ensure improvement of the Taiwan CDC Toll-free Hotline 1922 in quantity and quality alike, so that we could effectively resolve issues for the citizens as a force to continually stabilize situations in Taiwan.
Customer Satisfaction Survey

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

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

Rigorous Privacy Protection Management Mechanism

“Customer privacy protection” is emphasized at Chunghwa Telecom in compliance with “Personal Data Protection Act” and “Regulations Governing Non-governmental Personal Data Security Protection Designated by the National Communications Commission.” Privacy Policy has been stipulated, along with rigorous privacy security management and protection measures. Also, a data governance system has been constructed. Data standards and classification are set. Data access management and data owner verification mechanisms are exercised to ensure a proper management and protection of data access and sharing as well as the availability, integrity, and confidentiality of data. The scope of application thereof encompasses all the business groups, branches, offices, subsidiaries, and suppliers of Chunghwa Telecom.

Prior to any business promotion, risk assessment will be conducted to examine and ensure data access in compliance with the regulatory requirements and to check if data protection mechanisms are in place to avoid risks in data processing. To take it further with regard to “customer privacy protection,” we proactively introduced ISO 27701 system to assure the effectiveness and legal compliance in the lifecycle of data.

Regarding the collection, processing, use, and protection of personal information and privacy involved in the operation, aside from compliance with government’s relevant laws and regulations, personal information is used within the defined scope of regulatory requirements and will not be disclosed to a third-party via exchange, lease or otherwise at will. Also, relevant actions are implemented in accordance with the “Privacy Policy” stipulated by the Company so as to uphold the security of customer information and privacy.

In response to the potential innovation, advantage, and impacts arising from the development of AI technology, the II Guidelines in the “AI Technology R&D Guidelines” promulgated by the Ministry of Technology are also adopted as a reference for the Company in research, innovation, and development to ensure proper management measures in place in the use of AI technology, reducing the potential concerns from the public on AI technology as well as the risks thereof in order to develop under the premise of customer privacy protection. As such, we shall live up to the core values of “human-oriented,” “sustainable development,” and “diversity inclusion.”

Correction & Prevention E-Platform

To maintain our quality customer services, the PDCA cycle of customer service consultation is implemented for the few customer service personnel with unsatisfied customers in terms of service attitude or professional knowledge (satisfaction of 1-2 points). The system will automatically port the data of inbound customer calls to the “correction & prevention e-platform” first. Then, through mechanisms of work assignment by the system and audio file listening by staff, consultation and correction measures are carried out for the personnel with unsatisfied service level.

1. Send the quality audit ticket: Upon system notification received, the customer service quality inspector will issue “self-correction ticket” or “in-person consultation ticket” in line with the severity of the situation.
2. Track results of consultation and correction: Upon receiving the in-person consultation ticket or self-correction ticket, the individual is assisted to improve themselves in a specified period through the coaching consultation, followed by the random check of 3-6 records (or audio files) of similar types of customer service to verify the personnel’s improvement in order to close the case.
3. Plan for outbound call service: To create an optimal customer service, a comprehensive quality management project is implemented, with a plan to execute the outbound call service for unsatisfied customers in Q2 of 2022 to gain insight of customer needs and facilitate a quality customer relationship.

Data governance organizations and responsibilities

We have established the data governance organizations with structures and responsibilities as follows:

- Data Governance Committee (Level-1 Organization): The final decision-making body for issues of data governance with President as the Convener, responsible for the data governance development at Chunghwa Telecom
- Data Governance Center of Excellence (Level-2 Organization): Stipulation and promotion of corporate data governance regulations and systems; tracking of implementation results
- Data Governance Team (Level-3 Organization): Data governance implementer to ensure implementation of the data governance system in terms of data protection, data compliance, data quality, data access, data tools, and data maintenance throughout Chunghwa Telecom

Specific Data Management Mechanisms

In alignment with the major areas of Data Management Knowledge (DMBOK) of Data Management Association (DAMA), Chunghwa Telecom constructed its data governance structure of three-level organizations with respective responsibilities. Also, the data use system throughout the Company has been constructed in terms of data quality, data protection, data access/sharing, data tools, data compliance, and data maintenance, so that data can be regulated, authorized, tracked, and protected. As such, it warrants an effective data governance at the Company and the subordinate entities to achieve consistency, availability, security, and compliance in data asset management that meets international standards.
Privacy Protection Risk Management

- Group-wide risk management
  - In terms of risk management, risk and impact assessment are conducted in line with the “Information Security and Personal Information Risk Management Policy of Chunghwa Telecom Co., Ltd.” to identify risks to the corporate operation and businesses arising from internal/external threats (including regulatory and international standards changes, requirements by competent authorities, data threat tendency, audit results, etc.) and inventory critical risk topics of the year, so as to analyze the impact levels and likelihood of risks, assess risk handling priorities, formulate privacy risk handling targets and measures, and regularly review and evaluate achievement of indicators.
  
  - Our performance of cybersecurity and privacy risk management has been incorporated into the monthly tracking by the Risk Management Committee for management. Any material risk issue will be submitted to the Audit Committee or directly reported to the Board of Directors.
  
  - Performance measurement and disciplinary
  - Our Privacy Policy upholds "zero tolerance" as the overarching principle. Performance in cybersecurity and personal information protection is included in the appraisal of all employees, which has come into force upon approval of the President. The results of execution thereof are reviewed regularly, whereas those who fail the targets are required to take corrective actions. Any loss due to negligence or any conduct of improper inquiry, acquisition, use, or deliberate leak of customer’s personal data is subject to demerit or termination of labor contract at worst.
  
  - External audit
  - We ceaselessly strengthen the privacy protection procedures, ensure implementation of privacy protection security measures throughout the operation processes, organize trainings pertaining to privacy protection, elevate the overall privacy protection competency of the Company, and examine and evaluate effectiveness in privacy protection measures via regular tests and exercises. Externally, our Privacy Policy has obtained the third-party conformity verification. Also, we conduct internal/external audits and certifications each year (e.g. ISO 27001 / ISO 27011 / ISO 27017 / ISO 27018 / BS 10012 / CSA STAR Certification with ongoing validity) so as to offer consumers a better cybersecurity and privacy data protection.

Exercise of customer rights

To protect the rights of customers, a variety of channels (including websites, Apps, stores, and customer hotline) are available at Chunghwa Telecom for customers to access and learn about the types of personal information collected and the methods for collection, processing, use, or disclosure of such to a third party as well as the rights customers may exercise. The rights available for customers to exercise are as follows:

- Opt-out
- Opt-in
- Access to data held by the Company
- Request to edit data
- Request for deletion

Customer privacy rights protection

- Types and Content of Data Collected
  - When customers access services of Chunghwa Telecom, we collect their personal/private data, including account, browsed webpages or multimedia contents/mobile Apps, out of the regulatory requirement for identity verification or the needs for service provision.
  
  - Data Retention Period
  - Upon termination of contractual relationship between customers and us, we will maintain and use customer’s personal information within the scope and duration required or permitted by the laws and regulations and retain (non-personal) data generated therefrom in a form that does not identify the customer.
  
  - Policy for Disclosure to Third Parties
  - Personal data and privacy will not be disclosed to a third party by means of exchange, lease, or otherwise at will, unless consented by the customers or specified otherwise by laws and regulations.
  
  - Data Use and Protection
  - To elevate customer experiences and maintain customer relationship, we use customers’ data for analyses to provide optimized, customized services and discount information perfect for our customers, whereas customers may request stop to such use at any given time.
  
  - We have formulated personal data protection policy and relevant regulations regarding the use of personal data of customers, which apply to all employees and contractors, including contractors, personnel of subsidiaries stationed at the Company for service, suppliers, and partners. Also, monitoring is in place 100% with rigorous protection measures to prevent any unauthorized access, disclosure, use, or tampering of personal data in order to protect the privacy, data security, and rights of customers. The percentage of secondary use of customer data at Chunghwa Telecom in 2021 is 85.18%.

Requests for customer information received from government or law enforcement agencies

We are liable to protect customer’s secrecy of correspondence and privacy from illegal infringement in accordance with the laws. Only when government agency or law enforcement agency presents Chunghwa Telecom a letter in line with the laws to request access or inquire information of customers to protect public security, fight crimes, or maintain social order can we provide customer information thereto.

In compliance with the requirements, dedicated departments and rigorous review procedures for access are in place. Relevant information can only be provided in accordance with the laws upon criteria met, which will not be available otherwise.

In 2021, 659,429 requests were made by the government or law enforcement agencies for inquiries of our user information. The ratio of provision was 47.1% (310,591 requests) and that of rejection 52.9% (348,838 requests), most of which were primarily due to inconformity to the relevant laws and regulations or source data error.
Personal Data and Privacy Protection Consultation and Grievance Channels
A variety of means are available for customers to exercise their rights. In addition, customers with questions or concerns regarding personal data or privacy may send feedbacks or appeals via various channels, which will be explained by dedicated staff in a professional manner.

Personal Data and Privacy Protection Grievance Escalation Channels
Should anyone find their personal data and privacy use issues unresolved within 30 days, they are welcome to reach us via the escalation channels as follow:
Address: No. 21-3, Section 1, Xinyi Road, Zhongsheng District, Taipei City 101, Taiwan (R.O.C.)
Recipient: Chief Information Security Officer, Chunghwa Telecom Co., Ltd.
Phone: (02)2344-6789

There were 8 complaints over “alleged information breach cases” filed via the customer hotlines in 2021, of which 6 was notified by the National Communications Commission (NCC) and 2 submitted via the customer service hotline (same amount of cases compared with those in 2020, accounting for 0.000027% of the customer hotline service provided of the year). All the cases were investigated and verified that there had not been any fact of personal data and privacy breach.

For more information on the cybersecurity and personal data and privacy protection of Chunghwa Telecom, please visit our website at ESG/Customer Care/Privacy Protection.

1Gbps Network Speed across All Townships 100 Mbps across All Villages
We are constantly expanding our mobile network. We have the most 4G cell towers and the highest 4G signal coverage in Taiwan. According to test results published by the government, our network speed is the fastest across all 22 administrative districts in Taiwan. Our network quality has been unanimously commended by domestic and international mobile analytics organizations, including recognitions of 5G Download Speed, 5G Upload Speed, 5G Video Experience, 5G Games Experience, and 5G Voice App Experience of the 5G Mobile Experience Awards of OpenSignal, an international authoritative organization, as well as Fastest 5G Mobile Network and Fastest Mobile Network of Speedtest Awards.

As always, customer satisfaction is our top priority. We will continue to improve our mobile network to provide customers with top-notch services. To ensure the equal sharing of information, in addition to a positive strengthening of mobile Internet quality and coverage and network equipment. Hence, all people may have equal development opportunities to inspire innovative applications.

Types of CHT Base Stations Installed

<table>
<thead>
<tr>
<th>5G</th>
<th>4G</th>
<th>3G</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>100%</td>
<td>79.76%</td>
</tr>
<tr>
<td>20.24%</td>
<td>84.88%</td>
<td></td>
</tr>
<tr>
<td>15.12%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

Responses Measure
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.
Disaster Report and Upgraded Safety

In efforts to minimize the impact of disasters by prompt messaging, the Chunghwa Telecom self-developed "Emergency Response SMS System" sent out more than 240,000 SMS alerts in 2021, and apply to Directorate General of Highways’ “Traffic Conditions Alert System,” and Atomic Energy Council’s periodic “Nuclear Safety Drills,” and the National Fire Agency’s disaster prevention exercises, successfully playing its part in disaster prevention information notification.

In addition, a Public Warning System (PWS) has been established to support the national policy of emergency message dissemination about typhoons, earthquakes, thunderstorms, large-scale power outage, landslides, roadblocks, reservoir discharge or an outbreak of disease, fast and correctly to specific regions simultaneously, assisting government agencies and the general public improving their disaster prevention awareness and capabilities. As long as a mobile phone is open to the PWS function, all our customers will receive messages about disasters. The PWS issued over 7,300 times of emergency warnings across Taiwan in 2021. In May of the same year, upon the rotating power outage in force across Taiwan due to failures of Hsinha Power Plant, we issued the power outage alert in a timely manner, effectively assisting the government in policy delivery and disaster notification.

Major Service Interruptions in 2021 and Countermeasures

1. Overview of the Obstacle:
   (1) Service impacts to 7 3G base stations and 6 4G base stations in the Lanyu region
   (2) Service impacts to 54 4G base stations, 19 5G base stations, and broadband services in the Matsu region

2. Reasons for the interruption:
   (1) An unexpected power outage from Taipower on Lanyu, leading to impact to external microwave equipment due to UPS failure.
   (2) Service impact arising from possible severance of certain cable wires of the 3rd Taiwan-Matsu Submarine Cable caused by the bottom trawls of fishing vessels in the Matsu region

3. Improvement measures:
   (1) Replace the batteries of poor performance in the Lanyu region with batteries of relatively better performance to maintain their functionality.
   (2) Include the Matsu region in the Submarine Cable Automatic Warning System (SAWS).

4. Implementation Status:
   (1) Bad batteries in the Lanyu region were replaced to reduce risks of equipment malfunction arising from unexpected power outage.
   (2) The cable ship was requested for rapid repairment of the submarine cable in the Matsu region

5. Outcomes:
   With the ceaseless improvement of maintenance mechanism by the network maintenance department, the average number of obstacles encountered by users has been improved from 0.0006 in 2020 to 0.00017 in 2021, while the average time for obstacle removal improved from 0.096 minutes in 2020 to 0.093 minutes in 2021.

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>An average of 10 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.</td>
<td></td>
</tr>
<tr>
<td>&quot;Disconnection Service Fraud Prevention System&quot; offers information on some suspected telephone gimmicks used for cheating customers and a timely settlement of the problem. An average of 3.1 customer service person participated in the program each month.</td>
<td></td>
</tr>
<tr>
<td>The hotline received 237,991 calls, and 21,219 cases of fraud were referred to the authorities.</td>
<td></td>
</tr>
<tr>
<td>The hotline received 237,991 calls, and 21,219 cases of fraud were referred to the authorities.</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-Virus and Anti-Hacker</td>
<td>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 &quot;Regulations for Commercial Electronic Spam Mail&quot; , in which add the management obligations to the Internet Service Provider (ISP).</td>
</tr>
<tr>
<td>Adult Content</td>
<td>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.</td>
</tr>
<tr>
<td>Usage Time Control</td>
<td>The HiNet Online Time Management Service and mobile phone “3G Talk without Worries” programs, giving parents effective control of the mobile phone and internet use.</td>
</tr>
<tr>
<td>MOD Parental Lock</td>
<td>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.</td>
</tr>
</tbody>
</table>
The Green Corporation Pioneer

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

**Management**
- Instituted the Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd.
- Instituted the Chunghwa Telecom Co., Ltd. Procurement Grievance Procedures
- Chunghwa Telecom Energy Saving Policy for a Sustainable Environment stipulated
- Collect the suppliers information on climate change and carbon emission at least once a year

**5G Green Enterprise**
Although telecom is regarded as a low-polluting industry, Chunghwa Telecom is well aware of the environmental impacts associated with energy, resources, waste, maintenance, purchasing and other aspects of our operation. Subject to the maturity of the EV market, we plan to add 100% electrification of service vehicles and to evaluate joining the EV100 initiative.

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.

---

**Action**

- Efficient energy and resource management using EARTH
- The launch of the 5G initiative in pursuit of profit, environmental sustainability, and social responsibility
- Become the first telecom service provider in Taiwan to implement:
  1. Collaboration with the Sustainable Alliance for Low-carbon Economy (SALce) to issue the Sustainable Partnership Certificate
  2. TCFO Conformity Statement obtained
  3. BS 8001 Conformity Statement obtained
  4. Incorporation of the ISO 20400 Sustainable Procurement Standard
  5. Joined the Carbon Disclosure Project (CDP) Supply Chain
  6. ISO 14064 certified

**Target**

1. Procurement of 50 million kWh or more of renewable energy in 2022
2. Promises to reach the following targets in 2030:
   - 50% cut in carbon emissions compared to 2020 levels
   - 100% IDCs using renewable energy
   - 100% critical suppliers’ CHT sustainability partner certified
   - Cumulative 10 million t-CO₂e of carbon reduced by the supply chain
   - 100% electrification of service vehicles

**Indicator**

- GHG Emissions
  - 734,866.729 t-CO₂e
- Generated 4,506 kWp of installed capacity of PV systems
- 10.106 metric tons of cellphones recycled with a reuse rate of 87.89% via “Cellphone Recycling for a Sustainable Earth” program
- ISO 14064 certified

**Response**

- CHT ESG Supplier Conference / Sustainable Environmental Visit, education and trainings
- Targets low-carbon industries and promotes solar power
1G Green Operation
- A self-developed EARTH system for 100% control of environmental information
- Certifications of ISO 14001, ISO 50001, and ISO 14064-1
- The sole telecom carrier that has obtained the ISO 14046 certification and BS 8801 Circular Economy verification in the industry of Taiwan
- Certification to the highest grade of TCFD Conformity Check for 2 consecutive years

2G Green Energy
- Self-constructed photovoltaic systems reached a total capacity of 4,506 kWp
- Acquired 111 Taiwan Renewable Energy Certificates

3G Green Stores
- Transformed 991 service centers into Green Stores
- Systrend Store in Taipei as the sole net zero carbon store in the industry of Taiwan that obtained ISO 14007, EPA’s Service Carbon Label, and PAS 2060 carbon neutrality certification
- Promoted paperless services and accumulated a saving of 590 million sheets of paper per year

4G Green Supply Chain
- Became the first telecom carrier to promote supply chain sustainability management
- Formally incorporated the ISO 20400 Sustainable Procurement Standard
- Participated in the CDP Supply Chain Project to expand the efficiency of carbon management
- Certifications of ISO 14001, ISO 50001, and ISO 14064-1
- A self-developed EARTH system for 100% control of environmental information

5G Green Procurement
- Reached a total of NT$14,994 million in green procurement in 2021
- Reached 22.37% of total procurement as green procurement yearly

1G Green Operations
Chunghwa Telecom has set a goal to become a sustainable Green enterprise, and has made environmental issues an incorporated part of business operation and management. We hope to play a more proactive role in issues such as energy and climate change. By improving energy efficiency and exploring eco-friendly products and services, we are confident of our potential to inspire a new generation of low-carbon industries.

Environment ARTifier 1Theurgy (EARTH)
We developed the Environment ARTifier 1Theurgy (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 65,833 electricity accounts and 3,387,811 units of electricity payment data under management.
- Water Management: Request centralized payment of water bill; there are more than 1,351 water accounts and 134,941 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 67,490 tree data saved in the EARTH database.
- Recycling Management: Document type, volume of recycled material and the recycling management department. We have recorded 22 types of recycling and there have been 18,639,579 entries made.
Green Environmental Hostels
Chunghwa Telecom Hostels provide accommodation for employee business or leisure travel. In response to environmental protection and personal hygiene, the hostels do not provide disposable, or consumable items or towels. They also take energy-saving measures such as solar water heating, air conditioning using heat pumps and LED lighting. 19 hostels had been certified as Environmentally Friendly Accommodation by 2021.

Ecotourism
Chunghwa Telecom hopes to provide eco-tours that are both educational and entertaining for our employees, so that they understand concepts of extreme weather, responsible tourism, respect for nature and the rights of local residents. We hold regular company eco-tours with the hopes of incorporating environmental education into traveling and daily life. We held 121 tours in 2021, costing a total of NT$11,156 thousand with 20,190 participants.

Environmental Management Expenses

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental management expense (NT$ thousand)</td>
<td>328,558</td>
<td>329,126</td>
<td>330,550</td>
</tr>
<tr>
<td>Accounted percentage of turnover (%)</td>
<td>0.16</td>
<td>0.16</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Energy-saving/Emission-reducing Actions in 2021

<table>
<thead>
<tr>
<th>Project</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-RAN architecture BBU integration</td>
<td>7,551 integrations executed, saving approximately 700,000 kWh of energy</td>
</tr>
<tr>
<td>Phase-out of 2G gateway switch</td>
<td>2 projects executed, saving approximately 270,000 kWh of energy</td>
</tr>
<tr>
<td>3G-F2 cell shutdown</td>
<td>Shutdown executed for 16,736 cells in total, saving approximately 1.75 million kWh of energy (cumulative data since 2020)</td>
</tr>
<tr>
<td>Sleep Mode for 4G service</td>
<td>Sleep Mode engaged for 993 cells, on the basis of no impact to customer communications, saving approximately 80,000 kWh of energy</td>
</tr>
<tr>
<td>Externalization of base station RRU with the use of natural ventilation or exhaust fans</td>
<td>283 projects executed, saving approximately 650,000 kWh of energy</td>
</tr>
</tbody>
</table>

2G Green Energy
In response to the climate change, Taiwan has planned to raise the ratio of renewable energy from 6% in 2017 to 20% by 2025 so as to reduce CO2 emissions. 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 2021, the Company had 51 solar power stations around Taiwan with a total capacity of 4,506 kWp.

Power Consumption Analysis

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Electricity Consumption (A)</th>
<th>General Consumption (B)</th>
<th>Business Consumption – Meter Rate Lighting Service (C)</th>
<th>Business Consumption – Flat Rate Lighting Service (D)</th>
<th>Consumption of Meter Rate Lighting without Customer Number (E)</th>
<th>Consumption of Flat Rate Lighting without Customer Number (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>135,180</td>
<td>9,420</td>
<td>125,151</td>
<td>609</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2019</td>
<td>135,066</td>
<td>7,367</td>
<td>121,468</td>
<td>6,231</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2020</td>
<td>150,909</td>
<td>7,469</td>
<td>121,499</td>
<td>5,883</td>
<td>15,559</td>
<td>-</td>
</tr>
<tr>
<td>2021</td>
<td>142,825</td>
<td>6,871</td>
<td>126,848</td>
<td>8,163</td>
<td>374</td>
<td>569</td>
</tr>
</tbody>
</table>

1. B : office buildings and employee dormitories
2. C : base stations, depot, and public telephone, which are not CHT-owned property
3. D : base stations, depot, and public telephone, which are not CHT-owned property
4. E: Consumption of Meter Rate Lighting without Customer Number
5. F: Consumption of Flat Rate Lighting without Customer Number
6. A=B+C+D+E+F; the general consumption comes from CHT office buildings; the business consumption includes the Flat Rate and Meter Rate Lighting.
7. The Flat Rate is calculated based on the electricity fee. The electricity fee is converted into kWh based on the average electricity tariff per kWh, NT$2.6253/kWh, from the"2021 Average Electricity Tariff per kWh submitted to the Electricity Tariff Review Committee" announced by Taipower.
8. This table presents the power consumption with customer numbers and the fluctuated power consumption of equipment without customer number, which have been included in the GHG inventory data.

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

Electricity Consumption of IDCs

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit: 10,000 kWh</td>
<td>16,600</td>
<td>16,576</td>
<td>16,194</td>
</tr>
</tbody>
</table>

Renewable Energy Usage in Banqiao IDC

<table>
<thead>
<tr>
<th>Year</th>
<th>Unit</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar power generation (A)</td>
<td>10,000 kWh</td>
<td>10</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Total power consumption (B)</td>
<td>10,000 kWh</td>
<td>2,447</td>
<td>3,445</td>
<td>4,270</td>
</tr>
</tbody>
</table>
The sole telecom operator in Taiwan that passed water footprint certification

We tie eco-friendliness/green energy with network services tightly. Furthermore, we endeavor to engage "green communication" with consumers for them to accurately comprehend the eco-friendliness and low-carbon feature of products and services, in line with our corporate philosophy "Always Ahead." To accurately capture the water resource risks and in response to the UN SDG 3G Clean Water and Sanitation, we chose the most representative Rated 4 IDC of the Greater China region – Banqiao IDC and Cloud Data Center of Chunghwa Telecom for ISO 14046 certification on water footprint inventory and certification. As a result, it passed the verification by the SGS-Taiwan and obtained the assurance statement, making Chunghwa Telecom the sole telecom operator in Taiwan that passed water footprint certification.

The benefits achieved are as follows:

- Enterprise water usage management enhanced: the water usage distribution in the enterprise is captured effectively via water footprint inventory in order to create a complete water resource management system and stipulate proper measures to achieve the target of water conservation.
- Waste Management

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

<table>
<thead>
<tr>
<th>Item</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total waste generated</td>
<td>6,707.3101</td>
<td>7,344.8563</td>
<td>8,869.9306</td>
</tr>
<tr>
<td>(general waste + industrial waste)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste recycled/reused</td>
<td>3,454.0053</td>
<td>3,846.6950</td>
<td>5,455.5190</td>
</tr>
<tr>
<td>Waste landfilled</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Waste incinerated with energy recovery</td>
<td>29.77</td>
<td>26.15</td>
<td>40.57</td>
</tr>
<tr>
<td>Incinerated without energy recovery</td>
<td>3,179.2948</td>
<td>3,458.0913</td>
<td>3,328.9616</td>
</tr>
<tr>
<td>Waste otherwise disposed *</td>
<td>44.24</td>
<td>13.92</td>
<td>44.88</td>
</tr>
<tr>
<td>Waste with unknown disposal method</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Data Coverage (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Unit: tonnes

Waste otherwise disposed *: This category includes batteries and other toxic waste, which must be disposed of in accordance with regulations to prevent environmental pollution. Such waste generally requires specialized treatment and disposal processes.

Batteries containing cadmium are TCLP waste that requires processes in line with the EPA Taiwan regulations, which is to be processed overseas since there is no qualified service provider domestically.

Water Resource Management

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

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

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

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

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

Scraped lead-acid batteries are recyclable industrial waste regulated by the EPA. Business organizations are responsible for the reduction of pollution 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.

Scraped 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. A total of 35,871 lead-acid batteries with a total weight of 1,908,465 kg were scrapped and sold for NT$31,966,389 in 2021. 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 cement poles, fiber optic cables, woods, and batteries containing cadmium.

### BS 8001 Circular Economy

In response to the UN SDG 12: Responsible consumption and production and the circular economy promotion in Taiwan's 5+2 Industrial Innovation Plan, we drive the transition to a circular economy as well as exercise our industrial influence, facilitate the value chains as a whole, and collectively usher in the age of circular economy with zero waste and zero carbon emissions. We proposed five commitments with the 5R Principle higher than the statutory requirements at home and abroad:

1. **Reduce**: Establish a green operation and consumption model to properly manage and reduce consumption of energy and resources, along with enhanced education and promotion for employees, suppliers, and customers.
2. **Reuse**: Increase circularity and improve resource recycling technology for resource regeneration and recycling.
3. **Repair**: Promote eco-friendly design and extension of service life of products and offer circular products that are more durable, easy to repair, and recyclable.
4. **Refuse**: Promote green procurement, reject products with no green concept, and purchase products with green labels or with an equivalent efficiency thereof.
5. **Recycle**: Facilitate an industrial chain symbiosis and develop forward-looking energy technologies to elevate energy/resource efficiency and promote recycling.

Upholding the brand spirit of “Always Ahead,” we introduced BS 8001 Circular Economy in 2021 to our MOD services. Our MOD services offer customers multimedia content services like video on demand and applications as well as channels and programs.

**TABLE 1: Scraped lead-acid batteries disposal**

<table>
<thead>
<tr>
<th>Category</th>
<th>Unit</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement poles</td>
<td>Metric ton</td>
<td>695</td>
<td>787</td>
<td>803</td>
</tr>
<tr>
<td>Fiber optic cables</td>
<td>Metric ton</td>
<td>236</td>
<td>237</td>
<td>600</td>
</tr>
<tr>
<td>Woods</td>
<td>Metric ton</td>
<td>30</td>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td>Batteries containing cadmium</td>
<td>Metric ton</td>
<td>44</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Disposal Fee</td>
<td>NT$ thousand</td>
<td>9,218</td>
<td>9,555</td>
<td>20,642</td>
</tr>
</tbody>
</table>

8. **The Sole Net-zero Carbon Emission Store in The Industry of Taiwan**

In Q2 2020, “CHT Syntrend Store” became the first service center in Taiwan with Carbon Label for Services and the only carbon neutral store in the industry! Through certification and verification against standards at home and abroad (ISO 14067 and EPA’s Carbon Label for Services) as well as the purchase of 50 metric tons of carbon credits, it thus obtained the certification to PAS 2060 for carbon neutrality.

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

**TABLE 2: Paperless Receipt Service**

<table>
<thead>
<tr>
<th>Year</th>
<th>Customer applying for e-bills (10 thousand)</th>
<th>Customer applying for e-bills (total)</th>
<th>Ratio of customers applying for e-bills</th>
<th>Quantity of paper saved (per 1,000 sheets)</th>
<th>Number of trees saved</th>
<th>Reduction of carbon emission volume (metric ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1,933</td>
<td>1,968</td>
<td>70%</td>
<td>579,946</td>
<td>52,722</td>
<td>10,439</td>
</tr>
<tr>
<td>2020</td>
<td>1,968</td>
<td>1,994</td>
<td>71%</td>
<td>590,400</td>
<td>53,673</td>
<td>10,627</td>
</tr>
<tr>
<td>2021</td>
<td>1,994</td>
<td>1,994</td>
<td>71%</td>
<td>598,200</td>
<td>54,382</td>
<td>10,768</td>
</tr>
</tbody>
</table>

1. The data of paper saved and reduction of carbon emission is by e-bills (including SMS) and combined bills.
2. Each e-bill reducing the use of envelopes and paper are 2.5 sheets of A4 paper. Total amount of paper saved: number customers applying for e-bill × 2.5 × 12 (month).
3. 1 sheet of A4 paper generates 18 grams of CO₂; Carbon emission reduced: number of paper saved (1,000 sheets) × 18 grams.
4. The number of trees saved: each ton of paper pulp produced=20 trees; one ton of paper pulp=220 thousand sheets of A4 paper.
5. Therefore, the number of trees saved = number of papers saved × 220 thousand × 20.

### 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 sustainability concepts were introduced into products and services research, development, applications, and into the Company management strategies.

**Green Revenue**

In addition to developing products friendly to the environment, we have been promoting Green Stores and were the first telecom carrier in Taiwan to fully turn service centers into Green Stores. In 2021, green revenue was NT$259.57 million, which was 11.94% of the commercial products revenue.

**Paperless Receipt Service**

Upholding the philosophy of energy-saving/emission reduction and green action for Earth, along with saving the time and space for customers in the collection and preservation of hardcopy receipts, we have been promoting electronic billing since 2001, and reduce carbon emission by eliminating the use of paper bills. In 2017, we offered paperless receipt service. At the end of 2021, the percentage of paperless receipts exceeded 71%. The service saved 590 million sheets of paper and an estimated 54,382 trees, reducing carbon emission by 10,768 metric tons.
2. Key drivers for the green data in 2021

We were the first telecom company to propose the "Sustainable Supply Chain Initiative"

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

We were the first in the industry to join the "CDP Supply Chain Project"

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

Moving forward, the green supply chain will not only be limited to the green actions by our suppliers and extension of the lifecycles of green products. CHT will continue to focus on the value-added ICT applications, betterment of various systems to apply them to the supply chain, as well as coordinated management and comprehensive monitoring.

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

Our goals and policies concerning green procurement, as we hope to maintain green purchases at more than 5% of the total purchases per year over the mid-term, and increase this percentage to more than 50% over the long term. To achieve this goal, we incorporated the ISO 26000 Sustainable Procurement Standard at the end of 2018. The implementation of the ISO management system helped reinforce the idea of green procurement.

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green procurement total (NT$ million)</td>
<td>1,024</td>
<td>904</td>
<td>14,994</td>
</tr>
<tr>
<td>Accounted percentage of total procurement</td>
<td>2.47%</td>
<td>1.08%</td>
<td>22.37%</td>
</tr>
</tbody>
</table>

1. For more information about Green Supply Chain and Green Procurement, please refer to p.124-131.
2. Key drivers for the green data in 2021

(1) Inclusion of products with Gold rating from the Electronic Product Environmental Assessment Tool (EPEAT), promoted by US Environmental Protection Agency (EPA) and Institute of Electrical and Electronics Engineers (IEEE), with criteria as follows: Reduction/Elimination of Environmentally Sensitive Materials, Materials Selection, Design for End of Life, Product Longevity/Life Extension, Energy Conservation, End-of-Life Management, Corporate Performance, and Packaging.

(2) Exclusion of items with no green marks or equivalent in services and construction works in the statistics.

## 2021 Environmental Performance

### Item | Description
--- | ---
**Environmental Information Disclosures** | - Published ESG reports and disclosed environmental data to respond to the Dow Jones Sustainability Index (DJSI)
- 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 Magazine, Global Views Magazine, and Taiwan Corporate Sustainability Award)
- Signed on as a supporter of the Task Force on Climate-related Financial Disclosures (TCFD) initiative and disclosed relevant information in line with the TCFD Framework

### Improve Energy Use Efficiency

- Merged and exploited data center spaces
- Adoption of efficient, energy-saving equipment to improve the PUE performance of IDCs
- PUE values of IDCs reduced year by year from 1.67 in the base year of 2020 to 1.657 in the end of 2021 with an aim for 1.50 by 2030
- Green building materials adopted for newly-established IDCs or 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 4,506 kWp of photovoltaic systems by the end of 2021
- Acquired 111 Taiwan Renewable Energy Certificate
- One and only in the industry of Taiwan: Banqiao IDC passed ISO 14046 certification
- 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
- Promoted clean homes, energy-saving offices, car-free days, and paperless Office Document Automation System (ODAS)
- The Taiwan Energy Conservation Patrol; focus on increasing energy efficiency within small and medium enterprises and vulnerable social institutions
- Set waste reduction and recycling targets

### Autonomous Environmental Protection

- One and only in the industry of Taiwan: net-zero emission Syntrend store acquired both the EPA's Carbon Label for Services domestically as well as the ISO 14067 and PAS 2060 internationally
- Promoted e-mail with a marketing section, featuring eco-friendliness, energy-saving, and emission reduction
- 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 energy-saving products
- Mobile device recycling: "Cellphone Recycling for a Sustainable Earth" store trade-in campaign to install recycle bins to the service centers in line with the promotion for waste recycling; 10,106 metric tons of cellphones recycled with a reuse rate of 87.89% in 2021
- Green Stores: transform 691 service centers nationwide into Green Stores
- Collaboration with the Sustainable Alliance for Low-carbon Economy (SALcE) to issue the Sustainable Partnership (products, services, and organizations) Certificate
- Constructed 110 environmentally sustainable service centers nationwide
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 ESG. This is achieved by implementing conduct that complies with the international supply chain ESG standards to guide the ICT industry towards sustainability.

We were the first telecom enterprise in Taiwan to join the CDP Supply Chain Project in 2017 when the industry was confronted by the critical issues of global climate change and its effect on corporate development. In 2018, we again became the first telecom company to incorporate the ISO 20400 Sustainable Procurement Standard. We strive to establish a better connection to the world on our path towards the development of sustainability. We officially launched Sustainable Partner Certification mechanism in 2019. A total of 24 sustainable suppliers have been awarded with Gold-tier certificates as of 2021.

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

We launched “Sustainable Partner Certification” mechanism in 2019. We examine suppliers’ sustainability performance with the sustainable framework. We hope to compile a "Chunghwa Telecom Sustainable Supply Chain" list through evaluation, training, audit and certification; we’d also like to lead our suppliers toward a sustainable future, improve the sustainability of telecom companies, business, and society as a whole, as well as keep abreast with the international trends of low-carbon economy.

CHT’s Sustainable Supply Chain Initiative – Sustainable Partner Certification

Chunghwa Telecom upholds its company motto and its mission as a Digital Economy Motivator and a Creative Industry Pilot, formally adopting the ISO 20400 Sustainable Procurement Standard in 2018. With that, it evaluates its suppliers’ sustainability performance with the sustainable framework.

We launched "Sustainable Partner Certification" mechanism in 2019. We examine suppliers by SGS second party audit results as well as their type and level of importance, and rate them as 4 tiers of “Gold, Silver, Bronze and Participation” accordingly. If a supplier fails to pass the certification process, it is granted a limited period of time to implement corrective measures. Rated suppliers shall receive a mark that corresponds to their rating, and an excellent mark will be seen as a favorable term when submitting a tender.

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

Suppliers Analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Suppliers</th>
<th>Accounted Percentage of Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Suppliers</td>
<td>2,020</td>
<td>99</td>
</tr>
<tr>
<td>Critical tier 1 suppliers</td>
<td>192</td>
<td>85</td>
</tr>
<tr>
<td>Critical non-tier 1 suppliers</td>
<td>27</td>
<td>-</td>
</tr>
</tbody>
</table>

The Chunghwa Telecom suppliers fall into three categories: construction work, property and service. Apart from professional network communication equipment to be procured internationally and that the amount of which was higher for the 5G deployment in 2021, we procured locally as much as possible to facilitate the local economic development. The domestic procurement percentage was 89% in 2021, increased by 9% compared to the previous year.
ESG Capacity Promotion of Suppliers

In 2021, aside from the existing Annual ESG Supplier Conference and environmental education visits, we organized ESG education and training for suppliers, which were held online instead due to the concern of COVID-19, inviting 26 representatives from nearly 47 suppliers. Apart from the ESG lecturers internally, we also invited professional ESG consultants to offer a 4-hour ESG program. With the education and training, we expected to communicate to the suppliers our commitment to the sustainable supply chain management and Sustainable Partner Certification system, so as to collectively bridge the supply chains of telecom industry to the international trend of sustainability, which also come with the benefits in the ESG area.

ESG On-Site Audits

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

### CHT Management Indicator

<table>
<thead>
<tr>
<th>Supplier ESG auditing ratio per year</th>
<th>Method</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>· Occupational health and safety on-site audits/engineering and cable audits</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>· Second-party audit by the SGS-Taiwan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>· Critical non-tier 1 suppliers audits</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of suppliers assessed in ESG in the last 3 years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25%</td>
</tr>
</tbody>
</table>

### Overview of the Supply Chain ESG Management Results

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>2021 Goal</th>
<th>2021 Outcome</th>
<th>2022 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of Online Supplier ESG Survey</td>
<td>Suppliers with a procurement amount of NT$5 million or above is liable to fill out the Supplier ESG Survey that covers items of corporate ethics, labor rights, environmental management, and occupational safety and health.</td>
<td>95%</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>Procurement staff that received ESG-related training</td>
<td>It is to ensure all CHT procurement staff understand and execute faithfully the &quot;Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd.&quot;</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Supplier contracts containing ESG-related terms</td>
<td>Suppliers are explicitly required to abide by the &quot;Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co., Ltd.&quot; in their procurement contracts.</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>&quot;ESG self-assessment form for suppliers&quot; included in the documentation necessary in the tendering process</td>
<td>Tendering documentation stipulates that all bidders to fill out ESG self-assessment form for suppliers; additional elaboration on improvement is required in the event of breach of laws or regulations by suppliers.</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Suppliers without violations against environmental protection laws*</td>
<td>The environmental management status by suppliers is captured via online questionnaires.</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Supplier ESG second-party audit</td>
<td>Through second-party audit, key suppliers are ensured free from environmental and human right risks such as forced labor.</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Audits on civil engineering/ cable contractors</td>
<td>A total of 142 audits were carried out on 72 contractors. As of the end of 2021, 32 suppliers were found with incidents of violation and the fines amounted to NT$928 thousand.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-site safety and health inspections</td>
<td>Occupational safety and health officers under the Northern and Southern Taiwan Business Groups and the Mobile Business Group conduct at least three on-site safety and health inspections per week. Upon discovery of non-conformities, relevant departments will be notified for corrective action tracking. A total of 519 inspections were conducted on 379 contractors in 2021.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In reviewing the ESG questionnaires responded by the suppliers, the responsible unit would also inquire if there had been any economic, environmental, or social violation, while a persistent failure in improvement of any incident, which resulted in fines totaled NT$1 million or above, was deemed as a violation.
The first Taiwan telecom carrier to participate in the CDP Supply Chain Project
Connecting Low-Carbon Supply Chain

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

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

1. Increase supplier awareness and knowledge of climate change
2. Collect greenhouse gas emission information
3. Communicate and encourage changes in the behavior of suppliers

Abstract of the Results of Chunghwa Telecom's 2021 "CDP Supply Chain Project"

- 49% of suppliers responded to Chunghwa Telecom's questionnaire (49% globally)
- Chunghwa Telecom's supply chain reduced carbon emissions around 48,140 thousand t-CO₂e
- 59% of suppliers have taken energy-saving and carbon reduction measures
- 79% of suppliers incorporated climate change into long-term business strategic planning on average (83% globally)
- 62% of suppliers have set emission reduction goals
- 72% of suppliers have established procedures for evaluating climate-related risks

Types of Projects | The amount of Carbon Emission Reduced (t-CO₂e) | Estimated Amount of Money Saved Each Year (NT$)
--- | --- | ---
Changes in Corporate Policies and Behaviors | 2,180,693 | 17,758,139
Energy Efficiency in Buildings | 1,035,212 | 289,377,158
Energy Efficiency in Manufacturing Processes | 58,532 | 311,630,289
Low-carbon Energy Consumption | 41,123,207 | 3,633,000
Self-produced Low-carbon Energy | 17,616 | 59,297,374
Waste Reduction and Material Recycling | 1,416,177 | 51,020,000
Transportation | 2,000,110 | 43,331,600
Others | 312,718 | 18,820,103
Total | 48,144,265 | 794,867,663

Improvement of Suppliers' Sustainable Actions

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 ecosystem.

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

Abstract of Results of Chunghwa Telecom's 2021 "CDP Supply Chain Project"
Supply Chain Sustainable Low-Carbon Management

2008
Published "Supplier’s Environment and Human Right Guidelines" which asked suppliers to follow labor and environment regulations.

2009
Formulated "Basic Status Survey on CSR for Suppliers" and formally started "supply chain CSR management" with CSR committee approval.

2010
Invited critical suppliers to reply to the "Basic Status Survey on CSR for Suppliers" and held meetings to learn about supplier CSR compliance.

2011
- Announced the "Code of Corporate Social Responsibility for Suppliers of Chunghwa Telecom Co Ltd".
- Started holding "CSR Supplier Social Event Supplier CSR Interchange Meeting" annually and the publication of the analysis results of supplier CSR compliance.

2012
Required that suppliers with purchase amounts of more than NT$ 5 million have to complete the "Supply CSR Status Questionnaire".

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.

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.

2016
Organized the first "Sustainable Environmental Visit".

2017
Formally announced the CDP Supply Chain Project membership and became the first domestic telecom carrier to participate on the international platform.

2018
- Formal incorporation of the ISO 20400 Sustainable Procurement Standard
- Collaborated with the Sustainable Alliance for Low-carbon Economy (SALE) to classify sustainable products and service and incorporated "Sustainable Partner" assessment mechanism, which consists of four tiers: Gold, Silver, Bronze and Participation. We were the first telecom company in Taiwan to implement Sustainable Partner Certification.

2019
- Officially launched the sustainable partner certification - sustainable products and services rating system as well as recognized and awarded outstanding suppliers Gold-tier Certificates during CSR Supplier Conference.

2020
- Organization of the first ESG education and training event for suppliers
- Certifications of Excellence in Sustainable Supply Chain and of Sustainable Partner by SALE.

2021
- BS 8001 Circular Economy conformity check passed
- Ongoing organization of Sustainable Partner Certification – Sustainable Products and Services Rating, with 24 Gold-rated suppliers thus far.
As the pilot of ESG, Chunghwa Telecom has developed its core competence to positively minimize the digital divide and devote itself to the creation of digital opportunities. Since 2015, we have chosen to connect with the 2030 Sustainable Development Goals (SDGs) of the United Nations. Through real action, we have demonstrated our determination to develop and implement global sustainability.

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

**Chunghwa Telecom "5I SDGs" Initiative**

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**Chunghwa Telecom "5I SDGs" initiatives:**
- I Helping: Training volunteers for the visually impaired
- I Sharing: "Read with You" - Community Network Tutoring
- I Learning: "5G Plastic Free Day" campaign
- I Technology: "5I SDGs" digital inclusion initiative
- I Protecting: Corporate volunteer action

**Strategy**
- Minimize the digital divide and create digital opportunities

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

**Response**
- "5I SDGs" strategies and goals
- Corporate volunteer action
- "I Helping" Training volunteers for the visually impaired
- "5G Plastic Free Day" campaign

**SMARTI**

**Action**
- I Helping: Training volunteers for the visually impaired
- I Sharing: "Read with You" - Community Network Tutoring
- I Learning: "5G Plastic Free Day" campaign
- I Technology: "5I SDGs" digital inclusion initiative
- I Protecting: Corporate volunteer action

**Target**
- **Short-term**:
  - Ongoing commitment to the universal telecom service
  - Situation assessment to adjust offices of "Good Digital Neighbors" as appropriate

- **Mid-long term**:
  - Social investment will reach 0.5% of revenues by 2025
  - Support in hotspot deployment for huge national festivities, sports events, or other events
  - The Chunghwa Telecom Foundation funds NT$30 million every year to support Good Digital Neighbors in project promotion

**Indicator**

- **GRI**
  - Social investment: NT$1,153,814 thousand
  - Telecom subsidy for underprivileged groups: NT$211,098.18 thousand
  - Digital Good Neighbors: 89 locations

- **SROI**
  - "Read with You": NT$6.47

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

**Respond to the objectives of the DIGI+ of the Executive Yuan, widen the scope of digital inclusion and ensure Information Equality in the networked digital era**

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

Corporate Volunteer
Technology Education Team
Core Competence
Utilize digital technology to promote digital equality

Action Plan
Cellphone expert program in service center

2030 Goals
1. Cultivate 300 technology education volunteers
2. Technology education services for over 5 million

SI SDGs Action Results in 2021
Smart Academy
In response to government’s encouragement to the elderly and local citizens to partake in social activities, our corporate volunteers joined the service centers nationwide to help people in the communities to engage e-learning activities. Sessions: Ankeng, Xidian, Fenglin, Hualien; Pitou, Chang Hua; and Mingjian, Nantou, with 61 participants in total.

I Helping

Corporate Volunteer
Visually-impaired Service Team
Core Competence
Assist the visually-impaired in bridging to digital technology and services

Action Plan
Beacon case
Blind aid courses

2030 Goals
1. Benefits over 60,000 visually impaired people in Taiwan
2. Helping in lives and entertainment of over 200 thousand visually impaired

SI SDGs Action Results in 2021
"See the National Palace Museum" and whale watching activity "See the Beauty of Hualien at Sea via Technology"
The activities were cancelled due to COVID-19 pandemic and Typhoon Chanthu.

I Protecting

Corporate Volunteer
Green Service Team
Core Competence
Save energy and reduce carbon emission to treasure Earth with green actions

Action Plan
Reduce marine debris
Energy-saving volunteering projects

2030 Goals
1. Help reduce energy and carbon emissions of communities over 1 million t-CO2e
2. Cleaning the marine debris for over 100 t

SI SDGs Action Results in 2021
5G Plastic Free Corporate Volunteer Sustainability Action Tetralogy
The 5G Plastic Free Corporate Volunteer Sustainability Action Tetralogy kicked off both online and offline. The online actions included environmental education courses, online events on Facebook and Instagram with a reach of 3,394,367; the offline actions included 5G Plastic Free Family Day and the nationwide beach/ mountain cleanup activities with 20.7 metric tons of wastes removed by 4,200 participants.

I Learning

Corporate Volunteer
Love in Learning Team
Core Competence
Bridging the rural-urban gap and flip education in rural areas

Action Plan
Read with You
Foundation’s projects

2030 Goals
1. Over 8,000 university students as tutors
2. Schoolchildren who have been tutored for over 180,000 hours

SI SDGs Action Results in 2021
1. FJU "Read with You" Community Network Tutoring Program
With 13 access points for learning in the 1st and 2nd semesters, respectively, the program was executed for 237 Little Learning Buddies and 369 Big Learning Buddies with 5,073 hours of online learning.

2. Tri-Hua Program
Together with Chungwasp Post Co., Ltd. and ASUS Foundation, we jointly organized "Pay it forward for Education" to make donations to the students in the 42 junior high and elementary schools in New Taipei City, Miaoli County, and Pingtung County.

Chungwasp Post Co., Ltd. donated 2,800 retired computers. ASUS Foundation refurbished them into 200 recycled computers. With our provision of one-year quality broadband communication service combined, we jointly assisted the students to continue learning despite school shutdown to bridge the digital divide, fill the urban-rural gap, and create digital opportunities. The recycled computers helped in energy-saving/emission reduction and circular economy promotion, cutting over 70 metric tons of GHG emissions, which is equivalent to approximately 6,500 trees saved a year, benefiting the environmental sustainability.

Corporate Volunteer
Community Service Team
Core Competence
Promote local services as a friendly significant neighbor

Action Plan
Taiwan telecom digital collection guided tour

2030 Goals
1. Over 50,000 Corporate Volunteer Services
2. Over 3 million communities stakeholders being helped

SI SDGs Action Results in 2021
Corporate Volunteer Training Seminars
A total of 7 sessions were organized for 23 participants at the National Science and Technology Museum (NSTM), 21 at the CHTTI Banqiao Branch, 33 at the CHTTI Taichung Branch, 14 at the CHTTI Kaohsiung Branch, 15 at the CHTTI Kaohsiung Branch, 35 at the CHTTI Banqiao Branch, and 20 at the CHTTI Taichung Branch. With 161 participants and 7 hours each, the training hours were 1,127 hours in total.

I Sharing

Corporate Volunteer
5G Plastic Free Corporate Volunteer Sustainability Action Tetralogy

SI SDGs Action Results in 2021

<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSTM – volunteering in ordinary days</td>
<td>2,883</td>
</tr>
<tr>
<td>NSTM – volunteering in holidays</td>
<td>424</td>
</tr>
<tr>
<td>Liudui Hakka Digital Collection Activity</td>
<td>1,749</td>
</tr>
<tr>
<td>Smart Academy</td>
<td>102</td>
</tr>
<tr>
<td>Taipei Marathon</td>
<td>420</td>
</tr>
<tr>
<td>5G Plastic Free Family Day</td>
<td>360</td>
</tr>
<tr>
<td>CHT Nationwide Beach Cleanup Activity</td>
<td>8,800</td>
</tr>
<tr>
<td>Total</td>
<td>14,738</td>
</tr>
</tbody>
</table>

SI SDGs Corporate Volunteering Hours in 2021
I Technology + I Sharing – the Stronghold for the National Critical Infrastructure Protection

"National CIP Designated Exercise for Critical Infrastructure" led by the Executive Yuan is one of the highest level of national exercise, Chunghwa Telecom constantly evolves its technology and has been designated by the Executive Yuan to organize the Designated Exercise for seven years in a row. With multifaceted cyber resources and meticulous response capability against disasters combined, CHT was awarded the collective honor of “Outstanding Entity”. Also, in light of the proper commanding and coordinating performance of our President Shui-Yi Kuo, which were highly recognized by the assessors, President Kuo was presented with the honor of "Best Commander".

Our core expertise span from mobile, fixed line, submarine communication cable, and data to the emerging technological energies like AI big data, cybersecurity, and blockchain, which fell into the "communications" area of the national critical infrastructure. The exercise went for more than 7 months. We joined hands with 26 external response entities and realized a highly efficient horizontal communication. Targeting complex scenarios such as natural disasters, cybersecurity, man-made terrorism, we deployed overall contingency plans that fully demonstrated our resiliency in fighting and responding to disasters. As such, we successfully pulled off the contingency exercise that covered the widest in terms of disaster types and entity number while mobilized the most manpower over the years, and thus received the highest national recognition.

We shall continue to better the protections for various critical infrastructure, work closely with the public and private sectors to form joint defenses to ensure the business continuity of enterprises and the smooth communication and management of the country.

I Technology + I Sharing – NSTM Telecom@Taiwan for Holiday Scavenger Hunt Game

Starting from 2003, Chunghwa Telecom has been promoting the conservation of cultural heritage of the telecom services in Taiwan, including the interviews conducted with veterans for oral accounts inside the Company. Meanwhile, it collaborated with the National Science and Technology Museum (NSTM) for digitalization of relics and artifacts, organization of special exhibitions, education activities, as well as promotion, outreach, and other wonderful accomplishments.

Aside from the establishment of permanent exhibition "Telecom@Taiwan" in 2011 for offline exhibition, we are also committed to the promotion of digital museum online, featuring collection, cataloging and conservation, digitalization after photographing and scanning, search functions, and digital display of telecom relics and literature. Besides objects and literature studies, the oral history project through interviews with telecom veterans was set in motion in 2018 and has accumulated fruitful results over the years.

In 2021, we attempted to organize the holiday scavenger hunt game "Love of Telecom Lives on with the Helping Hand of NSTM" for the broader society to have the chance to learn and explore better the telecom service history in Taiwan. The activity went from April 27 to November 27, 2021 (halted during May to August due to COVID-19). 18 sessions were held with 1,697 participants in total. Through the web force of online check-in and snapshots, individuals of various age groups were drawn to learn more about the content in Telecom@Taiwan. As such, the general public had a good impression with Chunghwa Telecom for its attention to the history of its own and its generosity and effort to share it with the society at large.
CHT launched the "5G Plastic Free Corporate Volunteer Sustainability Action Tetralogy" campaign in 2021. With the speed and sharing capability of 5G networks in transmission, we aimed to play the roles of "initiator" and "leader" on the path to environmental sustainability to guide our employees to put the idea of eco-friendly plastic reduction in action and in life so as to give rise to a carefree and plastic free life!

Chapter I

Environmental education materials were designed, produced, and recorded by employees themselves. 26,150 CHT employees were involved in the online environmental education course via the internal education system of Chunghwa Telecom Training Institute, along with a series of posts for environmental advocacy released on social media such as CHT’s CSR Facebook Fan Page and Instagram official account.

Chapter II

Employees were encouraged to invite their friends and families as well as the general public to go to the campaign website (https://cht5gplastic-free.com.tw/). Through the web game Plastic Challenge, people’s knowledge with plastic waste was put to the test. Also, the Facebook post activity "3 Meals per Day" was held to encourage participants to NOT use disposable utensils for 3 meals. The participants could take and upload photos for a lucky draw. The notion of environmental sustainability was thus promoted via these social media posts. In addition, an Instagram filter was available for download for the younger generation to showcase their green attitude.

Chapter III

For the 5G Plastic Free Family Day, we collaborated with Paperwindmill Theatre, inviting employees and the public to play the environmental (plastic-free) interactive game brought by Paperwindmill Theatre. Through the storyline, the environmental awareness was to take root in the participants.

Chapter IV

CHT employees nationwide were called upon to carry out mountain/beach/river cleanup efforts at 26 locations across the country. Through actions on the ground, we cleaned the damaged environments. A total of 2,200 participants were involved with 20.7 metric tons of wastes removed.

Moving forward, Chunghwa Telecom shall systematically join hands with its partners on the supply chain to march toward the sustainability management goals of plastic-free and carbon-free to become “Green Enterprise” that actively facilitates environmental sustainability and achieves sustainable development!
The Mobile management tool eSafe Wizard App for occupational safety and health developed to allow personnel to manage the process on-site via cellphone introduces cloud, paperless, real-time, and effectiveness into the safety and health management.

Health checkup for employees is conducted annually, together with Employee Assistance Programs, health lectures, hiking, tours, and sports competition for employees; professional medical doctors and health managers are invited to offer health advisory to employees, so as to build wellrounded caring measures for employees.

As the first telecom service provider that introduced OHSAS 18001 and TOSHMS as well as obtained certification of ISO 45001 – occupational health and safety management systems, CHT implements the management of its employees safety and health in an institutionalized and systematic manner.

CHT develops AI agricultural analysis model. Agricultural sensors are deployed for catering to the needs of farmland to collect data of growth environment and weather for compilation and analysis to produce forecast of the farmland’s conditions in the following days. Also, the data is uploaded to a smart agriculture cloud platform via NB-IoT technology, with which farmers can arrange their farming schedule accordingly.

Through NB-IoT technology, technology is introduced to agriculture, analyzing key environmental monitoring parameters of produce. The optimum environment for produce’s growth is built and risks of agricultural disaster are reduced via forecast of the future tendency of data changes, which facilitate the improvement of yield and quality of produce and achieve the goal of a smart quality agriculture.

Zero Hunger

- CHT develops AI agricultural analysis model. Agricultural sensors are deployed for catering to the needs of farmland to collect data of growth environment and weather for compilation and analysis to produce forecast of the farmland’s conditions in the following days. Also, the data is uploaded to a smart agriculture cloud platform via NB-IoT technology, with which farmers can arrange their farming schedule accordingly.
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Clean Water and Sanitation

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

Gender Equality

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

Quality Education

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

Zero Hunger

- To bridge the gap of communication and information quality between the rural and urban areas, we go into the mountains and offshore islands to construct 4G cell sites.
- In response to the objectives of Digital Nation & Innovative Economy Development Program and Forward-looking Infrastructure Development Program - Digital Infrastructure, actions are taken as the testimony to CHT’s capacity in social inclusiveness.
- Over NT$400 million is allocated to construction and maintenance of universal telecommunication service to realize 4G in every town and village and 100% coverage in towns and villages in an endeavor to fulfill the visions of promote social innovation and information equality and realize the win-win of digital human rights and innovative economy.
- Responding to SDG 1 with actions to ensure that all, the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services.
Affordable and Clean Energy

- Renewable energy has been actively developed to bridge ourselves to green energy. As of the end of 2021, CHT has installed solar power plants across Taiwan with a total capacity of 4,506 kWp.
- As of the end of 2021, 341 PV systems have been installed for others and connected to grids with the total installed capacity of 219,946 kWp, generating 281 million kWh per year, which is equivalent to the power consumption of over 80,000 households a year.
- With the commitment in the green energy industry, we assisted with the two construction projects of solar power plants for a subsidiary of Taiwan Cement and Taipower respectively, in which the solar power plant commissioned by the subsidiary of Taiwan Cement was the largest solar power plant construction project commissioned by the private sector.
- Working with Vitec Energy Taiwan Co., Ltd., we completed two solar power plants in Yilan County for Alchemy Steel Inc. and Yi Lian Steel Manufacturing Co., Ltd. respectively. With an installed capacity of 3,000 kW in total, it is estimated to generate energy up to 3 million kWh per year, reducing approximately 1,600 metric tons of CO2e annually.
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Decent Work and Economic Growth

- CHT is the only telecom carrier with a labor union established and a collective bargaining agreement with it. The agreement covers issues pertaining to layoff, reward/punishment, promotion, health and safety, etc. In 2021, the employees covered by the agreement reached 99.21%. Meanwhile, a labor director is appointed to sit on the Board of Directors to voice the needs of employees to the top level.
- Complete education, reasonable remuneration, and a dignified environment allow our employees to commit themselves at work and reduce turnover rates.
- In 2011, EYE Social Innovative Call Center was established and the first comprehensive solution in Taiwan was released, training the visually-impaired individuals into call center personnel and offering work opportunities.

Industry, Innovation and Infrastructure

- To improve the quality of broadband networks, we continue to construct the Fiber to the Home (FTTH) networks, with a coverage of 88% achieved in 2021, and 30% achieved for the 2Gbps ultra-fast broadband network coverage, in line with the Digital Government Program 2.0 of Taiwan (2021-2025) of the Executive Yuan for a leading broadband environment.
- Upholding the spirit of digital equality, we are actively deploying mobile network in rural areas and improving network infrastructure and communication coverage in the rural areas in addition to being the No. 1 in the number of cell sites both across Taiwan and of counties/cities deployed; the mobile broadband coverage in the rural areas is above 98.54%.

Reduced Inequalities

- We proactively monitor and protect human rights issue (anti-discrimination, gender equality, freedom of association, collective bargaining, child labor, forced or compulsory labor, and indigenous rights etc.). We respond to the UN Declaration of Human Rights and the ILO Convention on the elimination of all forms of discrimination.
- We prohibit forced and child labor, and also respond to the domestic legalization of UN International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights, dedicating to promote human rights awareness and assure respect and fair treatment to all stakeholders.
- On digital equality issue, CHT is a member of the International Telecom Union and we fully comply with International Radio Regulations and assure the freedom of communication, transparency in global roaming charges and competition, support of Telecoms in developing nations, telecom services for persons with disabilities and the freedom of speech over telecom networks. In addition, we support the UN Guiding Principles on Business and Human Rights by conducting a human rights issue in the operational value chain is evaluated and we maintain all risk at a minimum level.

Sustainable City and Communities

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

Responsible Consumption and Production

- The First edition of CSR/ESG report was released in 2007 and has been disclosing the non-financial information of the corporation for 15 years consecutively.
- A green procurement strategy is fully implemented with over NT$14,994 million of green procurement amount and accounting for 22.37% in the total procurement amount in 2021.
- We took the initiative of supplier CSR management actions in 2008, which made us the first telecom carrier that promotes ESG management for supply chain in Taiwan.
- From Code of Corporate Social Responsibility to questionnaire survey, annual ESG Supplier Conference, sustainability education, and on-site audits of over 100 suppliers in cooperation with the SGS, we improve the sustainability capacity of our supplier partners step by step.
- Through accumulation of a decade, apart from introduction of ISO 20400 sustainable procurement guidance, sustainable rating label was implemented in 2019, realizing the idea of sustainability in our products and services while maximizing the influence of procurement to create new green business opportunities.

Climate Action

- The dedicated Environmental Sustainability Task Force has been established under the Sustainable Development Committee, tasked with stipulation of environmental sustainable development goals and incorporation of issues of carbon management in the operation plan.
- In 2008, we introduced ISO 14064-1 greenhouse gases management system to inventory the carbon emissions with over 1,800 buildings and cell sites and pass the SGS certification each year, and the standard was officially converted to ISO 14064-1:2018 in 2020.
- We further connect to the external supply chains to promote sustainable, low-carbon supply chain practices and develop green products and services. Since 2016, approximately 50 supplier partners are led to environmental education venue to engage carbon management training to elevate their environmental protection awareness every year.
- We joined the CDP in 2018, promote whole supply chain carbon management actions, and are the first telecom carrier in Taiwan that signed and responded to the initiative of Task Force on Climate-Related Financial Disclosures (TCFD).
- We became the first telecom operator in the world that passed BSI’S “comply and conform test for the TCFD Recommendations on climate-related financial disclosures” with the highest level attained.
- The “CHT Energy Efficiency Environmental Service” was established. With the expertise of our corporate volunteers, it provided volunteer diagnostic services in terms of electric engineering, HVAC, or professional lighting to help enterprises to obtain professional knowledge and the right ways to save energy, free of charge.
Life below Water

- In 2021, CHT leveraged the emerging 5G technology and worked with the unmanned vessel, Marine Vacuum Cleaner, developed by Azure Alliance. With the outstanding 5G communication capability in speed and low latency, we controlled remotely and cleaned efficiently the plastic debris in the ocean, using technology to truly form a virtuous cycle as well as listen and respond to social needs. The “I Protecting” model with results was born for us to play our part to “Protect the Ocean; Love the Planet” together.

Life on Land

- We worked with Dr. Jane Goodall in 2006 and formed an alliance to participate and care for environmental education and conservation issues and sponsored the Jane Goodall Institute in planning, producing, and publishing the “Roots & Shoots Environmental Education Newsletter for Children.”
- “Sustainable Environmental Education” initiative, firstly created in 2016, we take 37 supplier partners to the environmental education venue to engage “Sustainable Environmental Visit” training in 2021.

Peace, Justice and Strong Institutions

- To ensure that all employees engage operation activities with the highest ethical standards, we have stipulated Ethical Corporate Management Best Practice Principles, Code of Ethics, and Procedures for Ethical Management and Guidelines for Conduct to lay out the required ethics and responsibilities when employees engage business contacts.
- Guidelines for Personnel Evaluation and Standards Governing the Administrative Rewards and Discipline of Chunghwa Telecom Personnel have been stipulated for personnel evaluation; rewards and disciplines are to be given in a timely manner pursuant to the regulations upon deeds worthy of rewards and conducts to be disciplined.
- Safe and rigorous whistleblowing mechanism is established; the employee grievance hotline is made available in the Employee Section on the EIP.
- Certification of Conformity to Code of Conduct by an external third party is conducted as of 2020.

Partnership for the Goals

- We connect organizations, global and local, with the corporate resources and core competences to serve specific stakeholders, stakeholders in the rural areas, and disadvantaged stakeholders, so as to create a digitally inclusive society.
- Since 1988, we have been working with the Center of Resources for Visual Impairment of Tamkang University and dedicating ourselves to aiding the visually-impaired with telecom technologies and development of a voice-based assistance App for the convenience of their lives.
- Since 2009, we have been promoting Read with You network tutoring for over a decade joint forces with Fu Jen Catholic University, replacing roads with networks to offer schoolchildren in rural areas a hand on their schoolwork.
- Since 2015, working with the NTU Hackathon and establishing the network environment in the venue for the participants to retrieve data to produce innovative solutions.
- To help the community industries in economic autonomy, the Foundation has been working with the partners of Good Digital Neighbors to conduct an integrated marketing and promotion of their hometown produces and giftboxes; combined with the purchasing power of our colleagues, we supported the community-based industries and spread their ideas of sustainability.

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 2021, Chunghwa Telecom established 24 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 and Results

Minimize the Digital Divide

Chunghwa Telecom Foundation Digital Good Neighbors
- The Digital Good Neighbors were located in 89 places

Preferential subsidies for the disadvantaged groups
- Care for 76,905 households of the disadvantaged groups, with subsidies amounting to NT$211,098 thousand

The annual investment of Telecom universal service is approximately 4.8 million dollars
- Telephone services for more than 260,000 households in 86 “remote areas” and 9 “areas considered as remote areas”
- Data communication service for more than 140,000 households
- Data connection service for more than 600 high schools, primary schools, and public libraries.
- Approximately 33,000 public telephones installed across 22 counties/cities

Equipment supports for major events
- Broadband circuit, MOD platform promotion, mobile base station vehicles, SMS, Wi-Fi AP, temporary data circuit
- The coverage rate of the 12M bps popularization broadband service is over 96.66%

Create Digital Opportunities

Chunghwa Telecom Foundation Click Taiwan
- For the 13th Click Taiwan Program, in consideration of the health of communities during the pandemic, it was scheduled to engage offline activities in 2022. Although the offline activities were on pause, the online promotion continued. Besides an ongoing operation of Click Taiwan online platform, “Click Taiwan” Documentary Emerging Talent Award was selected online, supporting the video production of the students in the program with action and communicating the force of positivism.

The CHT Digital Innovative Application Series
- The CHT Digital Innovative Application Series has been running for 14 years to promote digital development in Taiwan

PC education Network tutoring
- iPhone usage training courses for the visually impaired were regularly held in support of the visually impaired assistance plan

Assistance application development / Employment
- App for the Visually Impaired has been viewed over 20 million times since 2013
- We established the EYE Social Innovative Call Center where the visually impaired can become paid service personnel and earn their own living
Social Investment Management

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

Social Investment Statistics for 2021

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Donations</td>
<td>180,865</td>
</tr>
<tr>
<td>Product or Service Donations</td>
<td>385,867</td>
</tr>
<tr>
<td>Universal Telecom Services</td>
<td>478,784</td>
</tr>
<tr>
<td>Management Expenditures</td>
<td>58,824</td>
</tr>
<tr>
<td>Corporate Volunteer Services</td>
<td>49,473</td>
</tr>
<tr>
<td>Total</td>
<td>1,153,814</td>
</tr>
</tbody>
</table>

Minimizing the Digital Divide

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

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

Chunghwa Telecom and Chunghwa Telecom Foundation have joined hands cultivating communities for 16 years, establishing digital good neighbors across Taiwan to bridge the rural-urban gaps in resources, serve as the platform to connect resources, offer resources such as community digital learning, youth volunteering, sports/cultural/art activities, and local industries promotion, as well as discover moving stories and local industries unique to local communities.

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

Promotion of Basketball Sport and Sportsmanship | Chunghwa Telecom Women’s Basketball Team Gives Back to Communities

Established in 1974, Chunghwa Telecom Women’s Basketball Team (CHT WBT) has been involved in “Love & Care Charity Tournament Series” for 11 consecutive years since 2011, hoping to convey the refreshing, healthy image of CHT WBT and the ESG philosophy of Chunghwa Telecom via the Series.

In 2021, to strengthen the bond with communities besides epidemic prevention, the activities were postponed to the end of year. “CHT WBT Homecoming” arranged the star athletes Tzu-Yin Pan, Yi-Wen Wang, Hsiang-Ting Huang, and Yu-Shu Lin to return to their alma maters. They came to Hsinchu and Yilan to play basketball with the kids in the communities. Also, they mentored the athletes in the schools. In teams and in groups, they offered the right ideas and techniques about basketball. The series of activities drew nearly 300 students. With the basketball promotions, we explore for young seeds across Taiwan and encourage them to dare to pursue their dreams.
Promotion of Placemaking and Community Industries | "2021 Click Taiwan Innovation Design Action"

We saw the manpower and resource shortage locally and that the local industries were limited in terms of development. With 2020 as the point of departure, it came up with the project of "Click Taiwan Innovative Design Action." Thanks to the outstanding results, the project continued in 2021. The CHTF served as the resource platform to connect teams of students and teachers with design-related backgrounds from universities and colleges as well as cross-disciplinary lecturers. Upholding the spirit of co-creation, they assisted the local industries in terms of optimization and update, as we supported them to implement their design solutions to drive the industrial developments.

Hualien Pangcah Farm & Department of Creative Product Design, Asia University

Brand logo visual optimization
- The designer team helped optimize the existing visual of their logo and enhance the indigenous impression of the produce.
- The element of slogan was introduced to elevate the overall brand recognition.

Product packaging identity enhancement
- New culturally creative vegetable bags were produced with QR Code for consumers to learn more about the origin of the produce.

Agri-food educational material design
- Since Pangcah Farm had been committed to the promotion of the edible plants in the wild in the Amis culture, the guided tour process was standardized, and the educational materials were redesigned, so as to add more fun to the activity.

Hualien Christian New Dawn Developmental Centre & Department of Industrial Design, Tunghai University

Exhibition venue optimization
- The space and the traffic flow were improved to further the overall efficiency of venue utilization.
- Exterior design was used to draw consumers into the store for more opportunities of the residents interacting with the outside world besides more business opportunities introduced.

Giftbox design modulization
- Flexible giftbox designs tailored to the needs of consumers were provided to the community.
- Packaging design was developed in line with the handcraft capacity of the residents.

Logo & IP design
- Through the design of figurines with stories, the specialties of the center were highlighted to elevate the brand affinity with consumers.

Taoyuan City Xinwu District Ayshiang Association & Department of Cultural Creativity and Digital Media Design, Lunghwa University of Science and Technology

Circular design of marine debris
- Taoyuan City Xinwu District Ayshiang Association was committed to the promotion of the stone-weir culture in the community and the beach cleanup in the process. The marine debris collected became the core elements for the Association’s works. Also, with the creativity of the designer team, new products rich in environmental meaning were developed.
- The ideas of environmental protection and sustainability were communicated through the products developed.

Logo identity design & derivative application
- With the Association’s ideas incorporated and the stone weir as the point of departure, they designed the logo for the brand, followed by the design and production of the derivative merchandise.

2021 Social Contribution of the Foundation

<table>
<thead>
<tr>
<th>Youth Empowerment</th>
<th>Digital Empowerment</th>
<th>Local Empowerment</th>
<th>Social Marketing</th>
<th>CHT Women’s Basketball Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>492,363</td>
<td>3,824,290</td>
<td>3,276,182</td>
<td>4,047,969</td>
<td>21,396,509</td>
</tr>
</tbody>
</table>

Unit: NT$
### Preferential Subsidies for the Disadvantaged Groups

Chunghwa Telecom has long been subsidizing telecom services for the socially disadvantaged, and assuring their access to basic communications. The following are the main preferential plan and amount in 2021.

<table>
<thead>
<tr>
<th>Preferential Plan</th>
<th>Preferential Content</th>
<th>Preferential Amount (NT$ thousand)</th>
<th>Beneficiaries (persons)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caring Series</strong>&lt;br&gt; Rate Plan (Mobile)</td>
<td>· Double communication hours from the original rate plan for the visually impaired, hearing impaired and speech impaired.&lt;br&gt; · 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.</td>
<td>305</td>
<td>94</td>
</tr>
<tr>
<td><strong>Broadband</strong>&lt;br&gt; Preferential Plan for Low-income Households</td>
<td>50% off on 16M/3M, 35M/6M, 60M/20M, 100M/40M, ADSL 2M/64K &amp; ADSL 3M/384K monthly rate.</td>
<td>39,103</td>
<td>8,045</td>
</tr>
<tr>
<td><strong>4G Mobile Data Plan for the Disabled</strong></td>
<td>Disabled persons are entitled to an NT$100 discounts for limited 399/436/499 plan, NT$200 discounts on monthly subscriptions when subscribing to the 4G 599 plan and above plus Wi-Fi hotspots for free during the term of the contract. The plan was renamed as “Heartwarming Plan” as of October 2021.</td>
<td>141,977</td>
<td>52,779</td>
</tr>
<tr>
<td><strong>Heartwarming Plan</strong></td>
<td>Available as of October 2021, the plan (4G Mobile Data Plan for the Disabled originally) offers exclusive discounts for cellphone purchase and SIM-only plans. Besides the cellphone purchase discount, there are NT$100-200 discount for the monthly subscription (subject to the plan selected), free CHT Wi-Fi service, free extra data or unlimited data (subject to the plan selected), add ons, and extra talk time, and more.</td>
<td>1,327</td>
<td>3,301</td>
</tr>
<tr>
<td><strong>Broadband</strong>&lt;br&gt; Preferential Plan for the Disabled</td>
<td>· 5% off on HiNet 16M /3M, 35M /6M, 60M /20M and 100M /40M monthly rate, 30% off for the announced rate of HiNet non-fixed monthly plan.&lt;br&gt; · 15% off on ADSL 5M /384K monthly rate. 5% off for other speed rates. Monthly rate for non-fixed Internet plan lowered from NT$280 to NT$180.</td>
<td>17,035</td>
<td>9,191</td>
</tr>
</tbody>
</table>

#### MOD Caring Plan and Project for the Socially Unfortunate

- Platform charges: A 50% discount (NT$45/month) from the work completion date.
- Subscribers of the MOD self-choose package, family premium package, family advance package, family advance package B, family high-quality package, family special package, family popular package, family golden package are entitled to 30% discount, and the normal rate after the discount period expires.
- The above plans 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.

<table>
<thead>
<tr>
<th>Preferential Plan</th>
<th>Preferential Content</th>
<th>Preferential Amount (NT$ thousand)</th>
<th>Beneficiaries (persons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD Caring Plan:</td>
<td>Platform charges: A 50% discount (NT$45/month) from the work completion date.</td>
<td>Caring Plan: 7,646.8</td>
<td>Caring Plan: 2,319 users</td>
</tr>
<tr>
<td>Low-income:</td>
<td>Subscribers of the MOD self-choose package, family premium package, family advance</td>
<td>Low-income Household: 3,690.4</td>
<td>Low-income Household: 1,162 users</td>
</tr>
<tr>
<td>Project:</td>
<td>package, family advance package B, family high-quality package, family special</td>
<td>Total: 11,337.2</td>
<td>Total: 3,481 users</td>
</tr>
<tr>
<td></td>
<td>package, family popular package, family golden package are entitled to 30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>discount, and the normal rate after the discount period expires.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy Net Plan:</td>
<td>Healthy Net Plan HiNet Adult Content Gatekeeper protects children from harmful</td>
<td>13.98</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>websites such as pornography, violence, weapons, gambling, and drugs. The service</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in the first year is rendered to low-income households for free.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welfare Public:</td>
<td>Installed 110 cm from the floor in public areas for the convenience of the disabled.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone:</td>
<td>The keyboard was designed with embossing on the 5 key for the visually impaired,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and a voice adjustment function (from 3db to 6db) was provided exclusively for people with hearing aids.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A slot for inserting is designed on the side of an IC card for the convenience of the visually impaired.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Message Relay:</td>
<td>All telephone messages will be translated and faxed to the service hotline 0800-080885 (Help Me in Chinese homonym).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service for:</td>
<td>The service personnel will then relay the message in voice and return the message to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the Hearing and Speech impaired:</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The service hours are 08:00 to 21:00 daily.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Creation of Digital Opportunities

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

Community Network Tutoring — “Read with You”

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

### Item Description

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
</table>
| Goal | By 2030, we hope to:  
- Assist 5,000 students in the remote areas with network tutoring  
- Accumulate more than 8,000 volunteers to participate in network tutoring  
- Accumulate more than 150,000 training hours for tutoring volunteers training |
| Characteristic | Online education with one-on-one individual tutoring by university students helps pupils of junior high schools and primary schools in the rural villages to enhance their learning and provides equal learning opportunities. |
| Method |  
- To realize the spirit of stakeholder engagement, we have cooperated with the Center of Care Services for Taiwan Rural Area Education at Fu Jen Catholic University.  
- University students helped the cause with one-on-one tutoring to take care of the school children in the rural villages and disaster zones.  
- Customized exclusive class supplements to care for the spiritual growth of schoolchildren through companionship, interaction and communication. |
| Participant | Taoyuan Dayuan Catholic Church, Taoyuan Guanyin Catholic Church, Chiayi Fu Jen High School, ihope Association of Tainan Assembly of God, Kaohsiung Daai Library, Pingtung Feng-Lin Church, Pingtung Chao Chou Boys Town, Hualien Yuli Library, Taitung Fukid Tribe, Taitung Lupe Library, Taitung Kaulahan Association, Taitung Citong Library, Taitung Lanyu High School, and Matzu High School. |
| Major Result |  
- University students improve the children’s learning outcomes with one-on-one individual tutoring of the school children in rural villages. They also took care of their need for personal communication and interaction.  
- More than ten-years efforts by e-Tutor, it has helped several dozen students gain admission to national and private universities, including the National Yang Ming University and Taipei Medical University. Assistance to remote villages has really reduced the divide between the cities and counties, radically improved the opportunities available to the children and changed their lives. |

<table>
<thead>
<tr>
<th>Schoolchildren who have been Tutored</th>
<th>University Students as Tutors</th>
<th>Tutorial Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>237 persons</td>
<td>369 persons</td>
<td>5,073 hours</td>
</tr>
</tbody>
</table>

The person-times and training hours for the mid- and long-term targets for volunteers were adjusted thanks to the early attainment of the program’s targets.
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 short code, and follow the voice prompts to contribute care to those in need.

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

By the end of 2018, the Total Solution had provided 8 working opportunities for the satisfaction surveyors of Chunghwa Telecom (including one visually impaired manager). And there were another 15 customer service personnel (12 visually impaired and 3 supervisors) for the Taipei City 1999 hotline.

A donor simply needs to pick up their cell phones, dial the short code, and follow the voice prompts to contribute care to those in need.
In 2021, Chunghwa Telecom donated more than NT$660 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 table below are the representative associations Chunghwa Telecom participates in.

<table>
<thead>
<tr>
<th>Name of Association</th>
<th>Description</th>
<th>Contribution/Membership Fee (NT$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan Telecommunication Industry Development Association, TTIDA</td>
<td>We care for the development of telecommunication industry in Taiwan while facilitate exchanges among peers and the healthy networking of the industry as a whole with the Association as the platform.</td>
<td>8,022,250</td>
</tr>
<tr>
<td>GSMA</td>
<td>Exchanges are carried out with mobile communication carriers worldwide, in software and hardware, to tap into the pulse of the global mobile communication ecosystem and facilitate the thriving development of the mobile communication industrial chains.</td>
<td>3,241,114</td>
</tr>
<tr>
<td>Taiwan Media Watch</td>
<td>Taiwan Media Watch aims to facilitate and coordinate the exchange and collaboration among the Internet organizations nationwide and worldwide. The industry’s consensus of the industrial development is reached through the activities organized. Also, through securing opportunities of international Internet resources and international collaboration, it facilitates a healthy development of the industry as a whole.</td>
<td>441,000</td>
</tr>
<tr>
<td>Global Research &amp; Industry Alliance of NCCU</td>
<td>With fin-tech players from the industry, government, and academia domestically and internationally, the Alliance is committed to the fin-tech innovation and industrial transformation in Taiwan, elevation and development of the domestic fin-tech sector, as well as development of more quality innovative financial services and products.</td>
<td>300,000</td>
</tr>
<tr>
<td>Taiwan Center for Corporate Sustainability</td>
<td>The Taiwan Center for Corporate Sustainability was founded with the missions to exercise corporate social responsibility, promote corporate sustainable development, and integrate industrial management to give birth to benchmark enterprises, facilitate the social core, and pass on the sustainability undertaking.</td>
<td>280,000</td>
</tr>
<tr>
<td>Pacific Telecommunications Council, PTC</td>
<td>As founding member, the International Business Group participates in the PTC events on behalf of CHT. The PTC comprises professionals in the industries, the public sector, and academia related to the telecommunication and ICT industries in the Asian-Pacific region. Through thematic activities, members exchange with each other regarding the industrial trends, business strategies, technical development, laws and regulations, etc.</td>
<td>140,085</td>
</tr>
<tr>
<td>Taiwan Business Council for Sustainable Development (BCSD-Taiwan)</td>
<td>As the sole partner of WBCSD in Taiwan, BCSD-Taiwan enables its members to advocate and promote comprehensive industrial and environmental sustainability together with enterprises and organizations worldwide.</td>
<td>120,000</td>
</tr>
<tr>
<td>Taiwan Communications Society (TCS)</td>
<td>TCS facilitates our long term commitment to the exercise of corporate social responsibility.</td>
<td>109,000</td>
</tr>
<tr>
<td>The Chinese Institute of Electrical Engineering (CIEE)</td>
<td>The CIEE aims to drive the technological advancement in the state, facilitate socio-economic development, along with the emphasis on talent cultivation and collective improvement of technical competency so as to contribute the wisdom for the sustainable development of the industry.</td>
<td>96,500</td>
</tr>
</tbody>
</table>
## GRI 103 Management Approach

<table>
<thead>
<tr>
<th>Material Topics</th>
<th>How We Manage the Topic</th>
<th>Purpose of the Management Approach</th>
<th>Policy</th>
<th>Performance</th>
<th>Grievance Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>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.</td>
<td>To ensure that the Company’s operations conform to the requirements of the government and super vising au thorities, and that shareholders’ and stakeholders’ interests are protected.</td>
<td><em>Business Integrity Principles</em></td>
<td>p.21</td>
<td>Shareholder hotline: (02)2394-1845 Investor hotline: (02)2344-5488</td>
</tr>
<tr>
<td>Market Presence</td>
<td>We have established a compensation committee, which helps to ensure that we provide employees with competitive salaries. We’re also able to adequately reward our employees through transparent salary policies.</td>
<td>Ensuring that the company’s compensation policies, systemic standards, and structures comply with govern ment regulations and labor rights.</td>
<td><em>Employment Contract</em></td>
<td>p.76</td>
<td>Grievance hotline: 0800-080998</td>
</tr>
<tr>
<td>Anti-corruption</td>
<td>Relevant directions and guidelines have been stipulated. In the event of matters worthy of reward or actions to be disciplined, the rewards or disciplinary actions will be issued promptly in line with the regulations. Also, an employee reporting mechanism in confidence is established. The information regarding employee hotline and other means for complaints or report is made available to employees at the Enterprise Information Portal.</td>
<td>Through the well-established employee appraisal and complaint mechanisms, incident of corruption is prevented, with the negative impacts and risks related to corruption reduced.</td>
<td>Guidelines for Personnel Evaluation*</td>
<td>p.22</td>
<td>Grievance hotline: 0800-080998</td>
</tr>
<tr>
<td>Energy</td>
<td>We perform annual greenhouse gas inventories &amp; verifications and publicly disclose the related environmental information. We effectively keep track of environmental resources and energy saving performance through the self-developed EARTH system.</td>
<td>To improve the environmental manage ment efficiency via the acquisition of international certifications.</td>
<td><em>Energy Saving Policy for A Sustainable Environment</em></td>
<td>p.114-115, 117</td>
<td>-</td>
</tr>
<tr>
<td>Environmental Compliance</td>
<td>With Chunghwa Telecom Energy Saving Policy for a Sustainable Environment stipulated, CHT rigorously adheres to the relevant national regulations and policies for environmental protection to exercise its duties in environmental protection.</td>
<td>To ensure that CHT operation violates no laws or regulations concerning environmental protection.</td>
<td><em>Energy Saving Policy for A Sustainable Environment</em></td>
<td>p.123</td>
<td>Grievance hotline: 0800-080998</td>
</tr>
<tr>
<td>Labor/Management Relations</td>
<td>The work rights of employees are protected. The Collective Bargaining Agreement has been signed with labor unions. Also, in compliance with the relevant laws and regulations like the Labor Standards Act, notice is issued for any personnel change.</td>
<td>To warrant an equal relationship between the labor and the management in consultation and negotiation as well as establish the mechanism to communicate any major change to the operation.</td>
<td><em>Employment Contract</em></td>
<td>p.79</td>
<td>Grievance hotline: 0800-080998</td>
</tr>
<tr>
<td>Occupational Health and Safety</td>
<td>Chunghwa Telecom is the first domestic telecom service operator that introduced Occupational Health and Safety Assessment Series 18001 (OHSAS 18001). It has completed ISO 45001 certification process for all branches and institutions in 2021 with the management of employee health and safety in place. Apart from compliance with the laws, regulations, and requirements of health and safety, CHT continues to improve the health and safety facilities and measures of work environment.</td>
<td>Chunghwa Telecom guarantees its employees a safe and healthy working environment to prevent occupational hazards.</td>
<td><em>Employment Contract</em></td>
<td>p.89</td>
<td>Grievance hotline: 0800-080998</td>
</tr>
<tr>
<td>Diversity and Equal Opportunity</td>
<td>Chunghwa Telecom practices employment diversity as well as equality in remuneration and promotion opportunities. Also, the Appeal Review Committee has been established, dedicated to handling appeals regarding misconducts such as employee discrimination/harassment, making sure that employees are not subject to discrimination, harassment, or unfair treatment arising from ethnicity, gender, religion, age, political leanings, or otherwise protected by applicable laws and regulations.</td>
<td>To provide a workplace of dignity, equality, and communication transparency for employees.</td>
<td><em>Employment Contract</em></td>
<td>p.78-79, 98</td>
<td>Appeal Review Committee Grievance hotline: 0800-080998</td>
</tr>
<tr>
<td>Marketing and Labelling</td>
<td>In addition to providing relevant information and usage descriptions on all product s and services offered, we also have a &quot;Marketing Policy&quot; in place to ensure that business activities are carried out in compliance with the authority’s rules and requirements. Compliance with such policies constitutes part of senior managers’ performance appraisal.</td>
<td>To provide a workplace of dignity, equality, and communication transparency for employees.</td>
<td><em>Marketing Policy</em></td>
<td>p.23, 99</td>
<td>Telecom Service hotline: 0800-080123</td>
</tr>
<tr>
<td>Customer Privacy</td>
<td>Customer Privacy “Cybersecurity and Privacy Protection Steering Committee” has been established with the SEVP, appointed by Chairman, as the “CISO” to achieve the objective of zero tolerance via regular meetings and third-party verification.</td>
<td>To protect consumers’ rights to information and ensure the clarity and transparency of marketing information.</td>
<td><em>Distribution Sales Aid Management Guidelines</em></td>
<td>p.23, 99</td>
<td>Telecom Service hotline: 0800-080123</td>
</tr>
<tr>
<td>Socioeconomic Compliance</td>
<td>Ethical management and legal compliance are the principles and guidelines that govern our operations. To ensure all operations comply with socioeconomic laws and regulations, all the departments as well as the level 1 and level 2 institutions of Chunghwa Telecom are operating in line with the laws and regulations pertaining to the businesses.</td>
<td>To ensure that the Company’s operations are free from violations of socioeconomic regulations.</td>
<td><em>Business Integrity Principles</em></td>
<td>p.22</td>
<td>Compliant Investi gation Committee Grievance hotline: 0800-080998</td>
</tr>
</tbody>
</table>
### 2021 Evaluation of the Management Approach

<table>
<thead>
<tr>
<th>Material Topics</th>
<th>Mechanism for Evaluation</th>
<th>Result of the Evaluation</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Performance</td>
<td>Independent directors, supervisor system, internal audit, Board of Directors evaluation (self-evaluation: by the directors and functional committees; third-party evaluation: by the external professional institutes commissioned), evaluation by the relevant authority</td>
<td>p.21</td>
<td>None</td>
</tr>
<tr>
<td>Market Presence</td>
<td>Compensation committee, internal audit, evaluation by relevant regulatory authorities</td>
<td>p.76</td>
<td>None</td>
</tr>
<tr>
<td>Anti-corruption</td>
<td>Internal audit, whistleblowing mechanism, TWSE Governance Evaluation</td>
<td>p.22</td>
<td>None</td>
</tr>
<tr>
<td>Energy</td>
<td>ISO 14001, ISO 50001, ISO 14064-1 management system certificate, TWSE Governance Evaluation</td>
<td>p.114-115, 117</td>
<td>None</td>
</tr>
<tr>
<td>Environmental Compliance</td>
<td>ISO 14001, TWSE Governance Evaluation</td>
<td>p.123</td>
<td>None</td>
</tr>
<tr>
<td>Labor/Management Relations</td>
<td>Labor unions, Collective Agreement</td>
<td>p.79</td>
<td>None</td>
</tr>
<tr>
<td>Diversity and Equal Opportunity</td>
<td>Appeal Review Committee</td>
<td>p.78-79, 98</td>
<td>None</td>
</tr>
<tr>
<td>Non-discrimination</td>
<td>NCC’s telecom service quality survey, communication/consumer complaint report</td>
<td>p.23, 99</td>
<td>None</td>
</tr>
<tr>
<td>Socioeconomic Compliance</td>
<td>NCC’s telecommunication service quality survey, communication/consumer complaint report, evaluation of Board of Directors’ Performance by external third-party, TWSE Corporate Governance Evaluation, CoC by the external third party</td>
<td>p.22</td>
<td>None</td>
</tr>
</tbody>
</table>

**GRI 103 Management Approach**

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>103-1 Explanation of the material topic and its Boundary</td>
<td>p.36-39</td>
</tr>
<tr>
<td>103-2 The management approach and its components</td>
<td>p.158-159</td>
</tr>
<tr>
<td>103-3 Evaluation of the management approach</td>
<td>p.160</td>
</tr>
</tbody>
</table>

### General Disclosure

<table>
<thead>
<tr>
<th>General Disclosure</th>
<th>Disclosure Items</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Profile</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-1</td>
<td>Name of the organization</td>
<td>Chunghwa Telecom V</td>
<td></td>
</tr>
<tr>
<td>102-2</td>
<td>Activities, brands, products, and services</td>
<td>p.14-15 V</td>
<td></td>
</tr>
<tr>
<td>102-3</td>
<td>Location of headquarters</td>
<td>p.12 V</td>
<td></td>
</tr>
<tr>
<td>102-4</td>
<td>Location of operations</td>
<td>p.12 V</td>
<td></td>
</tr>
<tr>
<td>102-5</td>
<td>Ownership and legal form</td>
<td>p.12 V</td>
<td></td>
</tr>
<tr>
<td>102-6</td>
<td>Markets served</td>
<td>p.12-15 V</td>
<td></td>
</tr>
<tr>
<td>102-7</td>
<td>Scale of the organization</td>
<td>p.12, 21, 76-77 V</td>
<td></td>
</tr>
<tr>
<td>102-8</td>
<td>Information on employees and other workers</td>
<td>p.76-77 V</td>
<td></td>
</tr>
<tr>
<td>102-9</td>
<td>Supply chain</td>
<td>p.16-17, 124 V</td>
<td></td>
</tr>
<tr>
<td>102-10</td>
<td>Significant changes to the organization and its supply chain</td>
<td>None V</td>
<td></td>
</tr>
<tr>
<td>102-11</td>
<td>Precautionary Principle or approach</td>
<td>p.44-59 V</td>
<td></td>
</tr>
<tr>
<td>102-12</td>
<td>External initiatives</td>
<td>p.23, 50, 115, 140-144, 157 V</td>
<td></td>
</tr>
<tr>
<td>102-13</td>
<td>Membership of associations</td>
<td>p.157 V</td>
<td></td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-14</td>
<td>Statement from senior decision-maker</td>
<td>p.4-5 V</td>
<td></td>
</tr>
<tr>
<td><strong>Ethics and integrity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-16</td>
<td>Values, principles, standards, and norms of behavior</td>
<td>p.22 V</td>
<td></td>
</tr>
</tbody>
</table>
## General Disclosure

<table>
<thead>
<tr>
<th>Disclosure Items</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>102-18 Governance structure</td>
<td>p.18</td>
<td>V</td>
</tr>
</tbody>
</table>

## Stakeholder engagement

<table>
<thead>
<tr>
<th>Disclosure Items</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-40 List of stakeholder groups</td>
<td>p.41</td>
<td>V</td>
</tr>
<tr>
<td>102-41 Collective bargaining agreements</td>
<td>p.79</td>
<td>V</td>
</tr>
<tr>
<td>102-42 Identifying and selecting stakeholders</td>
<td>p.40</td>
<td>V</td>
</tr>
<tr>
<td>102-43 Approach to stakeholder engagement</td>
<td>p.41</td>
<td>V</td>
</tr>
<tr>
<td>102-44 Key topics and concerns raised</td>
<td>p.41</td>
<td>V</td>
</tr>
</tbody>
</table>

## Reporting practice

<table>
<thead>
<tr>
<th>Disclosure Items</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-45 Entities included in the consolidated financial statements</td>
<td>2021 Annual Report P.113</td>
<td>V</td>
</tr>
<tr>
<td>102-46 Defining report content and topic Boundaries</td>
<td>p.36-39</td>
<td>V</td>
</tr>
<tr>
<td>102-47 List of material topics</td>
<td>p.36-39</td>
<td>V</td>
</tr>
<tr>
<td>102-48 Restatements of information</td>
<td>None</td>
<td>V</td>
</tr>
<tr>
<td>102-49 Changes in reporting</td>
<td>None</td>
<td>V</td>
</tr>
<tr>
<td>102-50 Reporting period</td>
<td>2021/1/1-2021/12/31</td>
<td>V</td>
</tr>
<tr>
<td>102-51 Date of most recent report</td>
<td>2021/8/10</td>
<td>V</td>
</tr>
<tr>
<td>102-52 Reporting cycle</td>
<td>Annually</td>
<td>V</td>
</tr>
<tr>
<td>102-53 Contact point for questions regarding the report</td>
<td>p.1</td>
<td>V</td>
</tr>
<tr>
<td>102-54 Claims of reporting in accordance with the GRI Standards</td>
<td>Core</td>
<td>V</td>
</tr>
<tr>
<td>102-55 GRI content index</td>
<td>p.160-165</td>
<td>V</td>
</tr>
<tr>
<td>102-56 External Assurance</td>
<td>p.170-172</td>
<td>V</td>
</tr>
</tbody>
</table>

## Topic-Specific Disclosures

### 201 Economic Performance

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>201-1 Direct economic value generated and distributed</td>
<td>p.21</td>
<td>V</td>
</tr>
<tr>
<td>201-3 Defined benefit plan obligations and other retirement plans</td>
<td>p.95</td>
<td>V</td>
</tr>
</tbody>
</table>

### 202 Market Presence

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>202-1 Ratios of standard entry level wage by gender compared to local minimum wage</td>
<td>p.76</td>
<td>V</td>
</tr>
</tbody>
</table>

### 205 Anti-corruption

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>205-2 Communications and training about anticorruption policies and procedures</td>
<td>p.22</td>
<td>V</td>
</tr>
<tr>
<td>205-3 Confirmed incidents of corruption and actions taken</td>
<td>p.22 (None)</td>
<td>V</td>
</tr>
</tbody>
</table>

### 206 Anti-competitive Behavior

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices</td>
<td>None</td>
<td>V</td>
</tr>
</tbody>
</table>

### 302 Energy

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>302-1 Energy consumption within the organization</td>
<td>p.117</td>
<td></td>
</tr>
<tr>
<td>302-4 Reductions of energy consumption</td>
<td>p.114-121</td>
<td></td>
</tr>
<tr>
<td>302-5 Reductions in energy requirements of products and services</td>
<td>p.114-121</td>
<td></td>
</tr>
</tbody>
</table>

### 305 Emissions

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>305-1 Direct (Scope 1) GHG Emissions</td>
<td>p.56</td>
<td></td>
</tr>
<tr>
<td>305-2 Energy Indirect (Scope 2) GHG Emissions</td>
<td>p.56</td>
<td></td>
</tr>
<tr>
<td>305-3 Other indirect (Scope 3) GHG Emissions</td>
<td>p.56</td>
<td></td>
</tr>
<tr>
<td>305-5 Reduction of GHG Emissions</td>
<td>p.56</td>
<td></td>
</tr>
</tbody>
</table>

### 307 Environmental Compliance

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>307-1 Non-compliance with environmental laws and regulations</td>
<td>None</td>
<td>V</td>
</tr>
</tbody>
</table>

### 308 Supplier Environmental Assessment

<table>
<thead>
<tr>
<th>Disclosure Item</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>308-1 New suppliers that were screened using environmental criteria</td>
<td>p.124</td>
<td>V</td>
</tr>
<tr>
<td>Topic-Specific Disclosures</td>
<td>Disclosure Item (topics without years noted are of the 2016 edition of the GRI standards)</td>
<td>Page / URL and Comment</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>401 Employment</td>
<td>401-1 New employee hires and employee turnover</td>
<td>p.77</td>
</tr>
<tr>
<td></td>
<td>401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees</td>
<td>p.90-95</td>
</tr>
<tr>
<td></td>
<td>401-3 Parental leave</td>
<td>p.94</td>
</tr>
<tr>
<td>402 Labor / Management Relations</td>
<td>402-1 Minimum notice periods regarding operational changes</td>
<td>p.79</td>
</tr>
<tr>
<td>403: 2018 Occupational Health and Safety</td>
<td>403-1 Occupational health and safety management system</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-2 Hazard identification, risk assessment, and incident investigation</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-3 Occupational health services</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-4 Worker participation, consultation, and communication on occupational health and safety</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-5 Worker training on occupational health and safety</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-6 Promotion of worker health</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-8 Workers covered by an occupational health and safety</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>403-9 Work-related injuries</td>
<td>p.89</td>
</tr>
<tr>
<td></td>
<td>403-10 Work-related ill health</td>
<td>p.89</td>
</tr>
<tr>
<td>405 Diversity and Equal Opportunity</td>
<td>405-1 Diversity of governance bodies and employees</td>
<td>p.18, 76-79</td>
</tr>
<tr>
<td></td>
<td>405-2 Ratio of basic salary and remuneration of women to men</td>
<td>p.76</td>
</tr>
<tr>
<td>406 Non-discrimination</td>
<td>406-1 Incidents of discrimination and corrective actions taken</td>
<td>p.78 (None)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic-Specific Disclosures</th>
<th>Disclosure Item (topics without years noted are of the 2016 edition of the GRI standards)</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>414 Supplier Social Assessment</td>
<td>414-1 New suppliers that were screened using social criteria</td>
<td>p.124</td>
<td>V</td>
</tr>
<tr>
<td>415 Public Policy</td>
<td>415-1 Political contributions</td>
<td>None</td>
<td>V</td>
</tr>
<tr>
<td>416 Customer Health and Safety</td>
<td>416-2 Incidents of non-compliance concerning the health and safety impacts of products and services</td>
<td>p.99 (None)</td>
<td>V</td>
</tr>
<tr>
<td>417 Marketing and Labelling</td>
<td>417-2 Incidents of non-compliance concerning product and service information and labeling</td>
<td>p.23 (None)</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>417-3 Incidents of non-compliance concerning marketing communications</td>
<td>p.23 (None)</td>
<td>V</td>
</tr>
<tr>
<td>418 Customer Privacy</td>
<td>418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data</td>
<td>p.57 (None)</td>
<td>V</td>
</tr>
<tr>
<td>419 Socioeconomic Compliance</td>
<td>419-1 Non-compliance with laws and regulations in the social and economic area</td>
<td>p.22-23, 79, 109</td>
<td>V</td>
</tr>
</tbody>
</table>

Topics marked with * have been disclosed voluntarily, and are not part of the material topics identified in 2021.

G 3.1 Telecommunication Sector Specific Indicators

<table>
<thead>
<tr>
<th>DMA and Indicators</th>
<th>Disclosure Items</th>
<th>Page / URL and Comment</th>
<th>External Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-category: Internal Operations</td>
<td>Investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMA</td>
<td>IO1</td>
<td>Capital investment in telecommunication network infrastructure broken down by country/region</td>
<td>p.108-111</td>
</tr>
<tr>
<td>145</td>
<td>IO2</td>
<td>Net costs for service providers under the Universal Services Obligation when extending service to geographic locations and low-income groups, which are not portable. Describe relevant legislative and regulatory mechanisms.</td>
<td>p.108-111, 157</td>
</tr>
</tbody>
</table>
Health and Safety

DMA 109

IO3 Practices to ensure health and safety of field personnel involved in the installation, operation and maintenance of masts, base stations, laying cables and other outside plants. Related health and safety issues include working at heights, electric shock, exposure to EMF and radio frequency fields, and exposure to hazardous chemicals. p.85-88 V

IO4 Compliance with ICNIRP (International Commission on Non-Ionizing Radiation Protection) standards on exposure to radio frequency (RF) emissions from handsets. p.109 V

IO5 Compliance with ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines on exposure to radio frequency (RF) emissions from base stations. p.109 V

IO6 Policies and practices with respect to Specific Absorption Rate (SAR) of handsets. p.109 V

Infrastructure

DMA 109

IO7 Policies and practices on the siting of masts and transmission sites including stakeholder consultation, site sharing, and initiatives to reduce visual impacts. Describe approach to evaluate consultations and quantify where possible. p.108-109 V

IO8 Number and percentage of stand-alone sites, shared sites, and sites on existing structures. p.109 V

Sub-category: Providing Access

Access to Telecommunication Products and Services: Bridging the Digital Divide

PA1 Policies and practices to enable the deployment of telecommunication infrastructure and access to telecommunications products and services in remote and low population density areas. Include an explanation of business models applied. p.108-111 V

PA2 Policies and practices to overcome barriers for access and use of telecommunication products and services including: language, culture, illiteracy, and lack of education, income, disabilities, and age. Include an explanation of business models applied. p.108-111 V

PA3 Policies and practices to ensure availability and reliability of telecommunication products and services and quantify, where possible, for specified time periods and locations of down time. p.108-111, 145-146 V

PA4 Quantify the level of availability of telecommunication products and services in areas where the organization operates. Examples include: customer numbers / market share, addressable market, percentage of population covered, percentage of land covered. p.145-146 V

PA5 Number and types of telecommunication products and services provided to and used by low- and no-income sectors of the population. Provide definition selected. Included explanations of approach to pricing, illustrated with examples such as price per minute of dialogue / bit of data transfer in various remote, poor or low population density areas. p.145-146 V

PA6 Programs to provide and maintain telecommunication products and services. p.110 V

Sub-category: Technology Applications

Resource Efficiency

TA1 Provide examples of the resource efficiency of telecommunication products and services delivered. p.50-55, 115-123 V

TA2 Provide examples of telecommunication products, services and applications that have the potential to replace physical objects (e.g. a telephone book by a database on the web or travel by videoconferencing) p.70-73 V

TA3 Disclose any measures of transport and/or resource changes of customer use of the telecommunication products and services listed above. Provide some indication of scale, market size, or potential savings. p.70-73 V

TA4 Disclose any estimates of the rebound effect (indirect consequences) of customer use of the products and services listed above, and lessons learned for future development. This may include social consequences as well as environmental. p.70-73 V

TA5 Description of practices relating to intellectual property rights and open-source technologies. p.70-73 V
The United Nations Global Compact

Areas

<table>
<thead>
<tr>
<th>The Ten Principles</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Rights</td>
<td></td>
</tr>
<tr>
<td>Businesses should support and respect the protection of internationally</td>
<td>p.96</td>
</tr>
<tr>
<td>proclaimed human rights; and</td>
<td></td>
</tr>
<tr>
<td>make sure that they are not complicit in human rights abuses.</td>
<td>p.96</td>
</tr>
<tr>
<td>Labour</td>
<td></td>
</tr>
<tr>
<td>Businesses should uphold the freedom of association and the effective</td>
<td>p.22,23,79</td>
</tr>
<tr>
<td>recognition of the right to collective bargaining;</td>
<td></td>
</tr>
<tr>
<td>the elimination of all forms of forced and compulsory labour;</td>
<td>p.96</td>
</tr>
<tr>
<td>the effective abolition of child labour; and</td>
<td>p.96</td>
</tr>
<tr>
<td>the elimination of discrimination in respect of employment and occupation.</td>
<td>p.78</td>
</tr>
<tr>
<td>Environment</td>
<td></td>
</tr>
<tr>
<td>Businesses should support a precautionary approach to environmental</td>
<td>p.50,55</td>
</tr>
<tr>
<td>challenges;</td>
<td></td>
</tr>
<tr>
<td>undertake initiatives to promote greater environmental responsibility; and</td>
<td>p.112,131</td>
</tr>
<tr>
<td>encourage the development and diffusion of environmentally friendly technologies.</td>
<td>p.112,121</td>
</tr>
<tr>
<td>Anti-Corruption</td>
<td></td>
</tr>
<tr>
<td>Businesses should work against corruption in all its forms, including extortion</td>
<td>p.22</td>
</tr>
<tr>
<td>and bribery.</td>
<td></td>
</tr>
</tbody>
</table>

Sustainability Accounting Standards Board, SASB Index

For corresponding information and page numbers, please refer to the 2021 CHT SASB Report.

Table 1. SASB Topics and Accounting Metric

<table>
<thead>
<tr>
<th>SASB Topic</th>
<th>SASB Code</th>
<th>Accounting Metric</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Footprint of</td>
<td>TC-TL-130a.1</td>
<td>1. Total energy consumed</td>
<td>p.4</td>
</tr>
<tr>
<td>Operations</td>
<td></td>
<td>2. Percentage grid electricity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Percentage renewable</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Activity Metrics

<table>
<thead>
<tr>
<th>SASB Code</th>
<th>Activity Metric</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-TL-000.A</td>
<td>Number of wireless</td>
<td>p.13</td>
</tr>
<tr>
<td>Subscribers</td>
<td>-- Subscribers</td>
<td></td>
</tr>
<tr>
<td>TC-TL-000.B</td>
<td>Number of wireline</td>
<td>p.13</td>
</tr>
<tr>
<td>Subscribers</td>
<td>-- Subscribers</td>
<td></td>
</tr>
<tr>
<td>TC-TL-000.C</td>
<td>Number of broadband</td>
<td>p.13</td>
</tr>
<tr>
<td>Subscribers</td>
<td>-- Subscribers</td>
<td></td>
</tr>
<tr>
<td>TC-TL-000.D</td>
<td>Network traffic</td>
<td>p.13</td>
</tr>
</tbody>
</table>
SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE CHUNGHWA TELECOM CO LTD.'S CORPORATE ESG REPORT FOR 2021

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 ESG Report for 2021 (hereinafter referred to as the Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented during verification (2022/04/20~2022/05/23). SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all CHT’s Stakeholders.

RESPONSIBILITIES

The information in the CHT’s ESG Report of 2021 and its presentation are the responsibility of the directors or governing body (as applicable) and the management of CHT. SGS has not been involved in the preparation of any of the material included in the Report.

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.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognized assurance guidance, including the Principles contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) 101: Foundation 2016 for report quality, and the AA1000 Accountability Principles (2018) for report content and reliability.

The assurance of this report has been conducted according to the following Assurance Standards:

<table>
<thead>
<tr>
<th>Assurance Standard Options and Level of Assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. SGS ESG &amp; SRA Assurance Protocols (based on GRI Principles and guidance in AA1000)</td>
</tr>
<tr>
<td>B. AA1000A3/v3 Type 2 High Level (AA1000AP Evaluation plus evaluation of Specified Performance Information)</td>
</tr>
</tbody>
</table>

SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

<table>
<thead>
<tr>
<th>Reporting Criteria Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. GRI Standards (Core)</td>
</tr>
<tr>
<td>2. AA1000 Accountability Principles (2018)</td>
</tr>
<tr>
<td>3. SASB</td>
</tr>
<tr>
<td>4. &lt;IR&gt; Framework (Chinese version 2015)</td>
</tr>
</tbody>
</table>

- evaluation of content veracity of the sustainability performance information based on the materiality determination at a high level of scrutiny for CHT and moderate level of scrutiny for subsidiaries, joint ventures, and applicable aspect boundaries outside of the organization covered by this report;
- AA1000 Accountability Standard v3 Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018);
- evaluation of the report against the requirements of Global Reporting Initiative Sustainability Reporting Standards (100, 200, 300 and 400 series) claimed in the GRI content index as material and in accordance with;
- evaluation of the report against the SASB Disclosures and Metrics included in the TELECOMMUNICATION SERVICES INDUSTRY STANDARD, VERSION 2018-10 and conducted alongside an evaluation of accuracy assurance at moderate level of scrutiny; and

ASSURANCE METHODOLOGY

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

LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts, Task Force on Climate-related Financial Disclosures (TCFD), GRI 302 Energy 2016 and GRI 305 Emission 2016 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, RBA, QMS, EMS, SMS, GPMs, CFP, WFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

VERIFICATION/ASSURANCE OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the specified performance information included in the scope of assurance is accurate, reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria.

We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting.

AA1000 ACCOUNTABILITY PRINCIPLES (2018) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

Inclusivity

CHT has demonstrated a good commitment to stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, investors, suppliers, sustainability experts, and other stakeholders are implemented to understand the organization’s understanding of stakeholder concerns. For future reporting, CHT may proactively consider having more direct two-ways
The report, CHT's ESG Report of 2021, is adequately in line with the GRI Standards in accordance with Core Option. The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics and boundaries, and stakeholder engagement, GRI 102-40 to GRI 102-47, are correctly located in content index and report. For future reporting, it is recommended to have more descriptions of CHT's involvement with the impacts for each material topic (103-1), and how efforts were given to mitigate the impacts. When reporting on goals and targets for each material topic, the expected results are suggested to be set, if applicable, with quantitative objectives.

SASB CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

CHT has referenced with SASB's Standard, TELECOMMUNICATION SERVICES INDUSTRY STANDARD, VERSION 2018-10 to disclose information of material topics that are vital for enterprise value creation. The reporting boundary is the same as CHT's ESG report. CHT used SASB accounting and activity metrics to assess and manage the topic-related risks and opportunities, where relevant quantitative information was assessed for its accuracy and completeness to support the comparability of the data reported. CHT has determined which disclosure topics and associated metrics are financially material to its business and has illustrated appropriately in the content index. By using both GRI and SASB standards together, the efficiency of communication and the identification of material issues are substantially increased during the whole reporting preparation process. Besides, it is best practice to implement a gap analysis and comparison of reported issues and benchmark within or across sectors in next reporting.

Signed:
For and on behalf of SGS Taiwan Ltd.

David Huang
Senior Director
Taipei, Taiwan
20 June, 2022
WWW.SGS.COM