Sustainability Risks and Opportunities

The SDGs CHT contributes to in this chapter









Emerging Risks
Emerging Opportunities
Climate Change Risks and Opportunities
Cybersecurity Risks



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.



The first telecom operator in the world to pass "TCFD Conformity Check" by BSI and obtain certification of the highest level.



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

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.

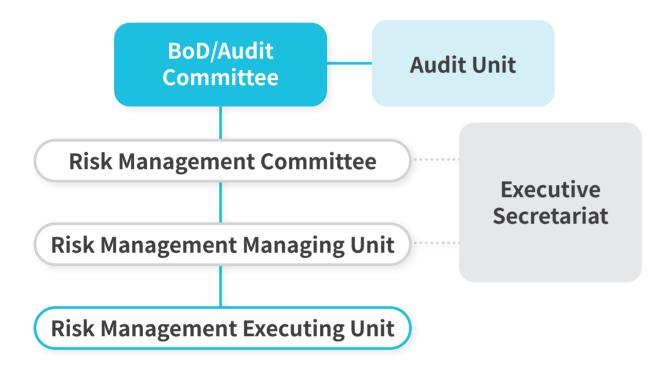






CHT places emphasis on the control of the corporate operation and sustainability risk. In 2016, the Company established a Risk Management Committee with the President as convener and high rank managers as members. The committee supervises risk management throughout the organization and is responsible 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.

CHT Risk Management Organization Structure





| Aspects | Description | | | | |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Organizational Aspect | "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. | | | | |
| Strategic Aspect | The BoD established the risk management strategy and structure. The Risk Management Regulations were established as a foundation and are followed by all employees engaged in business operations. | | | | |
| Management System | The Enterprise Risk Management (ERM) system was established for the regular control of the risks from each division and business. | | | | |
| Assessment Tool | 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 CSR issues, 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. | | | | |
| Audit Aspect | The executive Secretariat helps promote the risk management activities in all company. The Auditor reviews the risks and reports to the BoD. | | | | |
| Feedback and Improvement | Risk status is followed up monthly and reported to the Risk Management 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. | | | | |

Implementation outcomes in 2020

- 3 meeting were convened.
- "Operation of Risk Management" presented in the operation overview on the Board Meeting in November.

For more information about Risk Management, please refer to 2020 Annual Report P.97-103

O1 Corporate Overview

O2 Sustainability Value Strategy

Material Topics and Impact

Sustainability Risks and Opportunities



06 Public Policy Participation













Emerging Risks

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.

Risk Factor

Potential Influences (Obstacles)



The decrease in the voice revenue

• Market competition and VoIP have caused a slight decrease in voice revenue.

• We continue to maintain our competitive edge in broadband Internet, even in the face of low-price competition from cable television.



The 5G business model is unclear

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



Energy supply stability

• The electricity supply is unstable and insufficient.

 IDCs and base stations are facilities and equipment of high energy consumption, whereas unstable power supply will result in disruption in operation that impacts the revenue.

Emerging Opportunities

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

Opportunity Factors

Potential Business Opportunity



Developmen of 5G

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



IoT /
Big Data

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



- Popularization of emerging technological applications (e.g. IoT, AI, and cloud services) as well as diversified attacks by hackers, and the increased frequency of supply chain attacks gradually blur the existing security perimeters and boost the challenge of protection against cybersecurity threat while create new opportunities in the cybersecurity area.
- The FSC promulgated "Financial Cyber Security Action Plan" in 2020 to drive the demands for cybersecurity protection, monitoring, and joint defense in the financial sector.
- 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 predicts the investing amount the companies put into information security will rise to US\$ 146 billion in 2021 with a compound annual growth rate of 8.4% around the globe.



Climate Change Low Carbon Products and

- The World Economic Forum (WEF) foresaw the top five potential risks in the next decade to be 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 WEF estimated that the values of green bonds traded worldwide could soon hit US\$2.36 trillion.

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.

Countermeasures (Risk Avoidance and Opportunity Seizure)

- In addition to enhancing current core business, we continue with new product research and development, as well as service and value-added applications. These include video service, information security, IoT, the cloud, mobile payment and other new business.
- We are concentrating on applications related to big data, information security, the cloud, IoT, 5G and the intelligent city. CHT is being transformed into the leading brand for information, communications and digital convergence.
- We have developed an IoT intelligent internet platform by combining five main services, which are information security, big data,
- We expect IoT applications to develop rapidly with the advent of 5G and we already have 3 million phone numbers authorized by the NCC. We intend to provide IoT for both industrial and domestic applications.
- We are increasing the percentage of self-built renewable energy devices and have set up emergency power generating equipment to avoid interruption to our services in times of crisis.
- We plan to establish the Green Energy Office in charge of green procurement and renewable energy installment.
- CHT phases out the old and introduces high energy efficient IDC equipment and low-carbon base stations in order to lower the energy consumption and reduce its reliance on the power utility.

CHT IoT Smart Platform

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 pose 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 Chunghwa 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.

Countermeasures (Risk Avoidance and Opportunity Seizure)

- Launching "Taiwan 5G Industry Development Alliance CHT leading team" with the 5G office in DoIT, ITRI, and III.
- CHT Pilot Team extends laboratory testing to practical "5G Testing and Training Site." All industries in Taiwan can take advantage of this environment to develop innovative applications and grasp the opportunities.
- We are forming a national IoT team. Through allying with the international and Taiwanese companies, we create international competitiveness for the IoT industry in Taiwan.
- We developed the IoT intelligent internet platform on our own, combining 5 main services, including information security, big data, the blockchain, AI, and AR.
- 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, we strive to become a cybersecurity service provider for digital finance.
- With our current IT solutions, we offer complex solutions for clients using ICS/OT infrastructure connected to a hybrid network.
- As a managed security service provider (MSSP), we dedicated to the provision of a wide range of cybersecurity solutions. In addition to extending our market reach within the border, we are actively seeking business opportunities overseas.
- Maintain our leading position in the industry by consolidating our advantages in internet services, distributions channels, and R&D capabilities with domestic and overseas high-quality products to provide integrated solutions to large enterprise clients.
- $\bullet \ \ \text{Green Product and Service Program} \text{we provide businesses with energy-saving technology and services}. \\$
- By combining innovative green services, such as video conferencing, e-bills, and other cloud services, with our existing technology, we plan to build smart cities with lower carbon emission.
- We are building a cloud service platform that enables clients to access real time data regarding their energy usage and equipment status so that failures can be predicted and prevented.
- We began investing in the photovoltaics and Green ICT industries in 2017, establishing the Smart Energy Lab and the Smart Architecture Lab. Also, we planned to establish the Green Energy Office in charge of green energy procurement and renewable energy installment to enter the field of renewable energy. As of 2020, we have the largest capacity, self-built or otherwise, for solar energy among all telecom companies in Taiwan.







Elimate Change Risks and Opportunities

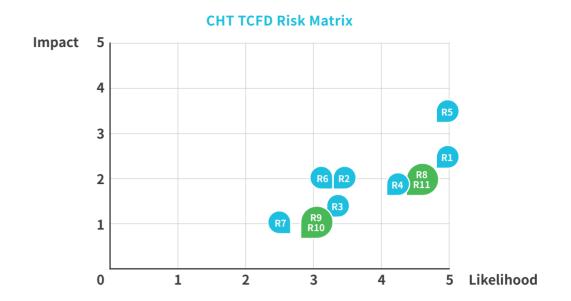
Chunghwa Telecom is the first telecom company in Taiwan to sign on as supporter of the Task Force on Climate-related Financial Disclosures (TCFD) initiative. In 2020, CHT has started to analyze climate-related risks and opportunities in accordance with the TCFD's recommended framework, and accordingly promote climate change mitigation and adaptation, in order to continuously reduce climate-related risks and create opportunities for the industry.

Chunghwa Telecom Disclosures to TCFD

| Framework | Disclosures | | | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|--|
| Governance | The board's oversight of climate-related risks and opportunities | P.46-47 | | |
| | Management's role in assessing and managing climate-related risks and opportunities | P.46-47 | | |
| | The climate-related risks and opportunities the company has identified over the short, medium, and long-term | P.51 | | |
| Strategy | The impact of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning | P.51 | | |
| | The potential impact of the Company's businesses, strategy, and financial planning in different scenarios | P.52-53 | | |
| | The Company's processes for identifying and assessing climate-related risks | P.50 | | |
| Risk Management | The Company's processes for managing climate-related risks | P.50 | | |
| | Processes for identifying, assessing, and managing climate-related risks and how they are integrated into the Company's s overall risk management | P.46-47 | | |
| | The metrics used by the Company to assess climate-related risks and opportunities | P.54 | | |
| Metrics and Targets | • Scope 1, Scope 2, and Scope 3 greenhouse gas emissions | P.54 | | |
| rangets | The targets used by the organization to manage climate-related risks and their implementation | P.111 | | |

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". As the result for identifying of climate-related risk, there are 6 transition risks and 5 physical risks.

After analyzing low, medium, and high risks, the Risk Management Committee will comprehensively assess the climate-related risk and other risks of the company and conduct necessary mitigation measures depending on the impact of risk. After the Risk Management Committee conducts an overall risk assessment based on the evaluation and analysis results, the Chief Auditor shall review the risk assessment results and the Risk Management Committee will report to the Board of Directors. The outcome of risk identification is shown in the following figure.



| Risk Type | NO. | Risk Factor | Risk Issue | Time |
|-----------------------|-----------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| | R1 | Policy & Regulation Risk | Increase in operating costs due to the carbon emissions pricing | Mid- and Long-term |
| | R2 | Market Risk | Higher electricity rate due to change in Taiwan's structure of electricity generation | Mid- and Long-term |
| | R3 | Technical Risk | Increase in operating costs as replacing low energy-consuming equipment ahead of time to improve energy efficiency | Long-term |
| | R4 | Technical Risk | Increase in operating costs as replacing fuel vehicles with electric ones to improve energy efficiency | Long-term |
| Transitional Risks | R5 | Policy & Regulation Risk | Increase in operating costs due to the adoption of renewable energy forced by updated regulations | Short-, Mid- and Long- term |
| | R6 | Reputational Risk | Losing the favor of investors and consumers because of lacking active sustainable actions | Short-, Mid- and Long- term |
| | R7 | Long-term Risk | Operational assets are damaged owing to the rise of sea level covering the low-lying coastal areas | Mid- and Long-term |
| | R8 | Short-/ Long-term Risk | Tense operating pressure and serious impact due to lack of water resource | Short-, Mid- and Long- term |
| | R9 | Long-term Risk | Decrease of international service revenue due to worsening environment which deters tourists from visiting Taiwan | Long-term |
| Physical Risks | R10 | Long-term Risk | Employees' leaving their jobs forced by rising temperature | Long-term |
| Mana | R11 | Long-term Risk | Equipment inoperability and service interruption resulting from Increased frequency and severity of heavy rains and floods | Mid- and Long-term |
| TI I | 20 2025 1 | | | |

The short-term is 2020-2025; the mid-term is 2025-2040; and the long-term is 2040-2100.

In consideration of the transition risks, we took reference to International Energy Agency, IEA Sustainable Development Scenario, SDS and Intergovernmental Panel on Climate Change, IPCC RCP 2.6 Scenario to identify the possible operational impacts and risks in the scenarios set.

Corporate
Overview









Public Policy
Participation











Risk Related to Climate Change

| | Climate scenarios | IEA SDS | | Climate scenarios | RCP 2.6 |
|--------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Main Risk | In response to regulatory trends, CHT uses renewable energy | | Main Risk | Increased frequency and severity of heavy rains and floods, resulting in equipment inoperability and service interruption |
| Transitional Risks | Preventive solution | CHT uses IEA SDS as the climate scenario, and comply nation regulation, such as "Greenhouse Gas Reduction and Management Act" and "Renewable Energy Development Act". CHT plans to establish a green energy office, which will in charge of purchase renewable energy and installed capacity. In order to reduce emission, CHT import high-efficiency telecommunication facilities, low-carbon base stations and adopt low-carbon product equipment with government's green label. By the end of 2020, CHT's installed capacity of renewable energy has exceeded 2,783 kWp and our energy saving target is 1% year over year. | Physical Risks | | CHT conducts climate scenarios analysis according to RCP 2.6 and the "National Climate Change Adaptation Action Plan (2018-2022)" formulated by the Executive Yuan. In further, CHT uses the Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP) as an analysis tool, and carries out the "Telecommunication Adaptation Action Plan for climate change adaptation" to elevate our adaptive capacity to climate change. |

Low-carbon Transition Opportunities

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

- Internally: Establishment of the Company's "Environmental Sustainable Development Strategies and Targets" via organized, systematic methods, and effectively improving the effective management of carbon emissions and other environmental information through the use of our internally developed environmental information management system.
- Externally: Development of green products and services to develop renewable energy and provide businesses with energy-saving technologies and services.

As the "Smart City" leading brand by its core technologies and resources combined, Chunghwa Telecom has utilized its long-established experience in the development of information & communication systems and electrical environment monitoring systems to integrate and monitor the energy-consuming status for its clients. It has also adopted a cloud platform to provide clients with services such as energy-saving performance calculations, equipment operational status monitoring, and real-time notifications. These services help businesses lower carbon reduction threshold and reach their energy-saving and carbon reduction targets. In addition, Chunghwa Telecom offers innovative green products and services to accelerate the spread of Smart Living.

As for our development of renewable energy, Chunghwa Telecom has invested thousands of manpower to build the Zhangbin Solar Power Plant. This plant is the country's largest solar power plant, with a total capacity of 100 MW and an annual output of 130 million kWh. The power plant reduces annual CO₂e missions by 70,000 metric tons, creating revenues for the Company, and thus it is a mutually beneficial endeavor, benefitting both the environment and our operations.



Carbon Reduction Practices and Measures

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

Close Observation of Regulatory Changes Both Domestically and Abroad

We are actively cooperating with relevant stakeholders and have established the "Chunghwa Telecom Energy Saving Policy for a Sustainable Environment", which aims at "Green Enterprise", "Green Sustainability" and "Green Innovation" to actively expand environmental protection actions; at the same time, we promote facilities-room disaster mitigation and climate adaptation programs to strengthen disaster response measures and reduce climate risks.

Universal Services

We have also installed solar panels on cell towers in remote mountainous areas to reduce energy consumption and carbon emission; these panels can also provide power to the cell towers in the case of a power outage to support emergency communications.

Establishment of a Sustainable, Low-Carbon Supply Chain

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

In 2018, we incorporated the ISO 20400 Sustainable Procurement Standard to implement our sustainable development beliefs in procurement practices; green supply chain was constructed in 2019 through a sustainable perspective, supplier evaluation, and classification management, with 16 suppliers passing the external third-party auditing and obtaining the Gold-tier Certificates.

Development of Low-Carbon Products and Services

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

Management of Service Centers Carbon Footprints

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





Greenhouse Gas Emissions Management

The total greenhouse gas emissions in 2020 were 790,320.9986t- CO_2e , consisting of six types of greenhouse gases, namely, CO_2 , CH_4 , N_2O , HFCs, PFCs, and SF_6 .

As the operations of Chunghwa Telecom primarily use electrical power, the greenhouse gas is mainly category 2 emissions (purchased electricity), accounting for a percentage of 97.19%. Category 1 emissions, which account for 2.81%, are mostly generated by workplace emission sources. Through implementation of various energy-saving carbon reduction measures, the total emissions in 2020 demonstrated a slight decrease as a result.

To facilitate the decrease of greenhouse gas emissions, Chunghwa Telecom has actively built solar photovoltaic systems in recent years. We also acquired 105 Taiwan Renewable Energy Certificates (T-REC), reducing carbon emissions by 53.45 t-CO₂e in 2020.



| | 2018 | 2019 | 2020 |
|---------------------------------------------------------|--------------|--------------|--------------|
| Direct emissions (Category 1) | 30,469.8920 | 28,455.5921 | 22,192.9316 |
| Indirect emissions (Category 2) | 804,043.4163 | 795,295.4952 | 768,128.0670 |
| Total emissions (Category 1 + Category 2) | 834,513.3083 | 823,751.0873 | 790,320.9986 |
| Emission intensity (t-CO ₂ e/NTD in million) | 3.9 | 4.0 | 3.8 |
| Percentage of category in revenue | 100% | 100% | 100% |

All the inventories and audits in 2018-2019 were conducted in line with the standard of ISO 14064-1:2006, while the GWP was derived from the Fourth Assessment Report of IPCC (2007). The standard was converted to ISO 14064-1:2018 as of 2021 with the scope changed into category. The GWP was derived from the Fifth Assessment Report of IPCC (2013). All data has been verified by SGS-Taiwan.

6HG Inventory and Verification

Chunghwa Telecom conducts regular annual inventories of the organization's greenhouse gas emissions and conforms with the ISO 14064-1:2018, investigating the greenhouse gas emissions of upstream and downstream activities. In 2020, Chunghwa Telecom conduct GHG inventories on category 3, 4, and 5. All data has been verified by SGS-Taiwan.

| Operation Value Chain | Category | Item | Emissions (t-CO ₂ e) |
|-----------------------|----------|-------------------------------------|---------------------------------|
| _ | 2 | Employee Commuting | 67,132.5036 |
| _ & | 3 | Business Travel | 648.2457 |
| | | Product & Service Procurement | 628.4054 |
| | 4 | Waste Disposal and Transportation | 3,619.4288 |
| Upstream | | Fuel- and Energy-related Activities | 169,158.1056 |
| Downstream | 5 | Leased Assets | 3,678.6770 |
| Total Emissions | | | 244,865.366 |

Eybersecurity Risks

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

Corresponding Strategies

With the cybersecurity vision of building the most valuable, safe, reliable, trustworthy telecom carrier in line with international standards as the point of departure, we implement "Cybersecurity Policy" and "Privacy Policy" from the start, and passes government inspection and third-party verification (ISO 27001, ISO 27011, BS 10012, CSA STAR Certification remain effective). Through the Plan-Do-Check-Act (PDCA) cycle, actions regarding cybersecurity and privacy protection management are continuously improved to ensure the goal of "zero tolerance" for major cybersecurity and personal information incidents is achieved.

Opportunities and Actions

In accordance with standards, laws, and regulations at home and abroad, "Chunghwa Telecom Cybersecurity and Privacy Protection Framework" was established to prevent possible risks, implement concrete, effective safety protection and personal data and privacy protection measures, safeguard customers' rights, and expedite the popularization of digital living services, including:

- Implementing the appropriate risk management strategies, introducing security requirements into design phase (security by design), and practicing rigorous cybersecurity protection management. These are conducted while selecting and supervising suppliers in an appropriate manner, to ensure supply chain security and enhance privacy protection.
- Deploying multi-layer, in-depth security protection and detection mechanisms, as well as the Intelligent Security Operation Center(SOC), to uncover malicious behaviors and hunt down possible cyber threats at an early hacking stage. Meanwhile, through threats intelligence gathering and early warning mechanisms, the Company will acknowledge cybersecurity incidents timely and process emergency incident response to have any damage controlled at a very early stage.
- Conducting Red Team Security Assessments and joint cybersecurity defense with national-level C-ISAC, including IOCs and threat intelligences exchanging, malicious website taking down. Moreover, the Company participates in national-level drills of Critical Infrastructure to ensure the effectiveness, safety and resilience of system and data protection.

The performance in cybersecurity and privacy protection risk management has been tracked and managed on a monthly basis by "Risk Management Committee". Any material risk issues will be reported to the Audit Committee under the Board of Directors or directly to the Board of Directors. In light of the major cyber security incidents domestically over the years, apart from a preemptive deployment of defense measures such as the ban on Network Neighborhood, security monitoring for Active Directory (AD), and blocking of APT attack via email, we utilize the smart cybersecurity monitoring platform that not only is capable of detecting incidents of breach or risks in peacetime, but also promptly backtracks impacts of external threats on the basis of intelligence. There has been no impact to the corporate businesses nor fine incurred from cybersecurity issue or personal data breach as of 2020. In 2020, we bridged ourselves to the world, planning for purchasing "data protection insurance", which will take place in 2021.

For more information of Chunghwa Telecom Cybersecurity and Privacy Protection, please refer to the official website