

# 2021

## Sustainability Report Highlights





## 2021 Sustainable Highlights



Governance

- Top 6–20% at the Corporate Governance Evaluation
- Ranked the 48th among the Top 50 in the large enterprise category, “Excellence in Corporate Social Responsibility,” CommonWealth Magazine.
- Gold Medal, TCSA – Corporate Sustainability Report Awards
- Taiwan Headquarters passed the certification of the ISO 27001 Information Security Management System (ISMS).
- Merry Shenzhen was recognized by the Corporate HQ in Longhua District and one of the Top 100 Industry companies.
- “Enjoin” conference speakers won the Good Design Award.

Top  
**6–20%**  
Corporate Governance Evaluation



Gold Medal  
TCSA



GOOD DESIGN  
AWARD



Environment

- Joined the RE100 global renewables initiative as the 13th enterprise in Taiwan and the first electroacoustics manufacturer to undertake to use 100% renewables by 2050. And pledged to achieve net zero carbon emissions by 2050.
- Merry Shenzhen passed the green factory certification (implemented certification plan in 2021 and received the certificate in January 2022)
- Signed a 3-year sustainability-linked loan agreement with Taipei Fubon Bank.

Commit to net zero  
**100%**  
by 2050

Commit to  
renewable energy  
**100%**  
by 2050



Merry Shenzhen  
Green Factory



Social

- Awarded the Special Award for Covid-19 Support “Torch” Award from branded clients.
- Awarded the Badge of Accredited Healthy Workplace by the Health Promotion Administration.
- Ranked the 2nd in the group category of the Healthy Fat (Weight) Loss Competition of the Taichung City Health Bureau.
- Engaged in the minimal hearing loss initiative to rectify correct hearing concepts by exerting our social influence.



Health  
promotion  
badge

Healthy Fat (Weight)  
Loss Competition  
of the Taichung City

Ranked **2**nd

## Message from the Chairman



Although business operations were significantly affected as the global economy was under the huge impact of the persistent threat from Covid-19 when the pandemic continued in 2021, while climate change is the biggest threat to global sustainable development, countries worldwide have announced the goal of net zero emissions in succession. Facing natural disasters that are beyond reasonable human control, it is necessary for human beings to review our relationship with nature. Besides identifying climate-related risks and opportunities in accordance with the climate-related financial risk disclosures recommended by the Task Force on Climate-related Financial Disclosures (TCFD), we continue to include the domestic and international ESG trends in our management approaches in order to keep steady growth in the constantly changing market.

To cope with the rapid macroenvironmental changes and to meet the customer demands, in 2021 we constantly implemented the operational policy of “structure optimization, digital transformation, integration and innovation, sustainable development” to optimize the group structure and thereby enhance operational efficiency and deploy the future development of new business types. In production management, besides engaging in active digital transformation through innovative models, such as robotic process automation (RPA) and the digitization of global supply chain management, we also actively supported the RE100 and became Taiwan’s 13th enterprise to sign up to this global renewables initiative, aiming to become a lowest-carbon electroacoustics manufacturer.

Based on the regulations of “Corporate Governance 3.0” announced by the Financial Supervisory Commission (FSC), we should officially declare the sustainability (ESG) report from 2023. So far we have voluntarily compiled nine sustainability reports successively and were rated Top 50 in the Excellence in Corporate Social Responsibility of Common-Wealth Magazine and awarded the Gold Award for TCSA – Corporate Sustainability Report Awards in 2021. All these suggest that we care about the opinion of stakeholders, maintain long-term concerns and management of material sustainability issues, and constantly disclose, review, and improve the related systems and data in order to make constant progress in our corporate sustainable competitiveness.

In terms of social issues, while nearly 1.1 billion of people aged 12–35 are at risk of hearing loss due to improper exposure to noise in leisure and entertainment, as indicated as an increasingly severe global hearing problem by the WHO in its 2020 report, as a world-leading electroacoustics brand, besides proactively activating various minimal hearing loss initiative projects at the end of 2020, in 2021, we have also successfully completed Taiwan’s first set of teaching materials that integrates acoustic hearing protection and offered campus awareness education in order to publicize the knowledge of correct ear use, hoping to prevent the increase in the hearing loss population starting from adolescents.

Looking out to 2022, we will face environmental challenges with a humbler mind and constantly maintain sustainable operations with a more practical attitude. We firmly believe that a better era is coming soon!

Chairman

CEO

## Financial performance

In 2021, the consolidated revenue increased by NT\$1.738 billion (or 5.05%) over 2020 to NT\$36.183 billion; the consolidated net profit before tax reduced by NT\$121 million (or 7.11%) over 2020 to NT\$1.582 billion.

The 2021 revenue increased because of the progressive global economic recovery in the post-COVID-19 era, the sales of new products were good after launch, and shipping also increased comparatively. In 2021, the operating expense also increased as the cost for international transportation rose due to the pandemic. The 2021 non-operating income (expense) reduced over 2020 because net profit reduced over 2020 due to the delayed shipment of new products from investees.

Unit: thousand

### Revenue and Profit over the years

	2017	2018	2019	2020	2021
Sales revenue	26,678,810	35,494,808	36,397,793	34,444,819	36,182,719
Operating costs	22,017,976	30,769,740	31,357,874	30,126,271	31,807,621
Net operating margin	4,660,834	4,725,068	5,039,919	4,318,548	4,375,098
Total Operating expenses	2,088,457	2,421,935	2,804,567	3,177,806	3,276,541
Selling expenses	323,523	350,439	397,602	345,767	424,928
General and administrative expenses	845,662	968,491	1,101,580	1,127,403	1,152,137
Research and development expenses	919,272	1,103,005	1,305,385	1,704,636	1,699,476
Operating profit	2,572,377	2,303,133	2,235,352	1,140,742	1,098,557
Total Non-operating income and expenses	1,684,883	423,116	1,010,845	561,963	483,616
Profit before income tax	4,257,260	2,726,249	3,246,197	1,702,705	1,582,173
Income tax expense	635,051	665,400	715,051	383,305	291,083
Profit for the year	3,622,209	2,060,849	2,531,146	1,319,400	1,291,090
Total other comprehensive (loss) income	3,307,089	(2,583,113)	926,128	(936,960)	(919,953)
Total Profit	6,929,298	(522,264)	3,457,274	382,440	371,137
Basic earnings per share	18.94	10.47	12.51	6.39	5.40

### Compiling the information specified in Disclosure 201-1

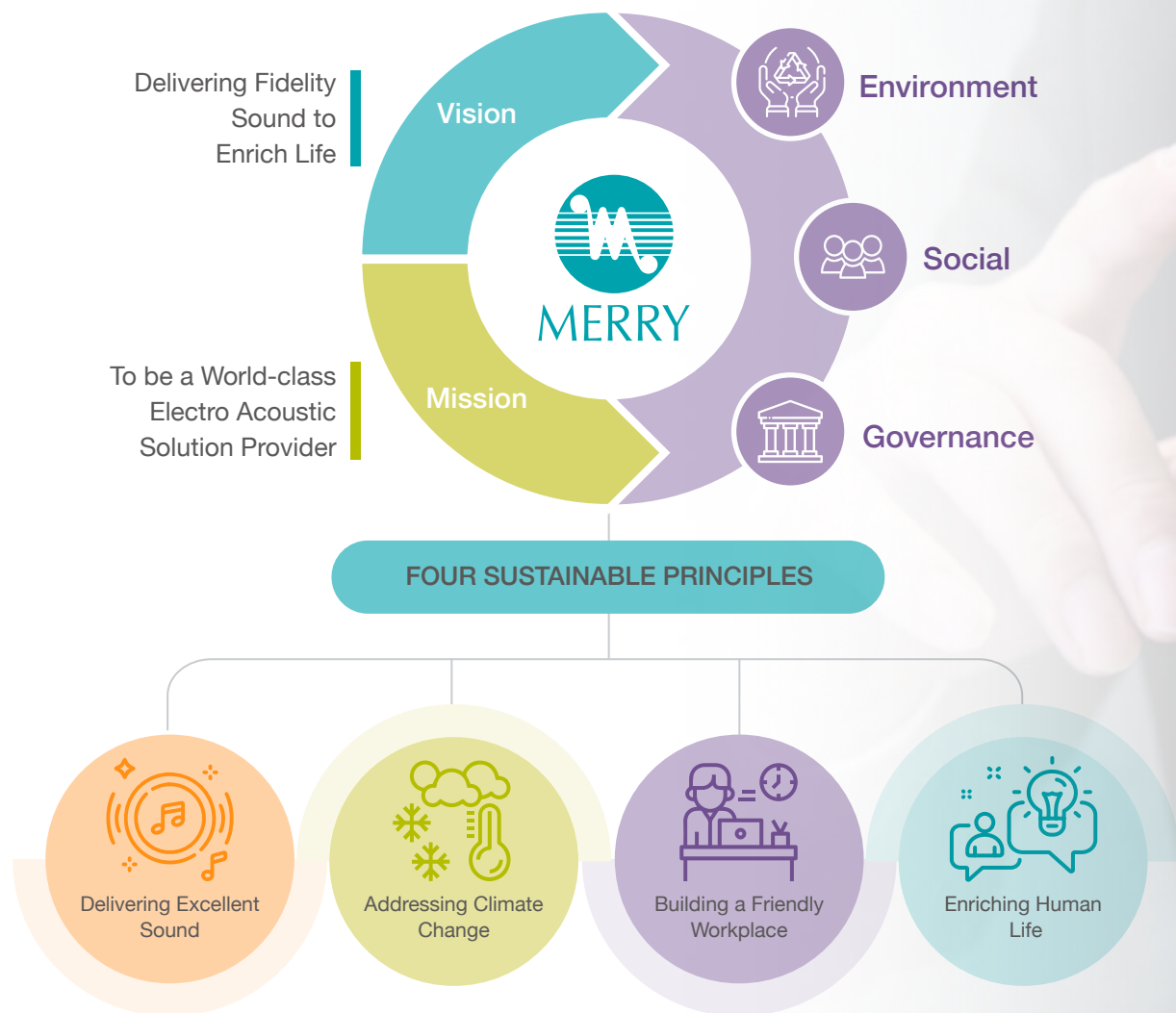
Employee wages and benefits	2,586,579	2,930,132	2,729,703	3,306,368	3,364,588
Government grants	5,427	59,410	173,967	188,780	312,065
Direct/indirect / political donations	0	0	0	0	0
Charity donations	3,043	2,843	2,013	1,649	1,598

Note

1. Please refer to our 2021 Annual Report disclosed on the corporate website for the details regarding the operational status, financial performance including liabilities, equity assets, retained earnings, dividend policy and status of execution, and rewards for employees and directors. [www.merry.com.tw](http://www.merry.com.tw)
2. .With respect to the resolution made at the 2022 AGM, the cash dividend for 2021 is NT\$4.00/share.

## Sustainable policy and operation

Starting from the vision “delivery excellent sound to enrich human life”, we make continual improvement of the core business to achieve the mission of “a global specialist provider of total solutions for electroacoustic applications in communication and entertainment”. We value the opinion of stakeholders and are committed to pursuing sustainable development through ESG. Hence, in 2020 we established four major principles for sustainable development and set the short-, medium-, and long-term goals to strengthen our constitution for sustainable development, optimize the disclosure of ESG information, and create co-prosperity shared by shareholders, customers, employees, suppliers, society, and the environment



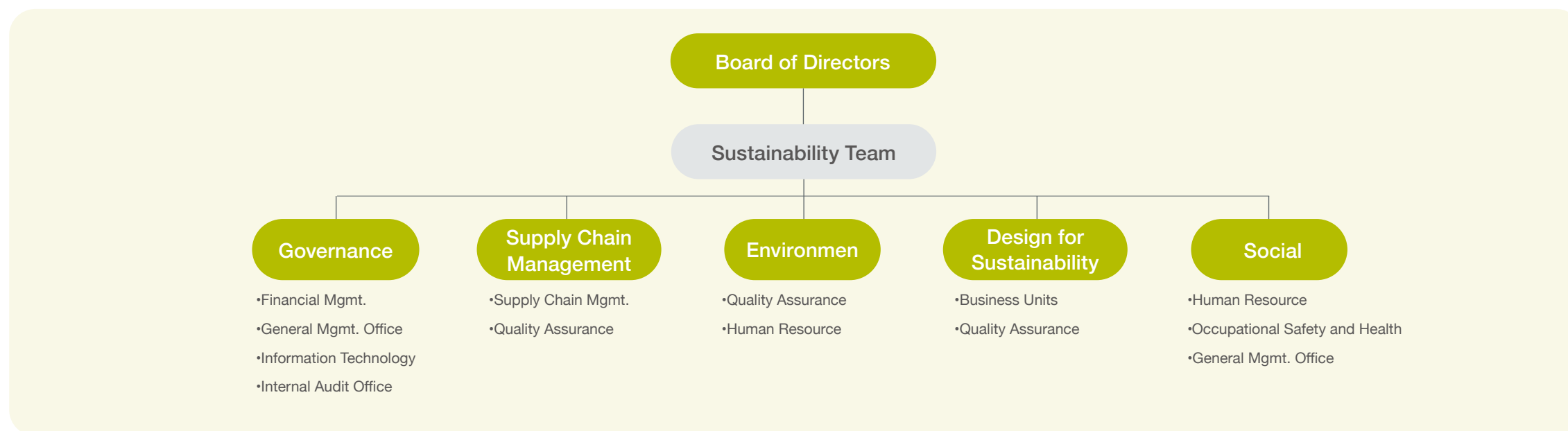


## Sustainable Development Promotion Team

We established four promotion teams, including the Sustainable Development Promotion Team, under the board. The Sustainable Development Promotion Team is chaired by the president, with the Public Relations Department as the executive secretary. Under the team, there are five functional units to integrate policies and systems or propose and implement management approaches and specific promotion plans related to sustainable development; maintain constant communication and interaction with stakeholders; and periodically report to the board. In the future, the team will periodically report to the board the individual implementation plans and their outcomes. In December 2021, the team reported to the board on the outcomes of implementation in 2021 and the implementation plan 2022. The team will also report the status of various projects and ESG performance indicators to the board from time to time.

### Operation

	Meeting Contents	Frequency
<b>Board of Directors</b>	Annual ESG outcomes and plans, including the response to the material topics that concern stakeholders.	Half-yearly
<b>Sustainable Development Promotion Team</b>	Sharing ESG trends; drawing up medium- and long-term approaches, and discussion of material issues.	Half-yearly
	Review of the outcomes of short-term ESG targets	Quarterly



# Information security

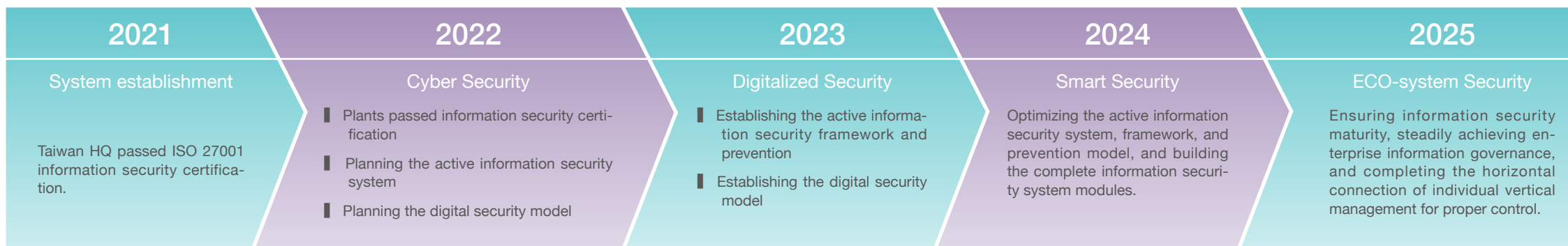
The security of information operations and protection of confidential and sensitive data are our competitiveness and commitment to customers, shareholders, and employees. At Merry, the long-term goal of establishing the group’s ISMS is implemented by the Information Security Promotion Team under the Board. In 2021, Taiwan HQ already obtained the ISO 27001 certificate and set 2022 as the year zero of information security to actively promote the establishment and certification of the ISMS of each plant in order to enforce the two cores “strengthening information security and ensuring sustainable operations” of the group’s information security policy and thereby fulfill the group’s medium- and long-term goals: operational development and total information security.

## Focus of information security management

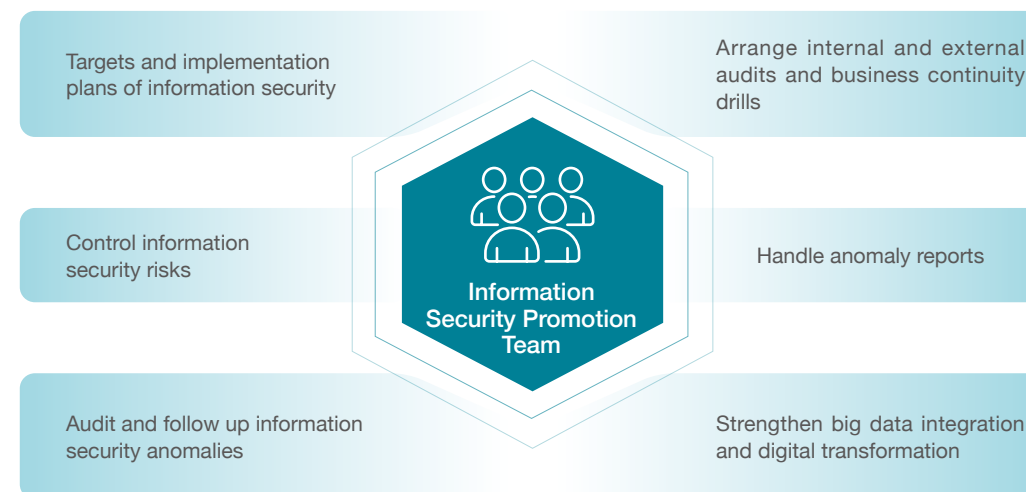
The procedures for information security management and security protection technology apply to all information operations to ensure the confidentiality, integrity, and availability of information assets during the collection, processing, transmission, storage, and circulation of information. Additionally, proactive information security protection and the transformation and establishment of digital information security are emphasized to protect the data of the Company, customers, suppliers, and personal data. Employee security awareness is publicized and enhanced periodically to lower the risk of man-induced information risk.

In addition to operating the ISMS, we have also established and implemented information security audits and assessments. Each year we perform the operational impact and risk assessment, internal audit, and business continuity drill to ensure the continuing operation of the ISMS.

## Security Information Milestones



## Foci of the duty of the information security promotion team

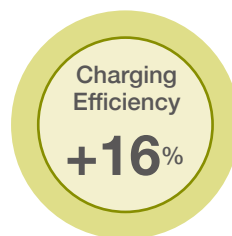
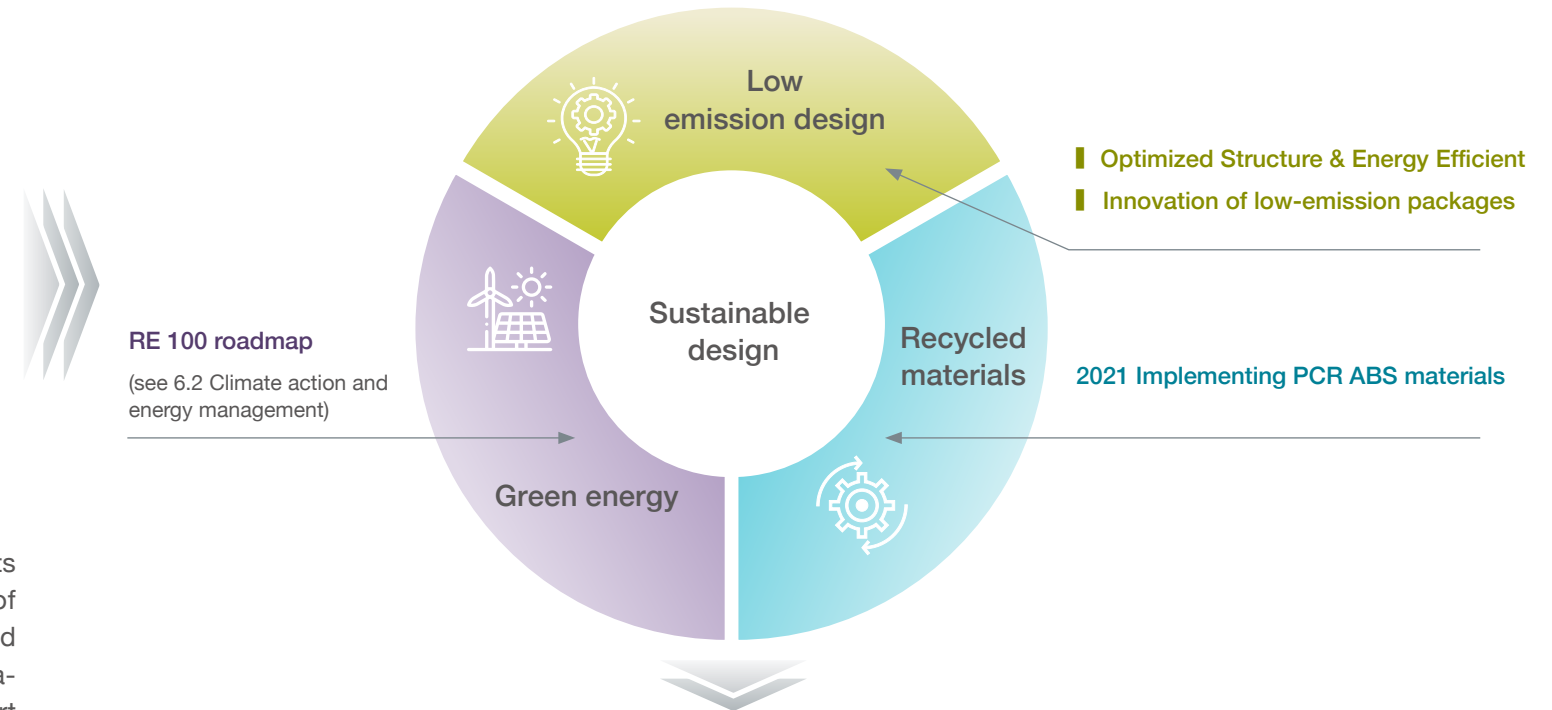


# Design for sustainability framewor



In addition to efficiency enhancement, new-generation products require lowering environmental impact, which is the focus of design for sustainability (DfS). Starting from product design and development, integration of function diversification, size miniaturization, ergonomics, software/ firmware differentiation, smart electroacoustic platform, and batter integration is the main target. In 2020, we began to draw up short-, medium-, and long-term strategies for product design; constantly improve production technology and product design capacity; reduce materials use; increase the use of recycled materials; use low-impact packages, and enhance product energy efficiency to demonstrate the product's social/environmental contributions to sustainable development. In 2021, we began to use recycled materials, adopt the structure optimization and low-impact design of products, and promote green energy use based on the three tracks of development: use of recycled materials use, product DfS, and green energy implementation to achieve sustainable business development.

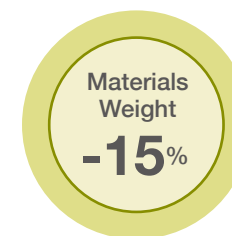
## 2021 Sustainable Design 3 Main Shaf



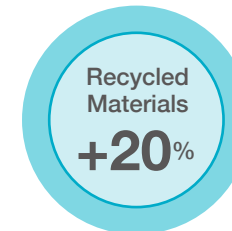
- TCircuit design optimization of TWS ear-phones/headphones
  - Reducing the power consumption of true wireless stereo (TWS) earphones/headphones from 9.2mA to 7mA
- TWS charging case - IC charging efficiency
  - Enhancing the IC charging efficiency of charging cases from traditional 74% to 90%



- Earphone/Headphone packages :
  - Reducing the overall box size by 50%
  - For more examples, please see the next page



- Lightweight design for new models of gaming headphones
  - Reduced the thickness of part of plastic parts
  - The number of screws from 3 reduce to 2
  - Reduce the all materials weight of parts by 15% (4% accounting for 4% of the headphone's gross weight)




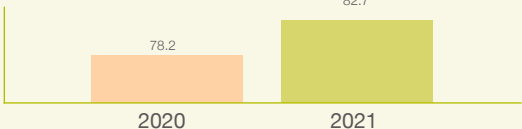



- Constantly use of Post-Consumer Recycled material(PCR)
  - Increasing the use of PCR on the plastic shells of new models of gaming headphones
  - Use of PCR materials from 20% to 40%



# Sustainable supply chain management

Maintaining long-term and steady cooperation with suppliers is essential to our operations. Apart from creating economic value together, we wish that suppliers can value the social and environmental value like what we do in order to build a sustainable and reciprocal supply chain.

Through the management and valuation mechanisms, we encourage and urge suppliers to fulfill CSR together, including compliance with the professional ethics, value labor human rights, provision of a good workplace environment, no use of conflict minerals, compliance with the national or local environmental regulations, and build a management system based on cooperation in order to meet the CSR requirements and work for the sustainable supply chain.

 <p><b>Source management</b></p>	<ul style="list-style-type: none"> <li>GPMS</li> <li>No use of conflict metals</li> <li>Social Responsibility Commitment</li> <li>Annual supplier audit</li> </ul>	<p><b>Source management</b></p> <p><b>Status of signing of the Supplier CSR Commitment</b></p> <p><b>New suppliers in 2021:</b> 94% of new suppliers signed the CSR Commitment and Declaration of Non-Use of Conflict Minerals (100% excluding customer-designated and world-leading suppliers)</p> <p><b>Partner suppliers in 2021</b> 96% (based on all suppliers) of partner suppliers signed the CSR Commitment and Declaration of Non-Use of Conflict Minerals.</p>	<p><b>Audits of key suppliers:</b></p> <p>In 2021, we selected 27 key suppliers for the annual CSR audit (operated as per the RBA-CoC as the management mechanism, with evaluation aspects covering labor, health and safety, environment, ethics, and management system), with 100% pass rate.</p> <p>In 2021 the average score of the CSR audit on key suppliers was 82.7, 4.5 marks higher than 2020.</p> <p><b>CSR audit score of key suppliers</b></p>  <table border="1"> <caption>CSR audit score of key suppliers</caption> <thead> <tr> <th>Year</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>2020</td> <td>78.2</td> </tr> <tr> <td>2021</td> <td>82.7</td> </tr> </tbody> </table>	Year	Score	2020	78.2	2021	82.7
Year	Score								
2020	78.2								
2021	82.7								
 <p><b>Supply alert mechanism</b></p>	<ul style="list-style-type: none"> <li>Establishing an emergency response team</li> <li>Implementing graded warnings and the management measures at all stages.</li> </ul>	<p>Under the risk management mechanism, routine supply is under steady monitoring. To lower the risk of supply disruption, we have established an emergency response team and supply emergency response plan, implemented the graded alert system and management measures at all stages, and periodically investigated and assessed the financial risk of suppliers to reduce the impact and loss caused by supply disruption as a result of climate change, natural disasters, pandemics, financial and operational crises, and reputation risks to stabilize operations. In 2021, we fulfill the supply demands of all customers.</p>							
 <p><b>Supply chain resilience</b></p>	<ul style="list-style-type: none"> <li>Local procurement</li> <li>Supply chain diversification</li> </ul>	<p>To balance local procurement and supply chain diversification, enhance production efficiency, and reduce the carbon emissions from the transportation of raw materials, parts, and components, we prioritize procurement from local suppliers and assist them in optimizing supply quality and their core capability. We also keep track on the feasibility of production and transportation against the extreme weather due to climate change or unpredictable natural disasters in local areas in order to constantly strengthen the resilience of sustainable supply.</p> <p>In 2021, China was still our production center, and the proportion of local procurement was 93% and the procurement amount was up to 99%, 1% higher than 2020.</p>							
 <p><b>Supplier exchange channels</b></p>	<ul style="list-style-type: none"> <li>Commendation of outstanding suppliers</li> <li>Publicity of the sustainable supply chain management policy</li> </ul>	<p>At the supplier biannual conference in 2021H2, we commended outstanding suppliers, publicized our operational directions and green supply chain management policies, and interacted and interviewed with suppliers to exchange the market trends and improve the mutual understanding and consensus for cooperation.</p>							

## Human rights promotion

All plants abide by the labor and employee employment rights and international standards, value labor human rights, occupational safety and health, maintain a friendly, safe, and healthy work environment. Apart from banning any tangible or intangible sexual harassment; act of discrimination, such as race, religion, color, nationality, and gender; forced labor; child labor; and improper treatment; we should protect the employee’s right to freedom of association and privacy. In addition, we have established the “Merry Code of Business Conduct and Professional Ethics” and related regulations to protect the rights and interests of employees. We have also set up grievance channels and disciplinary regulations and arranged strict protection of the identity of whistleblowers (informers). In 2021, non-compliance with human rights was reported.

To ensure all locations and plants to provide a safe work environment and show respect for all employees, currently, Taiwan HQ, Merry Shenzhen, and Merry Vietnam will arrange education and training related to human rights for new employees on their arrival. At the same time, other locations will progressively include human rights in awareness education, education, and training each year. We assess the human rights risks of each location and identify major production bases as regions (Shenzhen, Thailand, and Vietnam) with significant potential human rights risks. Besides enforcing various human rights measures, we voluntarily sign up for the RBA’s Validated Assessment Program (VAP) to strengthen human rights management in these locations and facilitate customers to query our validation results from RBA-Online.

Locations	Recipient	Duration/Method	Training Percentage	Total Hours of Training
Taiwan HQ	All new employees (excluding dispatched employees)	[Ethical Corporate Management]: Confidential data/IP protection/licensing agreements/questions and report of concerned issues and unethical behavior	99%	164
		[Ethical Corporate Management]: Discrimination and harassment	96%	35.2
Merry Shenzhen	All employees	In 2021, the RBA training course contained eight topics covering human rights and business integrity, and was administered in 15 classroom sessions (12.75 hours in total).	100	44,669.75
Merry Vietnam	All employees	In 2021, the RBA training course covered basic training and standard training, with contents on five topics including labor, health, and safety (one hour in total).	100%	2201

Note:  
 Training Percentage = Total number of trainees in a business location ÷ Total number of employees of the same business location at the end of the year.



Completed RBA-VAP in 2018 and 2021, with an RBA silver certificate (valid for 2 years).

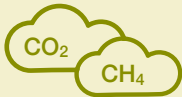





Completed RBA-VAP in 2021, with an RBA gold certificate (valid for 2 years).

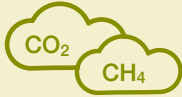





In 2021, we progressively inventoried the differences in measures for human rights management and will apply for RBA-VAP in 2022.

# Climate strategies and achievements

Issue	Strategy	Highlights of 2021 performance
 <p>GHG inventory</p>	<p><b>GHG inventory:</b> We constantly expand GHG inventory to all locations and enforce the inventory of "other indirect (Scope 3) GHG emissions".</p>	<ul style="list-style-type: none"> <li>Taiwan HQ and Merry Shenzhen performed organizational GHG inventory in accordance with the ISO14064-1:2018 standard and passed the third-party verification.</li> <li>Merry Vietnam performed internal organizational GHG inventory in accordance with the ISO14064-1:2018 standard.</li> </ul>
 <p>Enhancing energy efficiency</p>	<ul style="list-style-type: none"> <li><b>Energy monitoring system and energy use analysis:</b> improved the energy efficiency of energy-consuming equipment.</li> <li><b>Paying attention to successful examples in corporate energy conservation:</b> Through experience exchange talks and external successful examples in energy conservation, we actively learned new technology, concepts, and experience.</li> </ul>	<ul style="list-style-type: none"> <li>Merry Shenzhen introduced the magnetic levitation energy-efficient air-conditioning system to reduce electricity consumption by at least 30%.</li> <li>Merry Shenzhen also installed 40 coil air-conditioners in workshops to control workshop temperature, expecting to reduce electricity consumption by about 29,700KWh each year.</li> <li>Merry Vietnam installed lighting sensors at carports, expecting to reduce electricity consumption by about 20%.</li> </ul>
 <p>renewables</p>	<ul style="list-style-type: none"> <li><b>Renewables use:</b> Constantly assessed solar PV system construction and renewables transfer projects.</li> <li><b>renewables certificate (REC):</b> Supported local renewables development by purchasing RECs.</li> </ul>	<ul style="list-style-type: none"> <li>In October 2021, we officially signed up to RE100 and made a commitment on 100% renewables use by 2050.</li> <li>In 2021, we purchased RECs of 2,163MWh, accounting for 6.98% of total electricity consumption.</li> </ul>
 <p>Water and waste management</p>	<ul style="list-style-type: none"> <li><b>Water resources</b> Plant water management with ISO 14001 While domestic water use was the major water consumption at plants, we used water-efficient equipment and enhanced employee awareness.</li> <li><b>Waste management</b> Plant waste management with ISO 14001 We periodically followed up the plant's hazardous waste disposal and conducted real-time analysis and improvement of abnormal waste production.</li> </ul>	<ul style="list-style-type: none"> <li><b>Water resources</b> Taiwan HQ installed water-efficient taps and sensor taps in the whole building. Merry Shenzhen replaced all taps with water-efficient taps to reduce water consumption by 50%. Merry Vietnam adjusted the water level of toilet bowl flush to reduce equipment water consumption by 20%.</li> <li><b>Waste management</b> Merry Shenzhen hazardous waste production per unit output value reduced by 3%. 100% compliance with local laws and standards for waste disposal</li> </ul>

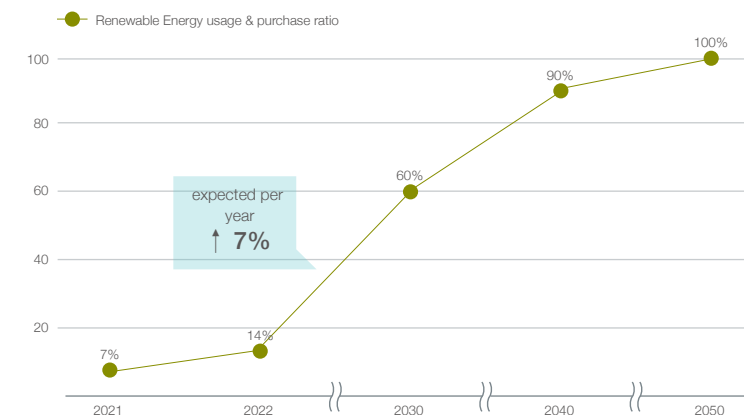


Issue	2022 Targets	Medium-term targets and strategies
 <p>GHG inventory</p>	<p>We constantly promoted GHG inventory in accordance with the ISO14064-1:2018 standard to all locations.</p>	<ul style="list-style-type: none"> <li>All locations performed GHG inventory in accordance with the latest ISO14064-1 standard.</li> <li>We implemented the Science Based Targets (SBT) to implement carbon reduction and management more effectively.</li> </ul>
 <p>Enhancing energy efficiency</p>	<ul style="list-style-type: none"> <li>The intensity of energy use reduced by 1.5%.</li> <li>Constantly enhanced equipment efficiency to strengthen the energy use analysis and monitoring system.</li> <li>Merry Shenzhen passes national green factory certification.</li> </ul>	<p>Constantly expanded the scope of energy management and enforced energy efficiency improvement plans.</p>
 <p>renewables</p>	<p>In 2022, the proportion of renewables use will reach 14% of total energy consumption.</p>	<p>In 2030, the proportion of renewables use will reach 60% of total energy consumption.</p>
 <p>Water and waste management</p>	<ul style="list-style-type: none"> <li><b>Water resources</b> Annual water conservation target: The intensity of water use at 1% less than the previous year.</li> <li><b>Waste management</b> Constantly promoted reduction in waste production per unit output value and enforced resource recycling following source management.</li> </ul>	<ul style="list-style-type: none"> <li><b>Water resources</b> Enhanced water monitoring and analysis and constantly enhance water efficiency.</li> <li><b>Waste management</b> Constantly implemented waste reduction and enforced resource recycling following source management</li> </ul>

## Supporting RE100 global renewables initiative

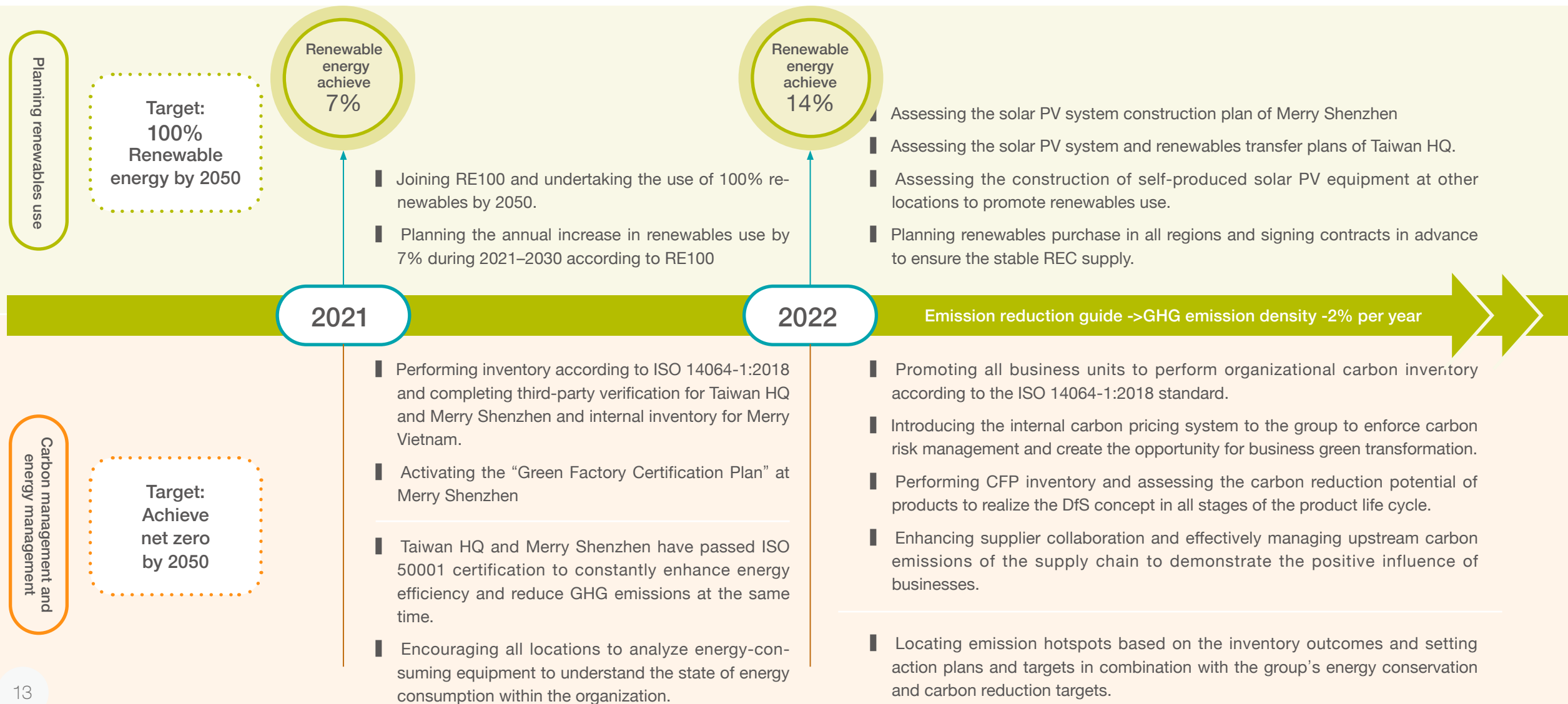
In response to SDG 13 Climate Action, in 2021 we officially signed up to plan to the RE100 global renewables initiative advocated by the Climate Group and the Carbon Disclosure Project (CDP) and made a commitment to 100% renewables use by 2050 to advance the schedule of renewables use to the medium- and long-term goals. The boundary of RE100 will cover Merry Taiwan, Merry Shenzhen, Merry Huizhou, Merry Thailand, Merry Vietnam, Merry Hong Kong, Merry Singapore, Suzhou Merry, Fulicare (Qingdao), Fulicare (Xiamen), AST, SCI, and SEAS. To achieve the goal of renewables use, we will continue with the management and enhancement of energy efficiency, assess the feasibility of building rooftop solar PV at all locations, and actively source local renewable companies to sign electricity purchase agreements with them, and purchase international RECs to increase the proportion of renewables use each year in order to develop toward low-emission production.

### Merry Renewable energy usage target

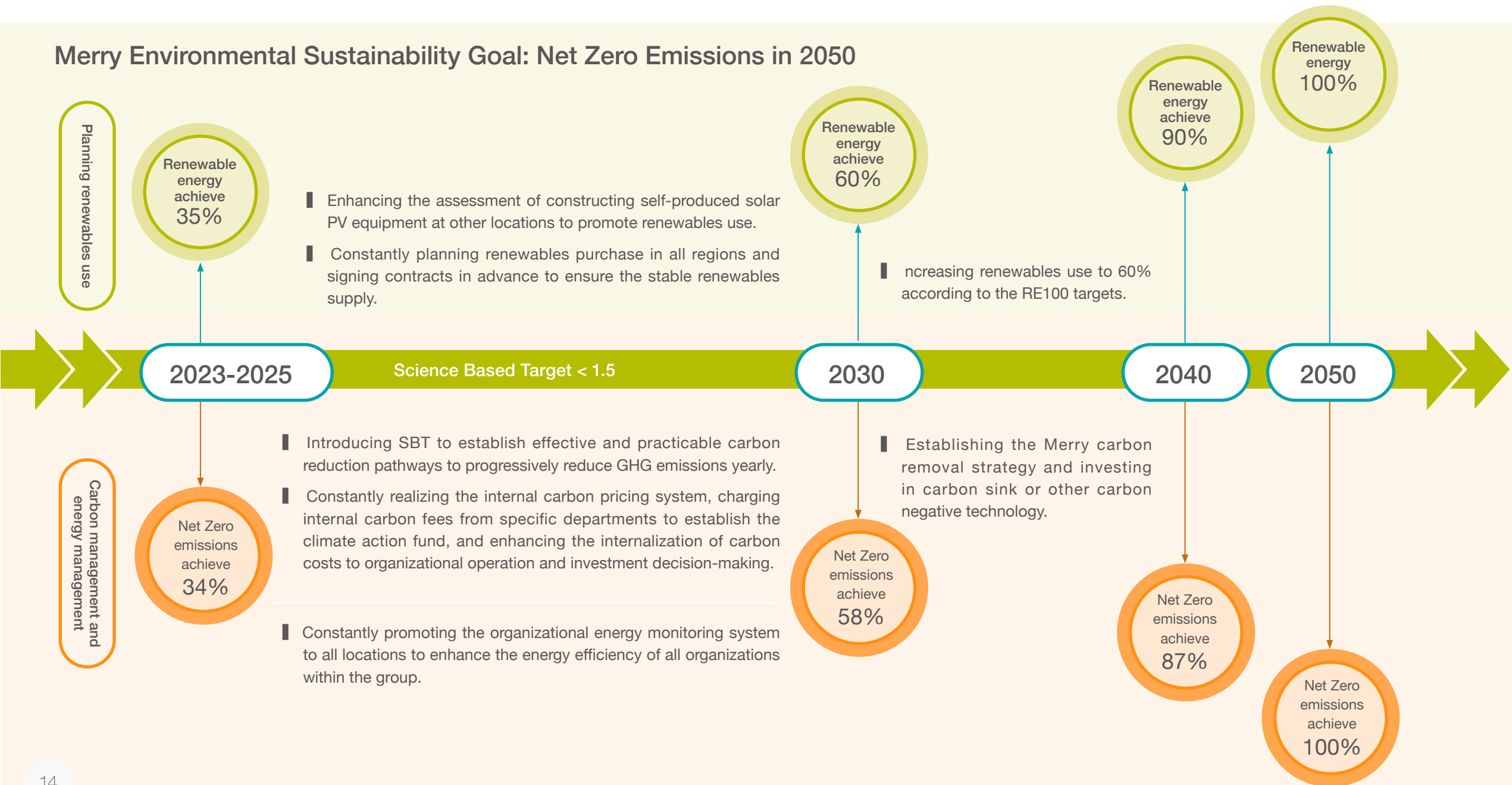


## Merry Environmental Sustainability Goal: Net Zero Emissions in 2050

To support the climate action of net zero emissions, we set “Net Zero Emissions 2050” as an important roadmap of our action to reduce energy carbon emissions and use renewables for environmental sustainability to actively include the environmental sustainability concept to product design and development, enhance the efficiency of environmental resources, and lastly offset carbon emissions by means of carbon offsetting.



## Merry Environmental Sustainability Goal: Net Zero Emissions in 2050





# Climate action and energy management

## GHG inventory and management

### GHG inventory

We are committed to GHG inventory to capture exactly the status of GHG emissions and set clear energy conservation targets. In 2007, Merry Taiwan HQ began to perform organizational GHG inventory according to the ISO 14064-1:2006 standard and passed the third-party verification. Additionally, we also progressively extended the GHG inventory to other locations yearly. In 2021, we reset 2020 as the base year for GHG emission calculation according to ISO 14064-1:2018 and established various management measures for various energy uses and pollution emissions to achieve the eco-friendly goals of less pollution, low energy consumption, and easy recycling through continual improvement. The seven GHGs for inventory included CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, and NF<sub>3</sub>.

The emission of categories 1 and 2 GHGs actually inventoried within the past organizational boundary (Taiwan HQ and Merry Shenzhen) in 2021 was 16,829.01 tCO<sub>2</sub>e, 1,225.58 tCO<sub>2</sub>e (or 6.79%) less than the 2020 emissions at 18,054.59 tCO<sub>2</sub>e. This is mainly because electricity consumption reduced due to the pandemic. The emission reduction target for 2021 of categories 1 and 2 was 2% of the total emission intensity per million revenue over 2020. The 2021 GHG emission density was 11.10% less than 2020. Emission intensity reduced mainly because of the increase in revenues and reduction of electricity consumption during the pandemic period.

#### Taiwan HQ

Based on the ISO 14064-1:2018 GHG inventory standard, Taiwan HQ set the scope of inventory including categories 1, 2, and 3 to 6 (upstream transportation, business travels, purchased products and services, and waste from production process). The total emissions in 2021 were 773.02 tCO<sub>2</sub>e, 46.43 tCO<sub>2</sub>e (or 5.67%) less than the 2020 emissions at 819.45 tCO<sub>2</sub>e. This is mainly because business travels of employees reduced after work from home was implemented at Taiwan HQ due to the pandemic, thus reducing the GHG emissions of input energy and business travels.

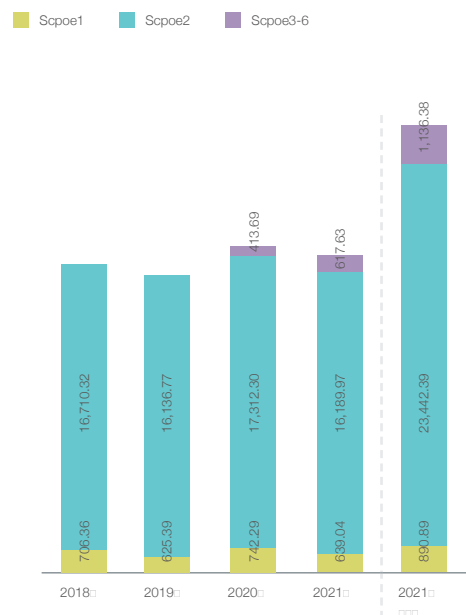
#### Merry Shenzhen

The scope of inventory of Merry Shenzhen included categories 1, 2, and 3 to 6 (purchased products and services, business travels, up- and down-stream transportation). The total emissions in 2021 were 16,673.62 tCO<sub>2</sub>e, 975.22 tCO<sub>2</sub>e (or 5.53%) less than the 2020 emissions at 17,648.84 tCO<sub>2</sub>e. Although the emissions of category 3 increased significantly from the previous year when Merry Shenzhen added the identification of up- and down-stream transportation to the 2021 scope of inventory, after introducing the energy-efficient central air-conditioning system in the last year, energy efficiency was enhanced significantly. Additionally, the number of overseas visitors also reduced, leading to the reduction in GHG emissions over 2020.

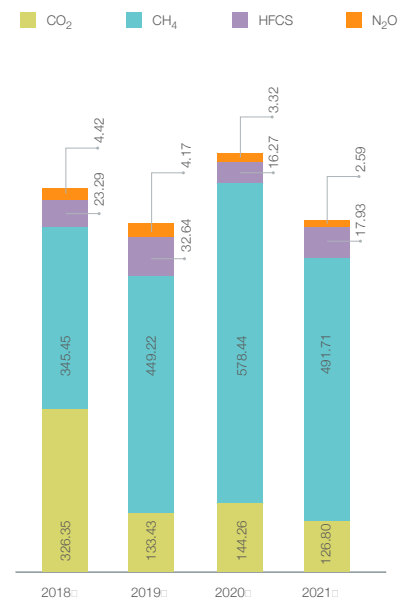
#### Merry Vietnam

The production of Merry Vietnam began in July 2020. In the first year, the internal inventory focused on the period from September 2020 to August 2021. The scope of inventory covered direct (Scope 1) and indirect (Scope 2) emissions. The total emission during the period was 6,472.21 tCO<sub>2</sub>e. Based on the ISO 14064-1:2018 standard, in 2022 Merry Vietnam inventoried the 2021 emissions at 8,023.02 tCO<sub>2</sub>e, with the scope of inventory covering categories, 1, 2, and 3 to 6 (including employee commuting, upstream leased assets, and waste disposal). Merry Vietnam also set 2021 as the base year.

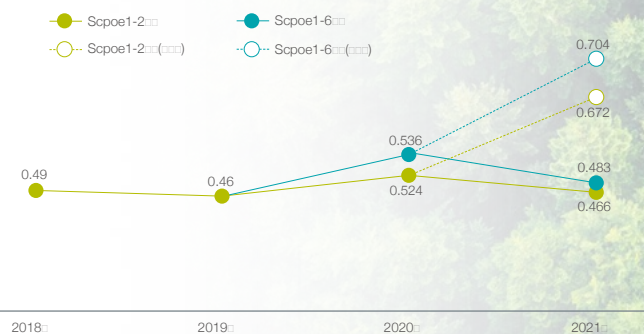
### GHG Emissions over the Years (Mt CO<sub>2</sub>e)



### GHG scpoe1 Emissions



### GHG intensity over the year (Mt CO<sub>2</sub>e/million NTD- revenue)



note :

- The boundary of inventory covered Taiwan HQ, Taipei R&D Center, Hsinchu R&D Center, Merry Shenzhen, and Merry Vietnam. Other locations will be included in the GHG management system progressively each year.
- Boundaries were defined by operational control, and emission coefficient is adopted in the calculation.
- Based on different emission sources, conversion was implemented with respect to the GHG Emission Coefficient Management Table (v. 6.0.4 dated June 2019) announced by EPA, Executive Yuan, Carbon Footprint Information Platform, Simapro 9.3.0.2, global warming potential coefficients in the AR6 (2021) of IPCC, and the ICAO flight carbon emissions.
- Taiwan HQ adopted the electricity emission coefficients at 0.533 tCO<sub>2</sub>e/MWh (2018), 0.509 tCO<sub>2</sub>e/MWh (2019), and 0.502 tCO<sub>2</sub>e/MWh (2020) announced by the Bureau of Energy.
- The “2019 China Regional Grid Baseline Emission Factors” announced by the PRC Ministry of Ecology and Environment were adopted for inventorying the electricity emissions of China locations. The conversion coefficient for the south regional grid is 0.8042 tCO<sub>2</sub>e/MWh. Due to the update of the 2017 coefficients, the emission data is calculated based on the updated coefficient.

Intensity of GHG emission = GHG emissions of the year ÷ Net consolidated revenue of the year (million NTD)



## Energy management

Energy consumption, carbon emissions, and climate change are interrelated with one another. Over the years, electricity has been the major source of our GHG emissions. Hence, we are committed to implementing energy conservation and carbon reduction through energy conservation and energy efficiency enhancement. In 2016, Taiwan HQ began to implement the ISO 50001 energy management system (EnMS) and extended it to Merry Shenzhen later. In 2020, both Taiwan HQ and Merry Shenzhen passed the third-party verification (agencies: AFNOR and Shenzhen CTI International) of ISO 50001:2018 to systematically implement various energy conservation and carbon reduction measures and constantly update energy-efficient equipment. We have replaced old chiller units and air-conditioners with chillers compliant with the COP specifications to enhance energy efficiency every year.

### Energy conservation enhancement measures

#### Taiwan HQ

LED tubes were used in the new HQ building and new office in Taipei, and constant replacement with LED is implemented in the original office area.

#### Merry Thailand

##### Energy conservation of factory energy-consuming equipment

- Three fixed-frequency air conditioners were replaced with variable-frequency air conditioners, expecting to save electricity by about 28,134.82KWh each year.
- Lighting fixtures were replaced with LED lighting, expecting to save electricity by about 43,713.20KWh each year.

#### Merry Vietnam

##### Energy conservation of factory energy-consuming equipment

- Merry Vietnam also installed lighting sensors at carports, expecting to reduce electricity consumption by about 20% and save electricity by about 3,594KWh each year.
- It also installed dimmers in the warehouse, posted power switch labels, and removed 148 unnecessary fluorescent tubes without affecting the necessary lighting, expecting to save electricity by about 2,600KWh each year.
- The switch machine was also added to achieve independent power supply for the test station and appearance station to prevent unnecessary energy consumption

##### Office energy conservation

- Merry Vietnam installed lighting sensors in the pantries and lavatories to prevent long-time lighting from causing a waste of electricity

#### Merry Shenzhen

##### Energy conservation of factory energy-consuming equipment

- Merry Shenzhen introduced the magnetic levitation energy-efficient air-conditioning system which significantly enhanced the system refrigeration efficiency to reduce electricity consumption by at least 30%, expecting to save electricity up to 1,587,222KWh each year.
- Merry Shenzhen also installed 40 coil air-conditioners in workshops to reduce and control workshop temperature, expecting to save electricity by about 29,700KWh each year

##### Energy conservation of employee dormitory

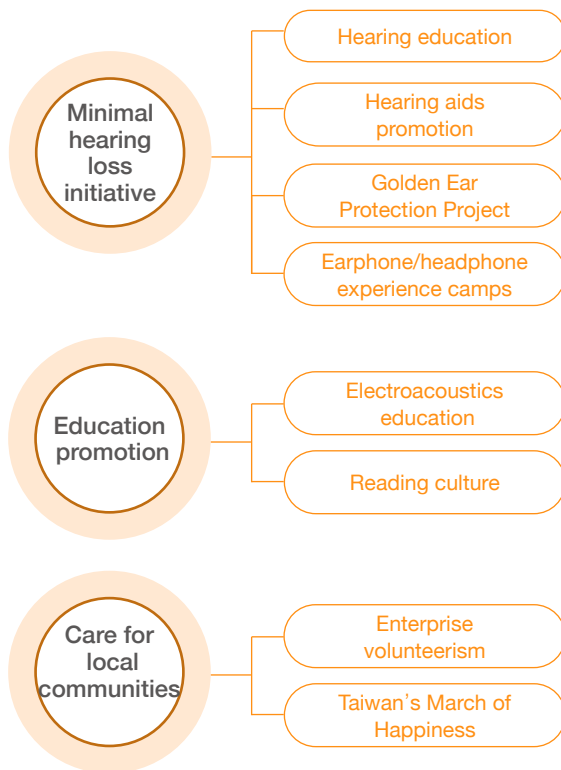
- Merry Shenzhen installed 184 temperature controller on the air-conditioning system of the employee dormitory, expecting to save electricity by about 54,648KWh each year.



## Promoting the minimal hearing loss initiative to advocate the knowledge of correct ear use

Emphasizing “education promotion” “care for community” promoting various long-term educational cultural projects over the years.

Due to WHO’s concerns about hearing impairment in recent years, based on electroacoustics, our core capacity, we take the initiative to advocate the “minimal hearing loss initiative,” unfold various action plans, and encourage employees to offer proactive care and contribute to society, hoping that these kind seeds can contribute to building a harmonious society.



Completed Taiwan’s first set of hearing protection teaching materials integrating with acoustics and also promoted them to remote townships.



Promoting the “Golden Ear Protection project” with the National Taiwan Symphony Orchestra

Earphone/headphone DIY camp: Understanding earphone/headphone structure and learning hearing protection



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