



Chang Wah Technology Co., Ltd.

**2022
Sustainability Report**

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About this Report

This report has been prepared in reference to the GRI Standards issued by the Global Reporting Initiatives (GRI) and in accordance with the “Rules Governing the Preparation and Filing of Sustainability Reports by TPEX Listed Companies” of the Taipei Exchange (TPEX). A corporate social responsibility (CSR) section is established on our corporate website.

The reporting boundary covers Chang Wah Technology Co., Ltd. (CWTC or the Company) and its subsidiaries. As for the scope of the reporting data, financial information and social data come from all entities within the consolidated financial statements while environmental, occupational safety and health data are from the production plants only.

Financial data in this report have been prepared in accordance with the International Financial Reporting Standards (IFRSs) endorsed by the Financial Supervisory Commission (FSC) and audited by Deloitte & Touche. Unless otherwise stated, figures are expressed in New Taiwan dollars.

The content of this report was reviewed for accuracy and completeness by department heads of each site for the Group’s ESG unit to compile the information and prepare the report. The entire report was then reviewed by the Sustainability Committee and reported to the Board of Directors prior to its release.

We also commissioned an independent third party, DNV Business Assurance Co., Ltd. (DNV), to undertake assurance over this report in accordance with the GRI Standards and the moderate level assurance requirements of DNV VeriSustain Protocol. The assurance statement is included in the appendix.

Reporting Period

This report is prepared for the period from January 1, 2022 to December 31, 2022.

The Company issues sustainability reports on a yearly basis, and this is the third report issued by the Company.

Previous report: September 2022

Current report: June 2023

Next report: Scheduled to be released in June 2024

Contact Information

For continuous communication with stakeholders, you are most welcome to contact us with your valuable suggestions. The contact information is as follows:





Address: No. 24, Kaifa Rd., Nanzi Dist., Kaohsiung City 81170, Taiwan (R.O.C.)



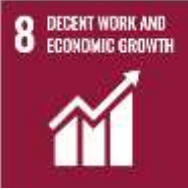
Telephone number: 886-7-365-3592




Fax number: 886-7-962-8203

Email address: cwtkh@cwtcglobal.com

Corporate website: <http://www.cwtcglobal.com/>

SDGs Core Objectives		Corresponding Issues	Achievements
	<p>To achieve the goal of “no poverty”, the government starts with strengthening the safety and care for the disadvantaged groups in the society. It provides support and social emergency assistance to the economically disadvantaged individuals, the elders and children, and the disaster-stricken communities as well as offers stable living arrangements and job security for all citizens, including the disadvantaged groups.</p>	1.3 Business performance	<ul style="list-style-type: none"> Assisted farmers with promotions and purchased agricultural produce failed to be sold due to the pandemic. Joined TPEX in supporting the non-profit organization - 1919 Food Bank.
	<p>For the goal of “good health and well-being”, the government increases the health insurance coverage for citizens of all ages and enhances responses to safety and health hazards for health risk management.</p>	4.4 Occupational safety and health	<p>There are regular employee health check-ups every year and the health risk classification approach in place to provide timely tracking of employee health, encourage treatments and prevent the occurrence of occupational diseases.</p>
	<p>The goal of “quality education” promotes lifelong learning, ensuring all citizens have access to comprehensive, fair and high-quality educational resources at all stages of their lives. In addition, it also focuses on supporting measures such as public childcare, technology and vocational skills training, assistances for disadvantaged groups, and cultural enrichment.</p>	4.2 Talent cultivation and nurturing	<ul style="list-style-type: none"> Vocational training courses covering a wide range of fields are held for employees every year. There was a total of 145,982 vocational training hours to 19,518 participants in 2022. The number of training hours increased by 13% compared to 2021.
	<p>The goal of “gender equality” promotes gender mainstreaming and a balanced sex ratio at birth. In view of the persistent gender disadvantage for women, the focus has been placed on protecting women against partner violence and sexual assault, eliminating the gap in unpaid domestic and family care for married women and encouraging women to take up managerial positions.</p>	4.1 Talent recruitment and workforce structure	<ul style="list-style-type: none"> Female employees accounted for approximately 37.83% of all employees in 2020 and the percentage raised to 38.6% in 2022. The proportion of female employees increases every year. The gender pay gap was about 44% in 2021. It narrowed down to 39% in 2022. We create a gender-friendly workplace with the provision of maternity allowance, breastfeeding room, breastfeeding time, parental leave without pay, and contracted nursery schools.

SDGs Core Objectives		Corresponding Issues	Achievements
	<p>The goal of “clean water and sanitation” covers two aspects: environmental quality and resource governance. It includes water resource management, air pollution control, waste and resource recycling, soil remediation, and environmental sanitation and requires public participation.</p>	3. Friendly environment	<ul style="list-style-type: none"> The discharge of wastewater is controlled by each site to comply with local regulations. There have been no environmental violations. With conservation measures such as water recycling systems within the plants and water-saving design of machinery and equipment, the water recycling rate increased by 6% every year from 26% in 2019 to 32% in 2021 and 38% in 2022. Precious metals such as silver, gold and palladium were recycled for reuse from waste. The volume of waste recycled amounted to 2,114 metric tons in 2022, nearly four times the volume in 2019.
	<p>The goal of “affordable and clean energy” focuses on ensuring everyone can enjoy affordable, stable, sustainable and modern energy; continuously refining modern and sustainable energy services; promoting energy and carbon-reducing energy systems; and increasing the proportion of clean electricity, e.g., renewable energy and gas.</p>	3.2 Energy management	<ul style="list-style-type: none"> Installed capacity of rooftop solar system increased by about 98kWp in 2020, and the cumulative capacity of rooftop solar system was 107kWp in 2022. The electricity intensity in 2022 was 5.32 kWh/thousands of NT dollars in 2022, an 8% reduction compared to 2021.
	<p>The goal of “decent work and economic growth” is twofold: “quality employment” aims to enhance labor productivity, strengthen youth employability, and promote gender equality and safety at workplace while “economic growth” aims to encourage and assist industries with investing in quality green economy and innovation developments through promoting the Internet of Things, digital economy, and financing assistance and thereby builds inclusive and sustainable economic strength.</p>	4. Harmonious workplace	<ul style="list-style-type: none"> Workplace safety is highly important for the Company. We set up a Safety and Health Committee, and regularly examine our operating environment to eliminate and improve unsafe conditions and potential hazards. Employment equality, respect for human rights, employee diversity, and prohibition of child labor and forced labor are incorporated into our recruitment principles and processes. Employees are entitled to appropriate salary packages and fair promotion opportunities regardless of

SDGs Core Objectives		Corresponding Issues	Achievements
			<p>gender, disability and any other factors.</p> <ul style="list-style-type: none"> We have a total of 233 non-citizen employees and 9 disabled employees.
	<p>The goal of “responsible consumption and production” is to master the use of materials and resource recycling, advocate the concept of cradle-to-cradle design, drive circular agriculture and develop sustainable tourism, thereby promoting green economy and securing sustainable consumption and production.</p>	<p>2.2 Conflict minerals 2.3 Local procurement policy 3.1 Environmentally sustainable development</p>	<ul style="list-style-type: none"> We adopt the latest version of ISO14001:2015 environmental management system and obtain relevant certifications. With the practice of responsible sourcing of minerals, we encourage all suppliers in the supply chain, including contractors and smelters, to participate in programs such as RBA and RMI. The proportion of local purchases was 43% in 2022. We established the Environmental Management Committee to review environmental management issues and effectiveness.
	<p>The “climate change” goal focuses on completing the mitigation and adaptation actions, which include to improve climate change adaptation capabilities, to strengthen resilience and reduce vulnerability, to execute greenhouse gas (GHG) control targets, and to enhance climate change and sustainability education as well as public awareness, in order to cope with climate change and its impacts.</p>	<p>4.4 Occupational safety and health</p>	<ul style="list-style-type: none"> No major disasters occurred at our Taiwan plants between 2019 and 2022. There are disaster prevention drills and education every year.
	<p>The goal of “peace, justice and strong institutions” aims at shaping a peaceful and diverse society, strengthening the social safety net and child protection, ensuring equal justice, and building a credible and inclusive system through transparent government data and online public participation.</p>	<p>1. Sustainable management</p>	<ul style="list-style-type: none"> We have a zero-tolerance policy for any non-compliant behaviors or activities and strictly prohibit corruption, bribery, embezzlement of public funds and other improper gains. We declare our non-acceptance of human trafficking and employment in any form of slavery, forced, bonded, indentured or prison labor. We stop corruption, discrimination and injustice in our procurement process; strictly prohibit our suppliers

SDGs Core Objectives		Corresponding Issues	Achievements
			<p>from engaging in child or forced labor; and closely observe fair business principles.</p> <ul style="list-style-type: none"> • A stakeholder mailbox is available as a channel for soliciting opinions and reporting of improper interests. • CWTC's existing suppliers and contractors did not impose any significant negative impacts, either actual or expected, on the environment, labor conditions, human rights, and society between 2019 and 2022.

Message from the Chairman

Since our establishment in 1989, Chang Wah Electromaterials Inc. has arrived at the “well-established” stage. Looking back on the entrepreneurial process over the past 30 years, I come to realize that “Gratitude, Responsibility, Cherishing, and Contribution” best describe and sum up the years. These four words can serve as the foundation of a corporate culture for sustainable development.

Gratitude

Over the years, we have come across many benefactors. I would like to make a special mention to Noboru Furukofu, a former director of Sumitomo Metal Mining Singapore Pte. Ltd. At the early stage of the Company, trust and assistance from Mr. Furukofu had secured us the agency right of Sumitomo, which laid the groundwork for our leading position in packaging materials in subsequent periods.

Responsibility

As the old saying goes, “God helps those who help themselves”. With support from benefactors, we shall be more inclined to take on responsibilities for our pursuit of corporate sustainability. We constantly enhance our operation, create stable profits and incorporate the concepts of corporate social responsibility into our business. In recent years, we have sponsored several community sporting events for us to become a more energetic company.

Cherishing

Enterprises are about creating economic value, generating profits for shareholders and investors and striving to maintain the value bases jointly forged by customers, shareholders and employees. Furthermore, they shall fulfill their social responsibilities by cherishing the communities, creating social values, and acknowledging the fact that wealth creation is equally important as social caring. This is the cornerstone of corporate sustainability.

Contribution

To achieve outstanding performance, one must improve the tools. We continue to invest in equipment, research and development as only advanced manufacturing machinery can boost production, enhance product quality and achieve production efficiency, thereby reducing costs and generating returns to customers. This is equivalent to sharpening the competitive edges of our customers and the Company, benefiting both parties with a win-win solution.

Prospects

In terms of our plans for the coming transformation, besides switching to manufacturing, we also actively explore investment opportunities. Through mutual technology support by integrating suppliers of upstream electronics needed by our investees, we aim to play a more crucial role in the industry. I look forward to CWE being not merely a key supplier in the semiconductor supply chain but also a standard setter in the market with substantial influence in the industry.

Canon Huang, Chairman of the CWE Group

1. Sustainable Management

1.1 Company Profile

Ticker number	6548	Company name	Chang Wah Technology Co., Ltd.	Industry	Semi-conductor industry
Address		No. 24, Kaifa Road, Nanzhi District, Kaohsiung City			
Chairman		Canon Huang	President	Chuen-Sing Hung	
Main businesses		Manufacturing of lead frames			
Date of incorporation		2009/12/24	Business ID number	70849957	
Paid-in capital		NT\$386,568,680	Par value per common share	NT\$0.4	

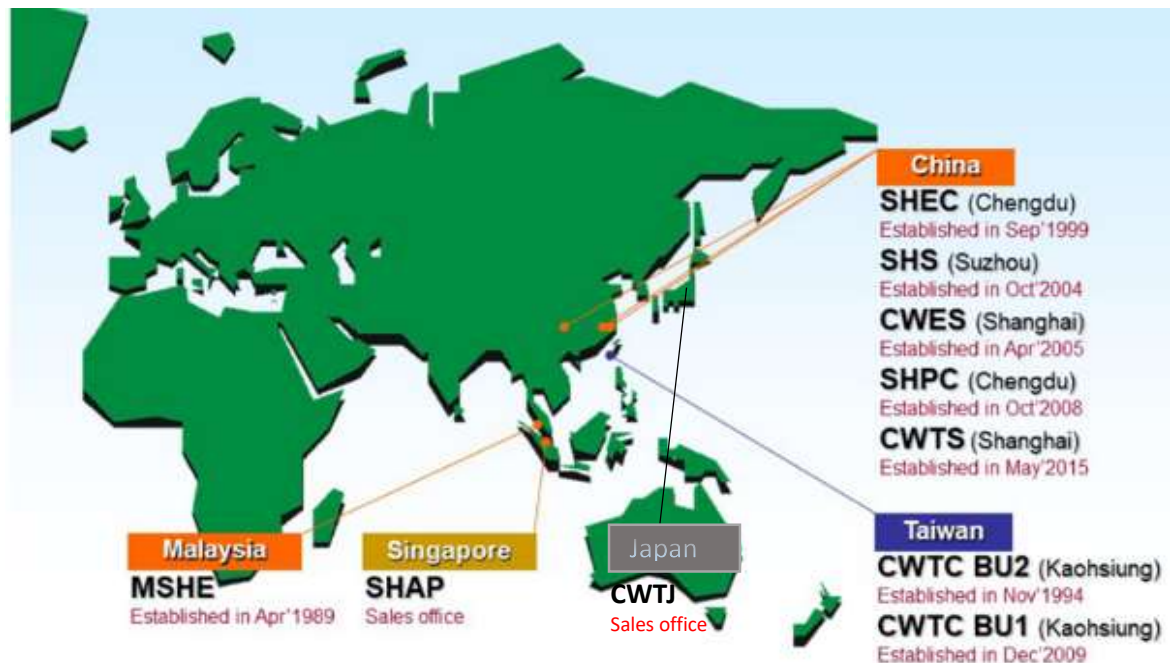
Chang Wah Technology Co., Ltd. was established on December 24, 2009, as a subsidiary of Chang Wah Electromaterials Inc. (CWE). The Company started with the development and production of packaging materials for LED lead frames and was listed on the Taipei Exchange under ticker number 6548 in 2016. It purchased the shares of SH Asia Pacific Pte. Ltd. (SHAP), an investee of the Japanese company, SH Materials Co., Ltd. (S.H.M), on March 17, 2017, marking its official start to the upstream metal lead frame industry to become a leading global IC substrate manufacturer. Our role in the IC and LED supply chain is to provide materials for packaging following wafer production. Wafers need to be packaged before they can be used in subsequent module production and be installed in/applied to various electronic consumer products. Same as other IC and LED packaging companies, we are material suppliers of the back-end process in the early stages of the entire industry chain. CWTC is one of the top five lead frame suppliers in the world.



● **Significant Events**

Category	Significant Events
Key Technology or Service Model	<ul style="list-style-type: none"> CWTC focuses on pre-mold IC technology. Leading international customers such as IDM and ASTS have started to use our products. With the main R&D center based in Taiwan, our R&D funding increases every year. We have a total of 125 patents. Our ENEPIG post plating facilities employ the industry's leading technology worldwide. We have the exclusive pre-mold metal substrate technology in the world. CWTC is the only company in the world that can vertically (or horizontally) integrate the IC substrate supply chain. The Company adopts the international quality assurance system ISO9001, and obtains ISO9001 certification from the Association Française de Normalisation (AFNOR) in July 2011, ISO/TS16949 quality management systems certification from the AFNOR in February 2015, and ISO14001 environmental management systems certification from the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) in April 2016. We have established a hierarchical and standardized quality and environmental management system.
Market Positioning	<ul style="list-style-type: none"> We specialize in manufacturing metal substrates products with our lead frames rank among the world's top five. The EMC LED lead frames developed and produced by CWTC belong to the mainstream EPOXY lead frames with advantages of high density, heat resistance and airtightness as well as yellowing resistance. Our core technology lies in the key process technology for high-precision lead frames, which is completely different from the traditional PPA LED lead frames in terms of process and structure. We develop industry-leading pre-mold IC packaging technology for LED lead frames. We are actively promoting the commercialization of mini LED products.
Brand Development	<ul style="list-style-type: none"> We market internationally under the brand of CWTC. We become the top 5 strategic partners of well-known international companies including the IDM. Our worldwide sales exceed NT\$10 billion, making us one of the largest groups in the global metal substrate industry in terms of product sales. At present, we have 9 overseas branches/subsidiaries and second-tier subsidiaries located mostly in the Asia-Pacific region.
Operating Performance	<ul style="list-style-type: none"> Our revenue amounted to NT\$14.4 billion in 2022, up 13% from 2021, with a gross margin of 30%. Our earnings per share equaled NT\$3.01 (with a par value of NT\$0.4 per share), representing a 57% increase compared to 2021.

● Operation Sites



Chang Wah Technology Co., Ltd.	
Location	No. 24, Kaifa Rd., Nanzi Dist., Kaohsiung City, Taiwan (R.O.C.); No. 16, E. 7th St., Nanzi Dist., Kaohsiung City, Taiwan (R.O.C.) (Plant 2); No. 133, Jing 5th Rd., Nanzi Dist., Kaohsiung City, Taiwan (R.O.C.) (Plant 3)
Main Business	Manufacturing of lead frames
Japan branch of CWTC	
Location	8F, 1-10-2, Kanda-Sudacho, Chiyoda-ku, Tokyo, Japan
Main Business	Trading of lead frames
SH Electronics Suzhou Co., Ltd.	
Location	No. 123, Longtan Road, Suzhou Industrial Park, Jiangsu Province, China
Main Business	Manufacturing of lead frames
SH Electronics Chengdu Co., Ltd.	
Location	No. 7, Xin Yuan South 2nd Road, Singapore Industrial Park, Chengdu High-Tech Industrial Development Zone, Sichuan Province, China
Main Business	Manufacturing of lead frames
SH Precision Chengdu Co., Ltd.	
Location	Plant No.6, Chengdu Export Processing Zone (West Zone), No.8, Kexin Road, West Park, Chengdu Hi-tech Zone, Sichuan Province, China
Main Business	Manufacturing of lead frames

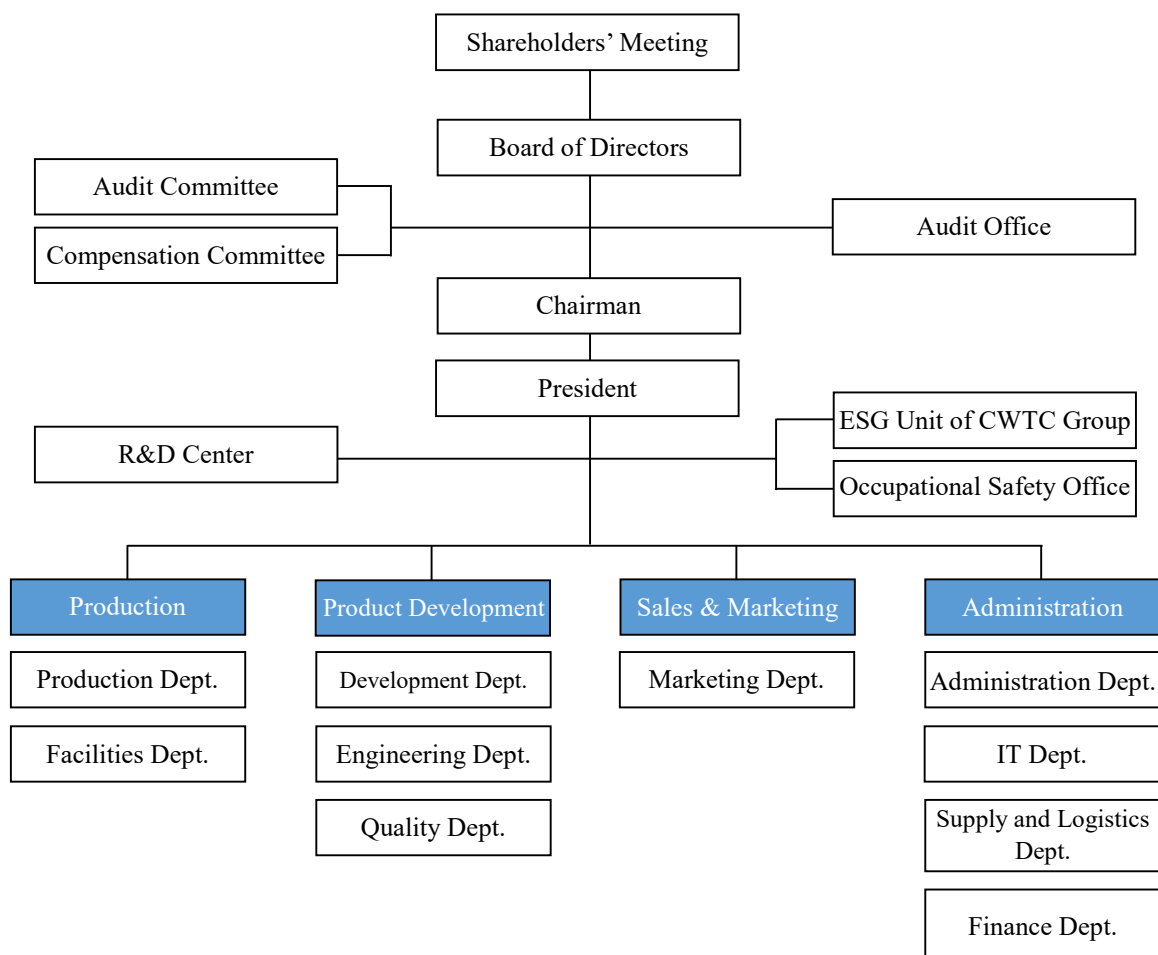
Shanghai Chang Wah Electromaterials Inc.	
Location	Rm. 4, 20F., Mega Plaza, No. 1027, Changning Road, Shanghai, China
Main Business	Trading of IC packaging materials
CWTC (Shanghai) Inc.	
Location	Rm. E01, 2F., No. 207, Fute North Road, Pilot Free Trade Zone, Shanghai, China
Main Business	Trading of lead frames
SH Asia Pacific Pte. Ltd.	
Location	10 Eunos Road 8, #05-04/05, Singapore Post Centre, Singapore, 408600
Main Business	Trading of lead frames
Malaysian SH Electronics Sdn. Bhd.	
Location	Lots 5, 7 & 9, Jalan Ragum 15/17, 40200 Shah Alam, Selangor Darul Ehsan, Malaysia
Main Business	Manufacturing of lead frames

1.2 Corporate Governance

With the goal of protecting shareholder rights, we not only maintain a sound corporate operation and strive for the optimization of corporate value, but also secure the rights of all stakeholders for the sustainable operation of the Company.

We examine the status of our governance practices and their effectiveness based on the corporate governance evaluation promoted by the FSC and our “Code of Practice for Corporate Governance” approved by the Board of Directors in 2020. Also, through the process of self-assessment, the management places greater importance on the continuous improvement of our corporate governance system, aiming to further build and enhance the governance quality.

● Organizational Structure



Department	Main Functions
Audit Office	Implementation of internal audit and risk assessment, planning and execution of internal control system, assessment of operational efficiency, and provision of system improvement recommendations.
President	Planning and execution of the Company's overall operation, development and execution of the Company's medium and long-term operational strategies, and establishment and supervision of the operation and system of various departments.
Occupational Safety Office	Formulation, planning, supervision and promotion of occupational safety and health management issues.
ESG Unit of CWTC Group	Planning and promotion of the Group's sustainable development objectives with a focus on sustainable risk management and opportunities.
R&D Center	Short, medium and long-term research and development plans for the Group's products and technologies.
Marketing Dept.	Market development and sales; customer services and inquiries; business resource planning, management and utilization; and industry data investigation and collection.
Development Dept.	Market survey for new products, research and development and production of new technologies and molds, and business activities and customer services for new products at the initial stage.
Engineering Dept.	Process yield monitoring and quality yield improvement, project development for products, pilot testing for mass production of new product, sample delivery planning and shipment control, and estimation of components and losses of equipment in the plant.
Quality Dept.	Establishment and maintenance of quality systems, supplier audit management, incoming material and process quality control, responses and improvement associated with internal, external and customer audits, assurance on product reliability testing, maintenance of calibration systems, handling and tracking of customer complaints.
Production Dept.	Planning of production line operation and production process, control of production schedule and planning of production targets.
Facilities Dept.	Establishment of safety operation standards; inspection of risk factors and collaboration on elimination; training on labor laws and regulations as well as safety and health; operation of environmental protection equipment; treatment of sewage; and maintenance of plant and utility facilities.
Supply and Logistics Dept.	Planning of production capacity, control of delivery schedules, coordination of production and sales, material planning and production cost control, management of outsourced production and warehouse control.
Finance Dept.	Finance and accounting management, funding arrangements, tax management, investor relations, etc.
Administration Dept.	Human resource planning, various education courses, corporate operation management, general affairs, etc.
IT Dept.	Establishment, introduction and maintenance of software and hardware information systems and development of smart technology applications.

● Board of Directors

The Board of Directors is the highest governance body of CWTC and is accountable to the shareholders' meeting. The Board as a whole possesses capabilities of business judgement, accounting and financial analysis, and business management. It exercises its powers with a high degree of self-discipline and prudence, and conducts the Company's business in accordance with the Board resolutions, except for matters that shall be resolved by the shareholders' meeting in accordance with the law or the Articles of Incorporation. It is also responsible for formulating the Company's corporate social responsibility and sustainable development strategies.

The term of the current Board is from July 22, 2021 to July 21, 2024. The professional qualifications of the Directors and the independence of the Independent Directors are as follows:

Name Conditions	Professional Qualifications and Experiences	Independence Status	Number of Other Public Companies in Which the Individual is Concurrently Serving as a Director
Yuan Yao Energy Technology Co., Ltd. Representative: Canon Huang	He graduated from the Department of Mechanical Engineering in Chung Yuan Christian University. Once served as an executive at several multinational corporations such as ASE Electronics Inc., Orient Semiconductor Electronics Ltd., and Wah Lee Industrial Corp., he has been involved in the operation and strategic management of semiconductor industry for more than 30 years. Besides being the Chairman of CWE Group (including Chang Wah Electromaterials Inc., the Company and JMC Electronics Co., Ltd.), he is a director in companies within the electronic technology industry chain with expertise in governance. Thus, he has experience in marketing, industry knowledge, leadership, decision-making and business management. He is not a person of any conditions defined in Article 30 of the Company Act.	-	6
Chang Wah Electromaterials Inc. Representative: Siou-Cyuan Huang	He graduated from the Department of Electrical Engineering in Tatung University. Once served as a vice president or vice chairman at several multinational corporations such as Hewlett Packard Enterprise Taiwan, Hon Hai Technology Group (Foxconn), and Innolux Corporation, he has been involved in the high-tech industry for more than 30 years. At present, he is the chairman of Vizionfocus Inc., and a director of Vizio Inc. He has vast experience in corporate governance, marketing, industry knowledge, leadership, decision-making and business management. He is not a person of any conditions defined in Article 30 of the Company Act.	-	3
Chang Wah Electromaterials Inc. Representative: Chuen-Sing Hung	He graduated from Hong Kong Polytechnic University. Once served as the president of Possehl Electronics Hong Kong Ltd. and SH Electronics Taiwan Co., Ltd., he has been involved in the operation and strategic management of semiconductor industry for more than 30 years. He is now the President of the Company and a director in entities of the CWE Group. He has vast	-	3

Name	Conditions	Professional Qualifications and Experiences	Independence Status	Number of Other Public Companies in Which the Individual is Concurrently Serving as a Director
		experience in corporate governance, marketing, industry knowledge, leadership, decision-making and business management to give opinions concerning governance and operation management to the Board of the Company. He is not a person of any conditions defined in Article 30 of the Company Act.		
Chang Wah Electromaterials Inc. Representative: Rong-Dong Tsai		He graduated from Indiana University with an MBA. Once served as the president of Ta Chong Commercial Bank Co., Ltd. and Taishin International Bank Co., Ltd., he has been involved in the operation and strategic management of finance industry for more than 30 years. He is now the independent director of companies including Elite Material Co., Ltd. and Mercuries Life Insurance Co., Ltd. He has vast experience in corporate governance, marketing, industry knowledge, leadership, decision-making, business management as well as accounting and financial analysis to give opinions concerning governance and operation management to the Board of the Company. He is not a person of any conditions defined in Article 30 of the Company Act.	-	3
Yi-Jing Lin		She graduated from the Department of Accounting in Tunghai University. She passed the Senior Examinations for Certified Public Accountants and has a CPA license. She was once an assistant vice president of Deloitte & Touche, specializing in corporate finance and accounting. Serving as an independent director in several companies including Control Technology Co., Ltd. and Sun Rise E&T Corporation, she has vast experience in business management as well as accounting and financial analysis to give opinions concerning governance and operation management to the Board of the Company. She is not a person of any conditions defined in Article 30 of the Company Act.	She satisfies the independence criteria after being verified against independence elements set out in the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by the FSC.	2
Ren-Lin Lin		He graduated from the City University of New York with a Master of Information Management. Once served as the vice president of HanYu Electronic Technology Inc. and the president of Konlin Digital Technology Co., Ltd., he has been involved in the operation and strategic management of electronics industry for more than 20 years. He is now the president of Hsin Yi Recreation Enterprise Co., Ltd. He has vast experience in corporate governance, marketing, industry knowledge, leadership, decision-making and business management to give opinions concerning governance and operation management to the Board of the Company. He is not a person of any conditions defined in Article 30 of the Company Act.	He satisfies the independence criteria after being verified against independence elements set out in the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by the FSC.	0
Jia-Ruey Ou		He graduated from the Institute of Traffic and Transportation of National Chiao Tung University	He satisfies the independence criteria after	0

Name	Conditions	Professional Qualifications and Experiences	Independence Status	Number of Other Public Companies in Which the Individual is Concurrently Serving as a Director
		with a PhD. He has been the Director General of Bureau of Energy, Ministry of Economic Affairs, the president of Da-Yeh University, and the chairman of CPC Corporation, and accumulated vast experience in the industry, government and academy. He is now the chairman of Sino-Arabian Cultural & Economic Association. He has vast experience in corporate governance, leadership, decision-making and business management to give opinions concerning governance and operation management to the Board of the Company. He is not a person of any conditions defined in Article 30 of the Company Act.	being verified against independence elements set out in the “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies” promulgated by the FSC.	

The fifth Board held a total of 12 Board meetings up to 2022. The attendances of Directors were as follows:

Name	Attendance in Person	Attendance by Proxy	Attendance Rate (%)	Remark
Yuan Yao Energy Technology Co., Ltd. Representative: Canon Huang	12	0	100%	
Chang Wah Electromaterials Inc. Representative: Siou-Cyuan Huang	12	0	100%	
Chang Wah Electromaterials Inc. Representative: Chuen-Sing Hung	12	0	100%	
Chang Wah Electromaterials Inc. Representative: Rong-Dong Tsai	12	0	100%	
Yi-Jing Lin	12	0	100%	
Jia-Ruey Ou	12	0	100%	
Ren-Lin Lin	12	0	100%	

Note: Directors with conflict of interest had recused themselves from the discussion and voting of issues.

● Board Diversity

Board diversity policy

The Board diversity policy is set out in Chapter III “Enhancement of Board Function” of the Company’s “Code of Practice for Corporate Governance”.

The Board shall direct corporate strategies, oversee the management and be accountable to the Company and the shareholders’ meetings. Procedures and arrangements of the governance system shall ensure the Board would exercise its powers pursuant to applicable laws and regulations, the Articles of Incorporation or resolutions of the shareholders’ meeting.

The Company’s Board shall have seven to nine Directors based on the business scale, shareholdings of major shareholders and operations.

Board composition shall reflect diversity. Besides limiting the number of Directors who are also managers of the Company to less than one-third of the Board seats, appropriate diversity guidelines are formulated based on operations, business types and developments. These guidelines shall include but not limited to standards of the following two aspects:

1. Fundamental conditions and values: Gender, age, nationality, culture, etc. and female Directors are advised to account for one-third of all Directors.
2. Professional knowledge and skills: Professional background (e.g., law, accounting, industry, finance, marketing or technology), professional skills, industry experience, etc.

Board members shall generally possess the knowledge, skills and competence required to carry out their duties. To achieve the ideal goal of governance, the Board as a whole shall possess the following capabilities:

1. Business judgement
2. Accounting and financial analysis
3. Business management
4. Crisis management
5. Industry knowledge
6. Global market perspective
7. Leadership
8. Decision-making

Specific management targets of Board diversity

Board diversity facilitates Board effectiveness. The Company’s nomination and selection of Board members comply with the Articles of Incorporation and adopt the candidate nomination system, where the finance department would examine the candidates’ qualification before submitting the list of candidates to the Board for resolution to ensure the diversity and independence of Board members. Besides limiting the number of Directors who are also managers of the Company to less than one-third

of the Board seats, more than one female Director candidate can be invited and nominated. Also, Directors with different professional knowledge and skills are selected to offer ideas and contributions of different dimensions, thereby further strengthening the Board function.

Implementation of Board diversity

Based on the specific management targets of limiting the number of Directors who are also managers of the Company to less than one-third of the Board seats, including at least one female Director and having the Board's expertise covering corporate strategy, accounting, taxation, finance, law, administration and production management, seven Directors (including three Independent Directors) were elected in July 2021 for the fifth Board of the Company. There is one female Director and the Directors' professional backgrounds range from industry, accounting, technology to management. In addition, the Directors have the knowledge, skills and competence required to carry out their duties, and their industry experience and professional competence are diverse and complementary.

Furthermore, Directors who are also employees of the Company account for 28.57% of all Directors while Independent Directors and female Director account for 42.86% and 14.29%, respectively. The Company's Independent Directors have not served consecutively for more than three terms. The specific management targets of Board diversity have all been achieved.

Diverse backgrounds of Board members are as follows:

Diversified Core Competence Name		Basics								Professional Knowledge and Skills					
		Nationality	Gender	Employees	Age			Independent Director Term and Experience			Industry Operation	Marketing Management	Technology R&D	Risk Management	Accounting and Financial Analysis
					Less than 60 years old	61~70 years old	More than 71 years old	Less than 3 years	3~9 years	More than 9 years					
Chairman	Yuan Yao Energy Technology Co., Ltd. Representative: Canon Huang	ROC	Male	V		V					V	V	V	V	
Director	Chang Wah Electromaterials Inc. Representative: Siou-Cyuan Huang	ROC	Male				V				V	V	V	V	
Director	Chang Wah Electromaterials Inc. Representative: Chuen-Sing Hung	HK	Male	V	V						V	V	V	V	
Director	Chang Wah Electromaterials Inc. Representative: Rong-Dong Tsai	ROC	Male			V					V	V		V	V
Independent Director	Yi-Jing Lin	ROC	Female		V				V					V	V
Independent Director	Ren-Lin Lin	ROC	Male			V			V		V	V		V	
Independent Director	Jia-Ruey Ou	ROC	Male			V		V			V	V		V	

● Continuing Education of Directors

Year	Number of Directors	Duration	Average Hours
2022	7	53	7.57
2021	7	53	7.57

● Director Performance and Compensation

We have established the Board performance evaluation system. Evaluations are carried out by external independent agencies or a team of experts every three years. They measure the performance of the Board and individual Directors in directing and overseeing the Company's operation using non-financial indicators with sustainability elements in order to enhance the Board's overall effectiveness.

Directors completed the 2022 Board performance evaluation in December 2022. The evaluation focused on "level of participation in corporate operations", "enhancement on the quality of Board decisions", "composition and structure of the Board", "election and continuing education of Directors" and "internal control". Also, the Taiwan Association of Board Governance is commissioned for external evaluation of the Board and providing specific recommendations to enhance the Board functions and operation efficiency. The evaluation results were submitted to members of the Compensation Committee in 2023 as references for Director compensation. Compensation policy of the Company's highest governance body, i.e., the Board, is disclosed in the annual report every year. Please refer to the annual report for details.

Results of the Board performance evaluation

Year	Internal Evaluation	External Evaluation
2022	4.72/5 A sound operation of the Board.	With good communication and respect for professionals, the Board moves towards positivity and progression.
2021	4.51/5 A sound operation of the Board.	

The Company's Articles of Incorporation explicitly states that the remuneration to Directors shall not exceed 1.5% of the Company's profits for the year, and the remuneration of Directors and managers shall be reviewed by the Compensation Committee and approved by the Board before it can be distributed.

Compensation policy of the President

As for the senior executives, the President's compensation includes a fixed component where the severance pay and pension benefits are distributed in accordance with the law, and a variable component which incorporates KPIs and short and medium-term incentives. The compensation is distributed after being reviewed and verified by the Compensation Committee.

In 2022, the ratio of the President's compensation to the median salaries of all other employees was 10 to 1 and the ratio of changes in annual compensation was zero.

● Audit Committee

The Audit Committee is responsible for the fair presentation of the Company's financial statements, the appointment (discharge), independence and performance of the Company's CPAs, the effective implementation of internal controls, regulatory compliance, and controls over existing or potential risks of the Company. Its main duties are listed as follows:

1. To formulate or amend internal control system pursuant to Article 14-1 of the Securities and Exchange Act.
2. To assess the effectiveness of the internal control system.
3. To formulate or amend procedures for significant financial or business activities pursuant to Article 36-1 of the Securities and Exchange Act; for example, the acquisition or disposal of assets, derivatives transactions, lending funds to other parties, and provision of endorsements or guarantees to other parties.
4. Matters involving Directors' personal interests.
5. Material asset or derivative instrument transactions.
6. Significant loans to others or provision of endorsement or guarantees.
7. Offering, issuance, or private placement of equity-type marketable securities.
8. Appointment and discharge of CPAs or their compensation.
9. Appointment or discharge of a financial, accounting, or internal audit officer.
10. Annual and semi-annual financial reports.
11. Other material matters governed by the Company or the competent authorities.

Operation of the Audit Committee:

The Audit Committee comprises three members.

The term of the existing Committee members is from July 22, 2021 to July 21, 2024.

Member details of the third Audit Committee are as follows:

Name	Education	Work Experiences	Current Positions
Yi-Jing Lin	Department of Accounting, Tunghai University	Assistant Vice President of Deloitte & Touche Assistant manager of Deloitte & Touche Supervisor of An Wei International Co., Ltd.	CPA of Ching Cheng Accounting Firm Responsible person of Ching Cheng Management Consulting Co Ltd. Independent Director, the Audit Committee member and the Compensation Committee member of Control Technology Co., Ltd. Supervisor of Ken Sean Industries Co., Ltd. Independent Director, the Audit Committee member and the Compensation Committee member of Sun Rise E&T Corporation Independent Director, the Compensation Committee member and the convener of the Audit Committee of CWTC
Jia-Ruey Ou	Ph.D., Institute of Traffic and Transportation, National Chiao Tung University	Chairman of CPC Corporation Director of China Steel Corporation President of Da-Yeh University Director General of Bureau of Energy, Ministry of Economic Affairs Director of Export Processing Zone Administration, Ministry of Economic Affairs	Chairman of Sino-Arabian Cultural & Economic Association Independent Director, the Audit Committee member and the Compensation Committee member of CWTC
Ren-Lin Lin	Master of Information Management, City University of New York	President of Konlin Digital Technology Co., Ltd. Vice President of HanYu Electronic Technology Inc. Manager of Walsin Lihwa Corp.	President of Hsin Yi Recreation Enterprise Co., Ltd. Independent Director, the convener of the Compensation Committee and the Audit Committee member of CWTC

● **Compensation Committee**

Composition of the Compensation Committee

Title (Note 1)	Condition	Professional Qualifications and Experiences	Independence Status	Number of Other Public Companies in Which the Individual is Concurrently Serving in the Compensation Committee	Remarks
	Name				
Independent Director (Convener)	Ren-Lin Lin	He graduated from the City University of New York with a Master of Information Management. Once served as the vice president of HanYu Electronic Technology Inc. and the president of Konlin Digital Technology Co., Ltd., he has been involved in the operation and strategic management of electronics industry for more than 20 years. He is now the president of Hsin Yi Recreation Enterprise Co., Ltd. He has vast experience in corporate governance, marketing, industry knowledge, leadership, decision-making and business management to give opinions concerning governance and operation management to the Board of the Company. He is not a person of any conditions defined in Article 30 of the Company Act.	He satisfies the independence criteria after being verified against independence elements set out in the “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies” promulgated by the FSC.	0	0
Independent Director	Yi-Jing Lin	She graduated from the Department of Accounting in Tunghai University. She passed the Senior Examinations for Certified Public Accountants and has a CPA license. She was once an assistant vice president of Deloitte & Touche, specializing in corporate finance and accounting. Serving as an independent director in several companies including Control Technology Co., Ltd. and Sun Rise E&T Corporation, she has vast experience in business management as well as accounting and financial analysis to give opinions concerning governance and operation management to the Board of the Company. She is not a person of any conditions defined in Article 30 of the Company Act.	She satisfies the independence criteria after being verified against independence elements set out in the “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies” promulgated by the FSC.	2	0

Title (Note 1)	Condition	Professional Qualifications and Experiences	Independence Status	Number of Other Public Companies in Which the Individual is Concurrently Serving in the Compensation Committee	Remarks
	Name				
Independent Director	Jia-Ruey Ou	He graduated from the Institute of Traffic and Transportation of National Chiao Tung University with a PhD. He has been the Director General of Bureau of Energy, Ministry of Economic Affairs, the president of Da-Yeh University, and the chairman of CPC Corporation, and accumulated vast experience in the industry, government and academy. He is now the chairman of Sino-Arabian Cultural & Economic Association. He has vast experience in corporate governance, leadership, decision-making and business management to give opinions concerning governance and operation management to the Board of the Company. He is not a person of any conditions defined in Article 30 of the Company Act.	He satisfies the independence criteria after being verified against independence elements set out in the “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies” promulgated by the FSC.	0	

Note1: For the “Title” column, please fill in “Independent Director” or “Others”. (The convener shall be indicated.)

Responsibilities of the Compensation Committee:

1. Formulate and regularly review the performance evaluations of Directors and managers, and the compensation policies, systems, standards and structures.
2. Regularly evaluate and determine the remuneration of Directors and managers.

Operation of the Compensation Committee:

The Compensation Committee comprises three members.

The term of the existing Committee members is from July 22, 2021 to July 21, 2024.

● Code of Business Integrity

The Board has gradually adopted rules of business conducts and ethics, and established policies, guidelines, operating procedures, code of conducts and grievance systems to prevent unethical conducts. We are committed to conducting all business activities and actions with integrity, and has dedicated a chapter on employees' code of conduct in our working rules, which is applicable to all employees of the Company and its subsidiaries. The Group's ESG unit would assess our business integrity performance every year and report the results to the Board of Directors.

Relevant rules

Internal Rules	Date of Establishment (Amendment)
Code of Ethical Conduct	October 21, 2015
Code of Business Integrity	October 21, 2015
Procedures and Guidelines of Business Integrity	October 21, 2015
Procedures for Preventing Insider Trading	October 21, 2015
Code of Practice for Corporate Social Responsibility	March 17, 2022
Code of Practice for Corporate Governance	February 21, 2023
Risk Management Policy	February 21, 2023

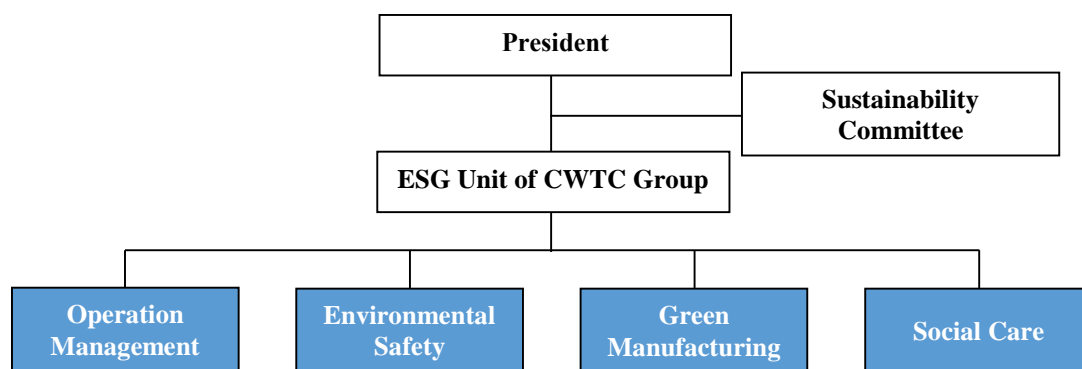
Compliance matters

Prevent conflict of interest
Avoid opportunities to pursue personal gains
Confidentiality
Fair trade
Safeguarding and proper use of corporate assets
Regulatory compliance
Incentives for reporting of illegal or unethical activities
Disciplinary measures

● Promotion of Sustainable Development

In terms of our framework for promoting sustainable developments, the Board appoints the President as the convener, and the Group's ESG unit coordinates relevant matters and incorporates sustainable developments into the President's KPIs. The Board oversees and gives guidance on environmental, social and governance issues of sustainable development, and receives reports on the effectiveness of promotion and corporate strategies as well as an annual update on the scope and content for the preparation of sustainability reports. The Board reviews strategy progress and urges the management team to make adjustments when necessary.

Sustainable development framework



Governance for promotion of sustainable development

ESG Unit of CWTC Group: Align with governance trends and comply with laws and regulations.

Environmental Management and Facilities Unit: Establish safety operation standards, inspect risk factors and collaborate on elimination, operate environmental protection equipment and manage sewage treatment.

Environmental Safety Unit of CWTC Group: Maintain labor relations, employee health and safety, and arrange various education courses.

Risk assessment for promotion of sustainable development

Material Issue	Risk Evaluation Item	Risk Management Policy and Measure
Environmental	Environmental protection	Push for a reduction in process water consumption, build wastewater recycling facilities, and improve wastewater treatment efficiency with the target of increasing the recycling volume by 10% each year.
	Climate change	Commit to energy saving and carbon reduction, carry out GHG inventory annually and set the target of reducing carbon dioxide emissions every year.

Material Issue	Risk Evaluation Item	Risk Management Policy and Measure
Social	Occupational safety	Conduct at least two plant-wide disaster and emergency drills every year, covering earthquakes, fires, chemical leakage, etc. and incorporating scenario setting based on operation characteristics and hazard types.
	Employee recruitment and training	Give priority to locals in terms of recruitment and hiring. Our training courses include orientation and on-the-job training. Courses are assessed with effectiveness evaluated to motivate employees and obtain appropriate authorization.
Corporate governance	Regulatory compliance	Ensure regulatory compliance of all personnel and operations by establishing a governance framework and implementing internal control mechanisms.

Details and number of communications between the Group's ESG unit and the Board of Directors in 2022

Date	Description
March 17	Business integrity performance with reviews revealing there were no violations in the previous year
May 6	GHG inventory and schedule planning for verification, where implementation and progress are monitored on a quarterly basis
August 5	Scope and analysis of material issues of sustainability reports
November 4	GHG inventory and progress report on verification planning

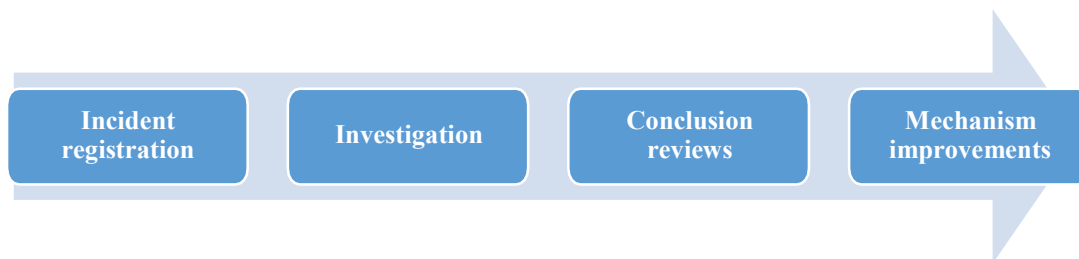
● Prevention and Grievance

In order to guide our employees and stakeholders to understand the Company's CSR policy, we release relevant policies and practices on our corporate website and communicate the concept and our actions through various means such as education and promotion within the Company.

In terms of human rights, we invite labor and management representatives for labor-management meetings. In 2022, four meetings were held and covered 100% of the total number of employees. Proposals related to operation and personnel were discussed during the meetings. Relevant units were invited to provide explanations on the proposals and give follow-up reports in the next meeting.

In the environmental aspect, we held the Environmental Management Committee meetings quarterly in 2022, covering 100% of our employees. In addition to promotion of laws and regulations and education and training, environmental monitoring and measurements as well as internal and external communications and proposals were fully discussed and resolved in the meetings.

Grievance mechanism



The Company has established a grievance procedure. To ensure its effectiveness, the auditing officer is appointed to handling reported incidents. A stakeholder mailbox (michelle.hsu@cwtcglobal.com) is created as a channel for soliciting opinions and reporting of improper interests, and the whistleblower's identity is strictly kept confidential. If the investigation reveals any material irregularities or the Company may suffer significant losses, a report would be prepared immediately to notify the Independent Directors in writing. As of the end of 2022, the Company has not received any reporting of incidents.

● Internal Audit

The purpose of internal audit is to assist the Board of Directors and management in examining and reviewing deficiencies within the internal control system and measuring the effectiveness and efficiency of operations, the reliability of financial statements and the level of compliance with relevant laws and regulations. Also, it provides timely recommendations for improvement to ensure the operation of the internal control system would remain effective and to serve as a basis for reviewing and amending the internal control system so as to promote a sound operation of the Company.

Audit work is as follows:

1. The Audit Office draws up audit plans for the next year based on risk assessment results. The plans shall include items set out in Article 13 of the "Regulations Governing Establishment of Internal Control Systems by Public Companies".
2. The Audit Office examines the execution of operations based on the planned audit items on a monthly basis and submits audit reports to the Directors and Audit Committee for review.
3. The Audit Office reports on details of internal audits at the quarterly Board meeting.
4. The Audit Office pushes the parent company and its subsidiaries to conduct self-inspections at least once a year. The evaluation form would be filled out by each unit and reviewed by the Audit Office before being submitted to the President and Chairman for review. The self-inspection results are used as the main basis for assessing the effectiveness of the entire internal control system and for issuing the statement of internal control system.

● Regulatory Compliance

Department	Regulatory Compliance	External Assistance
President Office	Report regularly on legal disputes and the progress of related litigations and cases, and take actions accordingly.	Plan for external legal advice and services.
Administration Dept.	Conduct internal training on relevant laws and regulations to strengthen employees' awareness of legal compliance.	Coordinate with external consultants to plan and obtain certificates of relevant educational training.
Departments and Subsidiaries	Comply with local laws and regulations.	Work with local authorities to conduct regulatory training courses and obtain relevant certificates.
Audit Office	Implement internal audits and control business risks.	

In 2022, there was one violation of the Labor Standards Act in Taiwan with a fine of NT\$50,000. Items in violation have been corrected.

Violations of the past and improvements

Year	Category	Location	Description	Fine	Improvement
2022	Social	Plant 2	Violation of Paragraph 2, Article 32 of the Labor Standards Act: Overtime hours shall not exceed 46 hours per month	NT\$50,000	Strengthened our control on the threshold for overtime applications within the HR system and instructed department heads to promote the concept of not to work overtime.
2021	Environmental	Plant 1	Violation of waste filing category	NT\$6,000	Corrected the filing and strengthened our review mechanism and education training.
2020	Environmental	Suzhou	Violation of wastewater discharge standards with a total copper concentration exceeding the standard	RMB 300,000	Improved equipment to enhance wastewater treatment. The wastewater discharged has met the regulatory standards.

Major violations of the Company are one-off events. The cumulated fines totaled NT\$1 million.

- **Participation in Industry Associations**

The Company increasingly participates in industry associations and relevant activities. Through participation, we can maintain good interactions with the industry and the society.

Organization	Position
Taiwan Corporate Governance Association	Member
Taiwan Institute of Directors	Member
The Institute of Internal Auditors, R.O.C.	Member
Accounting Research and Development Foundation	Member
Taiwan External Trade Development Council	Member

1.3 Business Performance

CWTC products center around metal substrates. We are involved in the manufacturing, R&D and selling of IC lead frame packaging materials to serve the global top-tier IC manufacturing and packaging foundries and vertically integrated manufacturers. We will continue to expand our own capacity and execute M&A strategies in pursuit of long-term sustainable revenue growth. Our target is to become the world's largest IC lead frame supplier by 2025. Our sales were NT\$14,431,284 thousand in 2022, an increase of approximately 12.8% from 2021.

● Financial Performance

Item (In thousands of NT\$)	2022		2021		2020	
	Amount	%	Amount	%	Amount	%
Net revenue	14,431,284	100%	12,792,169	100%	9,678,146	100%
Gross profit	4,385,586	31%	3,405,690	26%	1,804,906	19%
Operating income	3,121,660	22%	2,210,299	17%	960,286	10%
Income before income tax	3,634,255	25%	2,249,184	18%	966,360	10%
Net income	2,844,969	20%	1,738,645	14%	790,618	8%
Cash and cash equivalents	5,625,570	30%	3,685,370	25%	2,501,535	21%
Current assets	12,255,703	65%	10,080,244	68%	7,413,573	61%
Current liabilities	5,672,796	30%	4,335,495	29%	3,215,572	26%
Long-term loans	2,473,985	13%	1,736,873	12%	3,250,392	27%
Total equity	9,774,807	52%	8,411,732	57%	5,426,259	45%
Total assets	18,828,652	100%	14,842,063	100%	12,164,162	100%
Cash flow ratio	72%		38%		31%	
Return on assets	17%		13%		7%	
Return on equity	31%		25%		15%	

		2022	2021	2020
Direct economic value generated	Revenue	14,431,284	12,792,169	9,678,146
	Operating costs	8,983,599	8,828,993	7,395,093
Economic value distributed	Employee salaries and benefits	1,775,461	1,691,299	1,305,307
	Profit-seeking enterprise income tax	789,286	510,539	175,742
	Remuneration to Directors	4,000	4,000	4,000
	Employee bonus	32,969	18,693	7,386

		2022	2021	2020
	Dividends to shareholders	1,427,036	892,995	467,445
	Community investments	1,000		
Economic value retained		1,417,933	845,650	323,173

● **Government Subsidies**

Item	2022	2021	2020
Government subsidies	NT\$32,184 thousand	NT\$32,058 thousand	NT\$83,183 thousand

The government subsidies received by the Company and its subsidiaries in 2022 were mainly the concessional loans under the “Welcoming Taiwanese Companies Abroad to Invest in Taiwan Action Plan” and the tax deductions for research and development projects.

1.4 Innovations and Services

With the rise of emerging technologies such as 5G, AI and IoT, the consumer and automotive electronics markets would continue to grow in size and bring new opportunities for display applications as products shift toward being thin, light, and compact with high value-added or high-end specifications. Using QFN as our raw material, we create different processes to differentiate our products from the market and enter the niche market of lead frames for mini LED and automotive power management.

Our PMMS (pre-mode metal substrate) for mini LEDs use flat metal lead frames to open up the beam angle of LED chips to 170 degrees, superior to the 130 degrees in the conventional packaging structure. It greatly improves the contrast and brightness of mini LED backlights, which are formerly constrained by the multi-chip arrangements. There are also lead frames with high reliability for automotive/industrial power supply applications and GaN/SiC. In terms of applications, one is for TFT backlights while the other is lead frames for automotive power management.



As lead frames for mini LED display technology and automotive power management enter the mass production stage, new challenges have emerged. Through commercialization of results from our R&D Center, we are developing packaging metal substrates with higher precision, thinner in thickness, better reliability and greater diversity. By maximizing the number of chips on the laminate substrates in a larger area with high density, we assist customers with improving the product performance, packaging quality, and production efficiency. These products will become the market mainstream in the future.

● R&D Investments and Achievements

Year		2022	2021	2020	2019
Item					
R&D Investments	Net revenue (A)	14,431,284	12,792,169	9,678,146	9,320,275
	R&D expenses (B)	422,484	461,211	228,583	149,707
	Total no. of employees (C)	2,202	2,066	1,927	1,918
	Total no. of R&D personnel (D)	266	213	118	55

Item \ Year			2022	2021	2020	2019
	Average R&D expense per R&D personnel (B/D)		1,588	2,165	1,937	2,722
	Percentage of R&D expenses (B/A)		2.93%	3.61%	2.36%	1.61%
R&D Achievements	Cumulative no. of patents	Domestic	43	37	39	37
		Overseas	109	88	78	74

1.5 Risk Management

Confronted by changes in business strategy and the environment, a sound risk assessment and crisis management system can reduce operational impacts and secure competitive advantages to protect the rights and safety of the Company, customers, investors, suppliers and employees. We instruct each functional unit to conduct risk identification by division of labor, and to formulate management strategies and action plans to mitigate, transfer or avoid risks in order to effectively lower the Company's operational risks.

● Strategy Statement of Sustainable Development

Our business philosophy is as follows: (Details are available under [CSR policy](#) on the corporate website.)

1. Quality assurance

To meet and exceed customer expectations

To fulfill customer demand for quality and delivery

Outstanding services and skills

2. Three main cultures

People-oriented

To provide employees with a safe, friendly and fair working environment; care about occupational safety; constantly nurture talents; offer comprehensive promotion programs and build platform with promising opportunities.

Integrity

Integrity is the foundation for corporate sustainability.

Innovation

Innovation is the source of growth. We continue to create and improve our products to satisfy customer expectations.

3. Corporate responsibilities

Shareholders: Through efficient management, sustainable operation and maximization of shareholders' interests

Customers: Create market segmentation with skills, quality, delivery and production cost to become a highly competitive company.

Employees: Build a decent working environment with a clear division of responsibilities.

Government: Strictly adhere to the principle of regulatory compliance.



● Risk Response Strategies

In accordance with our risk management policy, each risk management unit identifies its risks and response strategies thereof within the risk management scope to ensure these risks are contained within its tolerance level. Each functional unit would monitor the risks periodically and report its risk management status to the management team on a regular basis.

Financial Risks

Interest rate	<ul style="list-style-type: none"> • Regularly assess interest rates and financial information of the money market. • Determine the use of funds based on the cost of capital and possible returns and risks.
Exchange rate	<ul style="list-style-type: none"> • Perform comprehensive assessments on future trends of exchange rates and factors affecting the exchange rates to determine the most appropriate quotes. • Achieve a certain degree of natural hedging through trading and adjust the positions of assets and liabilities denominated in foreign currencies in a timely manner.
Inflation	<ul style="list-style-type: none"> • Closely monitor price fluctuations in the upstream raw materials markets. • Maintain good relationships with suppliers and customers in order to properly adjust the inventory level of raw materials.

Operational Risks

Peers competition	<ul style="list-style-type: none"> • Map out cross-regional strategies with developments in the Asia-Pacific market as our advantages. • Maintain excellent customer relations to enhance customer loyalty and trust.
Shrinking of profit margin	<ul style="list-style-type: none"> • Increase product applications. • Strengthen product reliability in terms of design and verification and enhance customer satisfaction so as to gain more sales opportunities.
Customization affects production efficiency	<ul style="list-style-type: none"> • Focus on major customers, concentrate on advantages of mainstream products, and move towards planned production to improve production efficiency. • Strengthen communication and improve production timeliness and efficiency in order to lower the inventory level of work in progress.

Climate Change Risks

Water resources	<ul style="list-style-type: none"> • Push for a reduction in process water consumption, build wastewater recycling facilities, and improve wastewater treatment efficiency. • Map out short, medium and long-term recycling targets with a projected increase of 5~10% in recycling volume every year.
Carbon management	<ul style="list-style-type: none"> • Implement energy-saving schemes, regularly monitor carbon emissions and review reduction measures. • Install renewable energy facilities such as rooftop solar systems to increase the proportion of green power.

Social Risks

Talent recruitment	<ul style="list-style-type: none"> • Initiate talent nurturing policies with planned and systematic training for long-term talent developments in order to mitigate the impact of talent gap on the Company. • Recruit foreign workers in accordance with laws and regulations to narrow the talent gap and ensure normal production capacity.
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● **Assessment on Impact of Climate Change**

1. The extent of influence or impact of GHG emissions:

(1) Risk of compliance with climate change-related regulations

Taiwan has established regulations such as the “Greenhouse Gas Reduction and Management Act” and the “Renewable Energy Development Act”. We will gradually improve our GHG emissions in line with the national policies and fulfill our responsibilities as a global citizen.

(2) Physical risk of climate change

Short-term physical risk: Climate change may lead to extreme weather events including typhoons, floods, and droughts, affecting our equipment and operations.

Medium and long-term physical risks: Extreme weather leads to a gradual scarcity of energy and resources, such as water, electricity and fuel, and may result in shutdowns.

(3) Opportunities from climate change

Promote low-carbon technology and process: Improve energy and resource efficiency, lower medium and long-term operating costs and achieve the goal of carbon reduction.

Improve supply chain stability: Improve product delivery and frequency and enhance customer satisfaction.

Improve natural disaster resilience: Actively participate in renewable energy programs to enhance climate adaptation capabilities and monitor climate change-related risks through management.

2. Strategies, methods and targets of GHG management:

(1) Strategies for climate change and GHG management

In terms of our framework for promoting sustainable developments, the President is the convener with the President Office coordinating relevant matters. The Board oversees and gives guidance on environmental, social and governance issues of sustainable development and receives reports on the effectiveness of promotion and corporate strategies. The Board reviews strategy progress and urges the management team to make adjustments when necessary.

(2) GHG reduction targets

We are committed to energy conservation and carbon reduction, and conduct GHG inventory annually with the target of reducing carbon dioxide emissions every year.

(3) Budget and plans for GHG reduction

Use energy efficient facilities within our plants.

Adopt LED lighting at all sites.

Facilities with Level-I energy ratings are preferred in our plants.

- (4) Carbon reduction effects of our products or services to customers or consumers

Our electricity intensity dropped 18% in 2021 compared to 2020.

Our electricity intensity dropped 8% in 2022 compared to 2021.

- **Information Security Management**

- 1. Purpose and scope:

- (1) Purpose: To maintain the normal operation of our information system and mitigate operational risks due to human errors, external cyberattacks or force majeure events such as natural disasters, thereby ensuring business continuity.
- (2) Scope: Information system and software/hardware devices associated with business operations.

- 2. Information security management structure:

- (1) The Company has established an information security unit with dedicated personnel. Vice President Wen-Yu Wen is the chief information security officer.
- (2) Information security policy is reviewed and modified regularly to ensure an effective operation of the information security management system.
- (3) IT Department is in charge of information security promotion and handling of cyber incidents.

- 3. Information security control measures:

- (1) Threat protection:

- A. Install endpoint detection and response (EDR) software on personal computers and servers under the control of the master control unit. Update threat definition files regularly.
- B. Deploy patches through Windows Server Update Services (WSUS). Schedule restarts for changes to take effect.
- C. Establish Urchin Tracking Module (UTM) to prevent malicious attacks.

- (2) Information equipment control:

- A. Ban the use of personal computers on company premises.
- B. Disable USB ports on company computers. Applications are required for user access.
- C. Establish a network access control (NAC) platform to block access from unknown devices.

- (3) Account and personnel management:

- A. New employees shall sign the non-disclosure agreements (NDA) when joining the Company. Information security is part of the orientation program.
- B. Accounts and accesses of information system are reviewed and

controlled by the IT unit.

- C. Information security promotion is arranged regularly to raise employees' awareness.

(4) System availability:

- A. Formulate backup plans in compliance with the 3-2-1 backup principle.
- B. Initiate virtual platforms and employ high availability (HA) mechanism.
- C. Monitor the operation efficiency of core systems through SYSLOG.

4. Resources allocated to information security management:

- (1) The Company allocated NT\$1.5 million for information security measures in the annual IT budget.
 - (2) Information security unit performs safety assessments on information security assets annually and constantly align information security policies with advancements in relevant tools or technologies for current practices.
5. The Company had no significant complaints related to violation of customer privacy or loss of customer data in 2022.

1.6 Stakeholders

We have established transparent and effective channels for communication with stakeholders in order to understand their issues of concern. We adopt these issues as important indicators for the Company's sustainable developments and as references for decision-making and information disclosure in our formulation of business policies for sustainability.

● Analysis of Material Topics

CWTC follows the GRI standards issued by the Global Sustainability Standards Board. Relevant steps are described below:



Step one:

Identify stakeholders: Based on information received by the task force from various departments and peer experience, the Company's stakeholders are the government, local communities, non-governmental organizations, investors, employees, customers, and suppliers.

Step two:

Collect sustainability issues: For issues to be communicated with stakeholders, we use the GRI Standards as references and relevant units incorporate these issues into their annual work lists or targets. We also adopt requirements set out in the "Rules Governing the Preparation and Filing of Sustainability Reports" of the TPEX in preparing the issues.

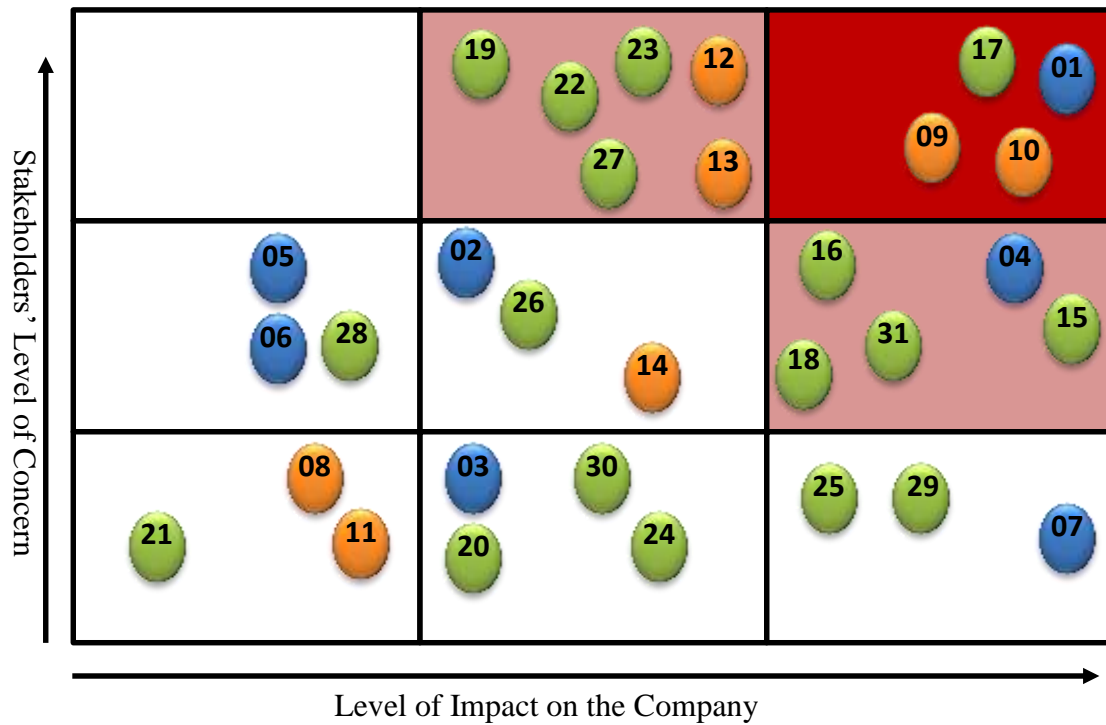
Step three:

Identify material issues: Material topics are determined in Sustainability Committee meetings attended by the task force and department representatives of the Company based on the scores of stakeholders' level of concern and level of impact on sustainability

Step four:

Review and discussion: With material topics identified through materiality analysis as issues prioritized for disclosure, we would continue to strengthen management and disclose relevant information in the report.

● **Materiality Analysis Chart for Issues Concerned by Stakeholders**



Economic Topics	Environmental Topics	Social Topics
01 Business performance 02 Market presence 03 Indirect economic impact 04 Procurement practices 05 Anti-corruption 06 Anti-competitive behavior 07 Tax	08 Materials 09 Energy 10 Water and effluents 11 Biodiversity 12 Emissions 13 Waste 14 Supplier environmental assessment	15 Employment 16 Labor/Management Relations 17 Occupational health and safety 18 Training and education 19 Diversity and equal opportunity 20 Non-discrimination 21 Freedom of association and collective bargaining 22 Child labor 23 Forced and compulsory labor 24 Security practices 25 Rights of indigenous people 26 Local communities 27 Supplier social assessment 28 Public policy 29 Customer health and safety 30 Marketing and labeling 31 Customer privacy

● Identification of Boundaries for Stakeholder Concerns

Order	Material Topic	Corresponding GRI Standard	Corresponding Chapter	Within the organization	Outside the organization			
				All Sites	Customer	Supplier	Investor	Non-profit organizations
1	Business performance	GRI201	1.3 Business performance	●	●	●	●	●
2	Occupational health and safety	GRI403	4.4 Occupational safety and health	●	●	●	●	●
3	Energy	GRI302	3.2 Energy management	●	●			●
4	Water and effluents	GRI303	3.3 Water resources management	●	●			●
5	Emissions	GRI305	3.2 Energy management	●	●			●
6	Waste	GRI306	3.4 Pollution emission and prevention	●	●			●
7	Employment	GRI401	4.1 Talent recruitment and workforce structure	●			●	●
8	Supplier social assessment	GRI414	2.1 Supplier sustainability management	●	●	●		
9	Diversity and equal opportunity	GRI405	1.2 Corporate governance	●				●
10	Procurement practices	GRI204	2.3 Local procurement policy	●		●		
11	Labor/Management Relations	GRI402	4.3 Employee benefits	●				●
12	Forced and compulsory labor	GRI409	4.1 Talent recruitment and workforce structure	●				●
13	Customer privacy	GRI418	1.5 Risk management	●	●			
14	Child labor	GRI408	4.1 Talent recruitment and workforce structure	●				●
15	Training and education	GRI404	4.2 Talent cultivation and nurturing	●				●

● **Communication Channels with Stakeholders**

Stakeholder	Material Topic of Concern	Frequency	Means of Communication	Communication Channel
Employee	<ul style="list-style-type: none"> ● Business performance ● Procurement practices ● Energy ● Water and effluents ● Emissions ● Waste ● Employment ● Labor/management relations ● Occupational health and safety ● Training and education ● Diversity and equal opportunity ● Child labor ● Forced and compulsory labor ● Supplier social assessment ● Customer privacy 	Quarterly, semi-annually, when needed	<ol style="list-style-type: none"> 1. Improvement proposal incentive form: For employees to submit proposals at any time, and bonuses would be given based on the outcome as an incentive. 2. Employee opinion mailbox and reporting hotline: For employees to report issues which would be handled immediately by dedicated personnel. 3. Labor-management and employee welfare committee meetings: For employees to propose suggestions and negotiate with the Company. 4. Human Resources Arbitration Committee: It conducts performance assessments and promotion list reviews twice a year and holds reward/punishment review meetings when needed. 5. Environmental Management Committee: It holds quarterly meetings where employees can submit environmental suggestions for approval and implementation. 	<ul style="list-style-type: none"> ● Contact: Mr. Chang cwtkh@cwtcglobal.com ● Contact: Ms. Hsu michelle.hsu@cwtcglobal.com
Customer	<ul style="list-style-type: none"> ● Business performance ● Energy ● Water and effluents ● Emissions ● Waste ● Occupational health and safety ● Supplier social assessment ● Customer privacy 	Quarterly, annually	<ol style="list-style-type: none"> 1. Monitor and discuss product quality and process, and provide technical support when needed. 2. Communicate with customers about orders and delivery schedules. 3. Conduct annual customer interviews and audits and discuss product quality, new product development and future prospects of the Company. 	<ul style="list-style-type: none"> ● Contact: Mr. Chang cwtkh@cwtcglobal.com ● Contact: Ms. Hsu michelle.hsu@cwtcglobal.com

Stakeholder	Material Topic of Concern	Frequency	Means of Communication	Communication Channel
Supplier	<ul style="list-style-type: none"> ● Business performance ● Procurement practices ● Occupational health and safety ● Supplier social assessment 	Annually	<ol style="list-style-type: none"> 1. Supplier audit and interview. 2. Inspection at equipment suppliers' premises. 3. Face-to-face/telephone/e-mail communication. 4. Construction Safety Commitments. 5. Supplier evaluation form. 	<ul style="list-style-type: none"> ● Contact: Mr. Chang cwtkh@cwtcglobal.com ● Contact: Ms. Hsu michelle.hsu@cwtcglobal.com
Investor	<ul style="list-style-type: none"> ● Business performance ● Employment ● Occupational health and safety 	Monthly, quarterly, annually	<ol style="list-style-type: none"> 1. Investor Relations section on the official website. 2. Annual shareholders' meeting. 3. Periodic release of financial reports. 4. Regular investor conferences. 	<ul style="list-style-type: none"> ● Contact: Mr. Chang cwtkh@cwtcglobal.com ● Contact: Ms. Hsu michelle.hsu@cwtcglobal.com
Non-profit organizations (governments, local communities, non-governmental organizations, etc.)	<ul style="list-style-type: none"> ● Business performance ● Energy ● Water and effluents ● Emissions ● Waste ● Employment ● Labor/management relations ● Occupational health and safety ● Training and education ● Diversity and equal opportunity ● Child labor ● Forced and compulsory labor 	Monthly, quarterly, annually	<ol style="list-style-type: none"> 1. Comply with relevant laws and regulations of authorities at all levels. 2. Official correspondence. 	<ul style="list-style-type: none"> ● Contact: Mr. Chang cwtkh@cwtcglobal.com

2. Supply Chain Management

2.1 Supplier Sustainability Management

Suppliers are not only crucial resources but also important partners to the Company. Therefore, CWTC values supplier sustainability management. We also implement supplier management procedures to ensure workplace safety, protection of the environment, working conditions, human rights, and social responsibilities as well as ethical compliance. We verify suppliers' basic financial status, quality management, environmental management, and other system certifications through the supplier data sheet, and ask suppliers to sign the conflict minerals statement. New suppliers are subject to factory visits and evaluations. These measures are to ensure suppliers' compliance with relevant regulations. Furthermore, we have regular on-site visits and evaluations every year. These evaluations cover quality management, delivery schedule, system management and sustainability risk assessment. Candidates would become qualified suppliers only when the evaluations are completed and such applications are approved by the procurement, quality assurance, engineering, and relevant departments. In 2022, there were no factory visits and evaluations as we did not have new major raw material suppliers.

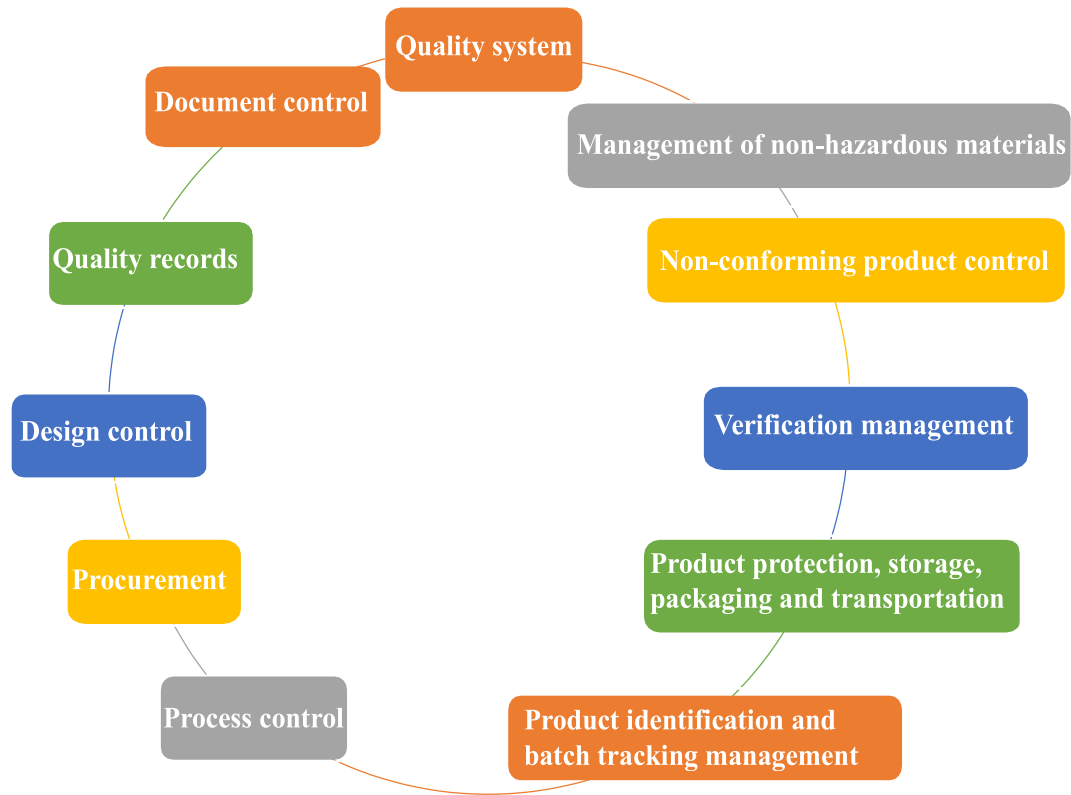
None of the Company's existing suppliers nor contractors had any significant negative impact, either actual or expected, on the environment, labor conditions, human rights and society in 2022.

● Supply Chain (Material Stability and Price & Inventory Control)

Industry	Upstream	Midstream	Downstream	Product Applications
IC	Copper alloys, nickel-iron alloys, industrial epoxies	Lead frame manufacturers	IC packaging companies	LCD panels, automobiles, computers and peripherals, lighting fixtures, handheld consumer electronics devices, precision instruments, aerospace industry
LED			LED packaging companies	

● Quality Audit Process for Suppliers

The Company regularly conducts quality audits on key suppliers. The supplier self-assessment and on-site evaluation cover the following 11 items:



● Supplier Tier Management

Rank	Score	Result	Action
A	90~100	Approval	Normal purchases
B	70~89	Conditional approval	Annual audits and counseling
C	<70	Fail	Improvement plans shall be submitted within 7 days. Suppliers failing to make improvements as scheduled would be banned.

● Supplier Assessment

The Company safeguards employees, the environment, and ethical management in the spirit of RBA, and conducts supplier sustainability risk surveys and audits on high-risk suppliers. Suppliers are categorized by type into primary materials, secondary materials, and others, and their sustainability management is divided into five risk levels. High-risk suppliers would be required to make improvements within the prescribed timeframe. Those who fail to make improvements on time would be disqualified from our supplier list. In 2022, we assessed 10 primary materials suppliers, and none of them were found to have significant or potential negative social impacts.

Risk Level	Risk Score	No. of Suppliers
Extremely Low	0~3	9
Low	4~6	1
Average	7~9	0
High	10~12	0
Extremely High	13~15	0

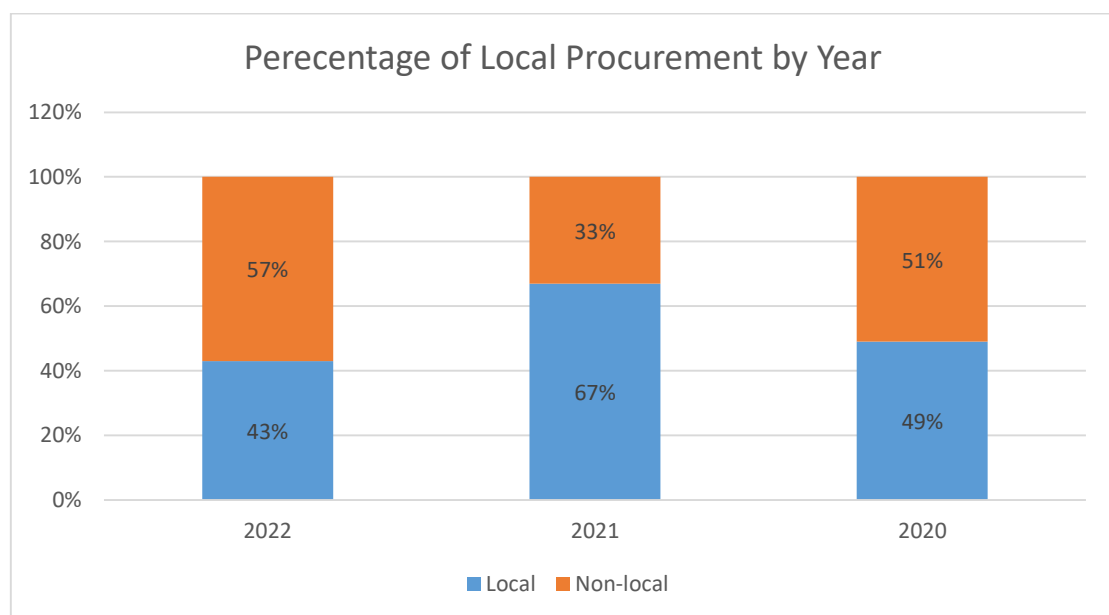
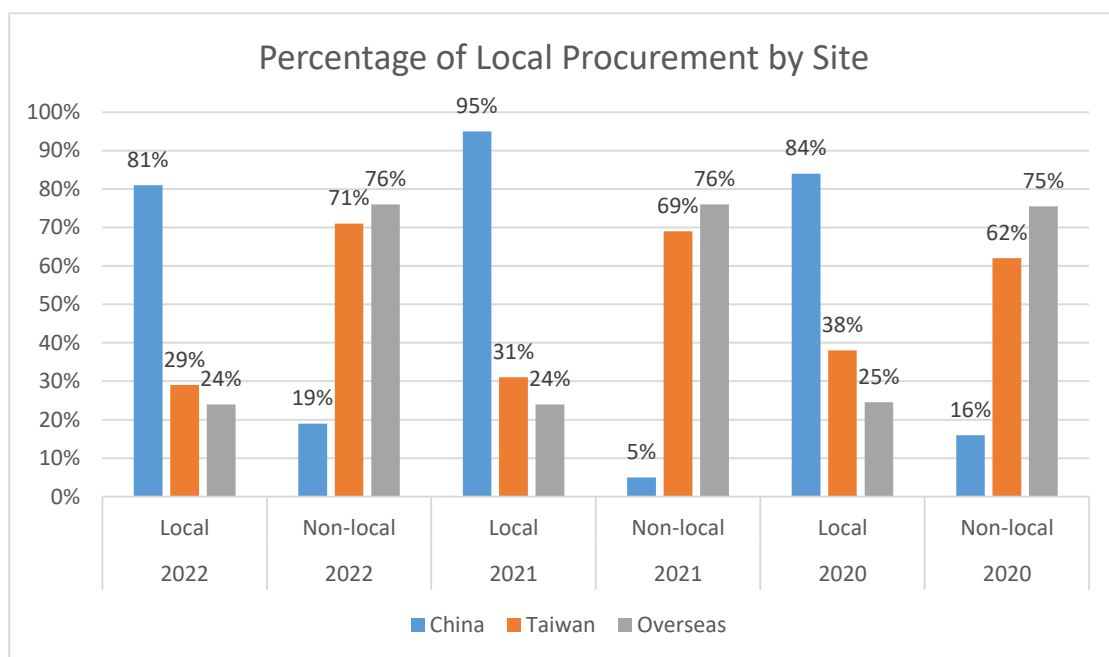
2.2 Conflict Minerals

CWTC and its subsidiaries have long been committed to complying with standards and initiatives of the Responsible Business Alliance (RBA), the Global e-Sustainability Initiative (GeSI) and the Responsible Minerals Initiative (RMI). As a good corporate citizen, we fulfill our social responsibilities, respect human rights, and constantly monitor conflict mineral issues. We carry out detailed supply chain investigations to ensure we do not source metals, including tin (Sn), tantalum (Ta), tungsten (W), gold (Au), and cobalt (Co), from mining areas or smelters in the Democratic Republic of the Congo and its neighboring areas controlled by armed groups. CWTC also plans to cooperate with suppliers who are environmentally and socially responsible. We ask our suppliers to abide by the RMA Code of Conduct as set out below:

1. Do not use conflict minerals from illegal sources.
2. Do not purchase conflict metals produced in conflict affected and high-risk areas.
3. Encourage all suppliers in our supply chain, including contractors and smelters, to participate in programs such as RBA and RMI.
4. Commit to due diligence on conflict minerals to provide more transparent sources of conflict metal and minerals.

2.3 Local Procurement Policy

Increasing the proportion of local procurement has always been a key focus of our procurement strategy. Through local sourcing, we improve the employment rate and boost the economic growth of the region. Local procurement provides faster services and more direct communication as it reduces transportation costs and shortens delivery time. With shorter transportation distance, carbon emissions and consequently the environmental pollution are simultaneously reduced. Even with the pandemic in the past two years, the proportion of local procurement continues to rise. Due to plant expansion, the demand for copper alloys surged in 2022. Since most of the copper alloys needed for our Taiwan plants were of special specifications, they were mainly sourced from Japanese suppliers.



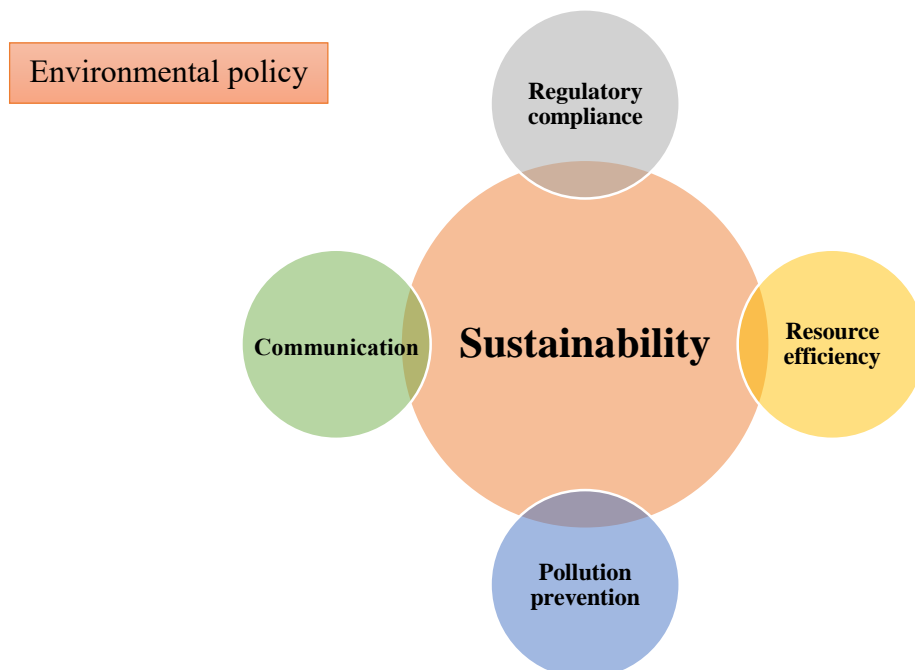
3. Friendly Environment

3.1 Environmentally Sustainable Development

We are a professional manufacturer of metal lead frames, dedicated to production, manufacturing and product development. Our operation model is built on the business philosophy of humanity, reasonableness, standardization and globalization with a fair and open management style. As we are well aware of the potential environmental impact of our products, activities and services, we are determined to adopt company-wide “environmental management system” and advocate “full participation, protection of social resources and regulatory compliance”.

Our environmental management unit includes the Environmental Management Committee of the head office and the Environmental Safety Center and Occupational Safety Office of each site. It is dedicated to internal and external issues proposed by all units and the integration of environmental aspects identified into assessments. It also assists with the review and verification of environmental data from each unit. A committee chaired by the plant chief is established at each site to hold quarterly meetings on performance reviews. Unit heads and employee representatives are invited to jointly coordinate, discuss, and review environmental management issues, demonstrating the importance of environmental management.

Our plants, both domestic and overseas, have adopted ISO14001 Environmental Management Systems with certifications acquired. The latest version of ISO14001:2015 was introduced with certification received in 2016 for our Taiwan plants and 2020 for our overseas plants. The practice extends environmental management to the entire product life cycle as well as the environmental risks and mechanisms at each stage. It also determines the strategic approach and action plan from a broader view to align with the latest international management trends.



The image displays three sample certificates of registration for ISO 14001:2015 Environmental Management Systems. The certificates are issued by TÜV SÜD to SH Electronics Chengdu Co., Ltd. for their facility in Chengdu, China. Each certificate includes the company name, address, and the scope of the certification. The certificates are presented in English, Chinese, and German.

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3.2 Energy Management

In response to global energy shortage and the urgency of GHG reduction, CWTC pushes for production machinery assessment to reduce energy consumption and drives energy efficiency improvement of plant facilities. We consolidate energy-saving proposals from all units to set relevant targets and action plans every year and periodically monitor and control our performance. Based on our energy-saving plan submitted to the Bureau of Energy, Ministry of Economic Affairs, the average energy-saving rate approved for our Taiwan site was 2.11% in 2022.

In line with the government's promotion of renewable energy, we have increased the installed capacity of solar panels in our Kaohsiung plant by 98 kWp (0.098 mWp) in 2020 with a cumulative capacity of 107 kWp in 2022, providing 131,804 kWh. Our new Kaohsiung plant scheduled to commence production in 2023 will bring an additional installed capacity of 126 kWp for our total capacity of solar panels to reach 233 kWp. We fulfill our social responsibilities as a global citizen and as an enterprise.

● Energy Consumption in 2022

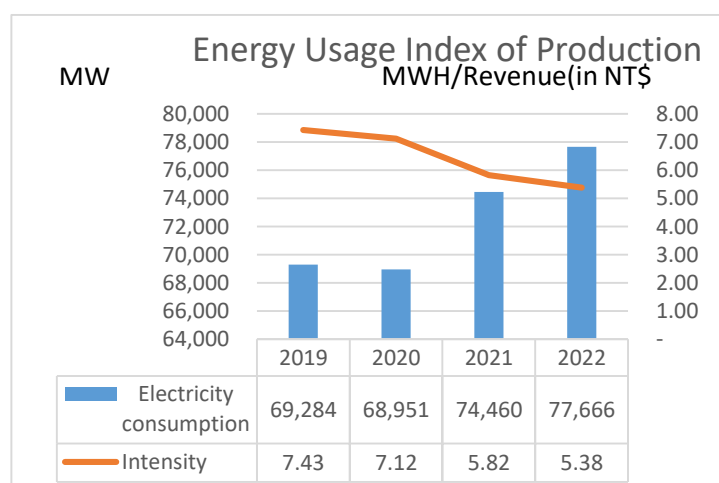
The total energy consumption of diesel fuel, gasoline, natural gas and electricity for our plants in Kaohsiung, China and Malaysia as a whole is as follows:

Consumption in 2022	Item	kWh	GJ	%
Direct Energy	Diesel fuel	326	1	-
	Gasoline	223	1	-
	Natural gas	6,261,349	22,540	7%
Indirect Energy	Purchased electricity	77,665,563	279,597	93%
Total Energy		83,927,461	302,139	100%

Note: Conversions are based on the "Heat Content of Energy Products" of the Ministry of Economic Affairs.

● Energy Usage Index of Production

Production equipment and facilities systems account for the majority of our electricity consumption. Within the total electricity consumption of 77 GWh in 2022, process and air conditioning took up 54% and 24% of the total consumption, respectively. In order to improve electricity efficiency, we implement energy-saving measures. The electricity consumption per unit product decreased by 19% in 2022 compared to 2021.



● Energy-saving Measures

In response to domestic and international pressures to reduce carbon, energy consumption and GHG emissions, the Company promotes various energy-saving measures to improve energy efficiency of facilities and production equipment. The plans focus on operational efficiency optimization and parameter settings of production equipment, and adoption of energy-saving lighting. The target for 2023 is 2% of the annual electricity consumption.

Key points of energy-saving programs

Site	Taiwan	China	Overseas
Parameter settings	★	★	★
Production process integration	★		★
Equipment process integration	★	★	
Energy-saving of facilities	★	★	★

We achieve energy conservation with efforts in various aspects and promote energy-saving measures by phases. The short-term plans are to replace existing air conditioners with central air conditioning systems, use LED lighting at all sites, install LED motion sensor security lights, adopt motion sensor landscape ground lights for pathways, and give priority to energy-efficient facilities or ones with Level-I energy ratings. In addition, we gradually replace power-consuming equipment, such as air compressors and water chillers, with energy-efficient models, and set up a central monitoring system to manage their operation. Our medium and long-term plans are to use the central monitoring system for energy consumption control of utilities equipment and continue to introduce the latest energy-saving technologies to improve the efficiency of processes and utilities equipment.

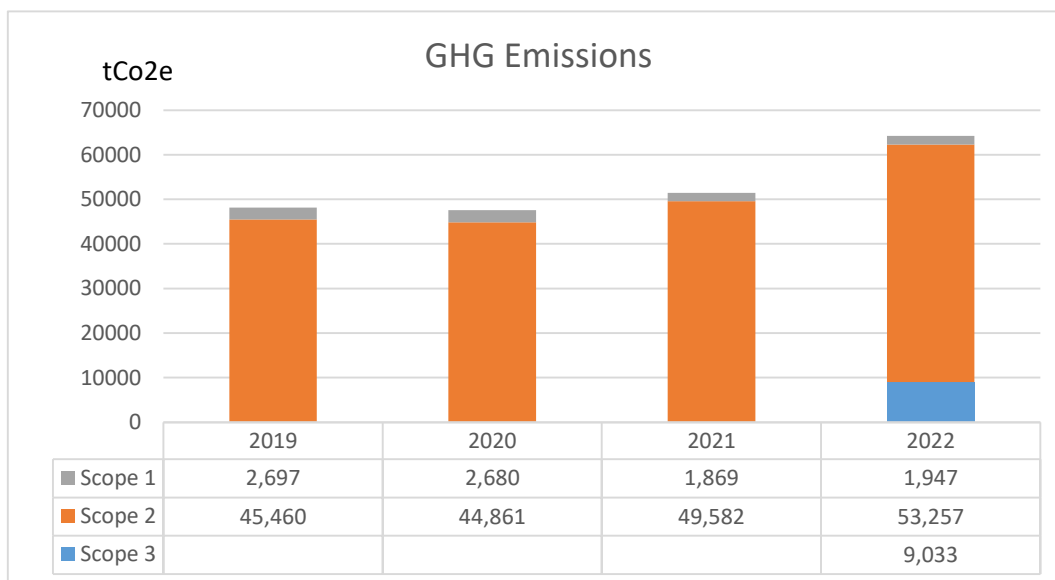
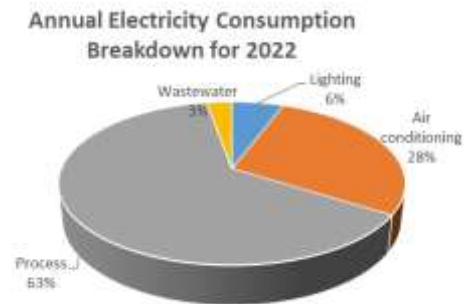
Through energy-saving promotions (e.g., turning off lights and computers at the end of the day), energy-saving lamps are used company-wide while motion sensor lightings are employed for areas where constant lighting is not required. Employees change their daily habits to cut down energy consumption and loss.

In 2022, the Company's electricity consumption totaled 279,596GJ with an electricity intensity of 5.38 kWh/thousands of NT dollars. Due to the increase in production capacity, electricity consumption went up by 268,054GJ in 2022, whereas the electricity intensity dropped 8% compared to 2021. The results indicated the effectiveness of our energy management. In the future, we will continue to focus on plans concerning energy efficiency, adoption of renewable energy or alternative energy, etc.

● GHG Emissions Management

In order to fulfill our social responsibilities, we voluntarily carry out GHG inventory and disclose GHG emissions every year. To meet our own targets, we adopted ISO14064-1:2018 for our 2022 GHG inventory of Taiwan site to set an example. GHG data were consolidated using the operational control approach and verified by a third-party assurance agency. We continue to perform voluntary inventory at our China and overseas sites and schedule to complete the external assurance of the Group's GHG inventory in accordance with ISO14064-1:2018 by the end of 2024.

As purchased electricity is the main source of GHG emissions, we analyze electricity consumption of our plant equipment and strive to reduce energy loss and improve energy efficiency. Power for process accounts for 54% of our electricity consumption, ranking number one in terms of energy use, followed by air conditioning, air compressors, lighting and wastewater treatment facilities.



Note: We started to calculate Scope 3 emissions for Taiwan site in 2022.

● GHG Emissions over the years

We adopted external inventory under ISO14064-1:2018 for the first time at Taiwan site in 2022 with voluntary inventory for Scope 1 and Scope 2 only at China and Overseas sites. The calculation of GHG emissions used the “emission factor approach” along with the Greenhouse Gas Emission Factor Table (6.0.4) of the Environmental Protection Administration and the IPCC AR-6.

Category 1 (1,947 metric tons) Direct GHG emissions Scope 1	<ul style="list-style-type: none"> • Mobile combustion: Corporate cars and forklifts - CO₂, CH₄, N₂O • Stationary combustion: Emergency generators and analytical instruments for laboratory - CO₂, CH₄, N₂O • Fugitive emission: Septic tanks, air-cooling facilities and fire-fighting facilities - CH₄, HFC_s
Category 2 (53,257 metric tons) Indirect GHG emissions Scope 2	<ul style="list-style-type: none"> • Imported electricity emissions (purchased electricity)
Category 3~6 (9,033 metric tons) Other indirect GHG emissions Scope 3	<ul style="list-style-type: none"> • Upstream transportation and distribution, employee commuting and business travel • Purchase of goods • Disposal of waste from operation • Fuel and energy-related activities (excluding categories 1 and 2)

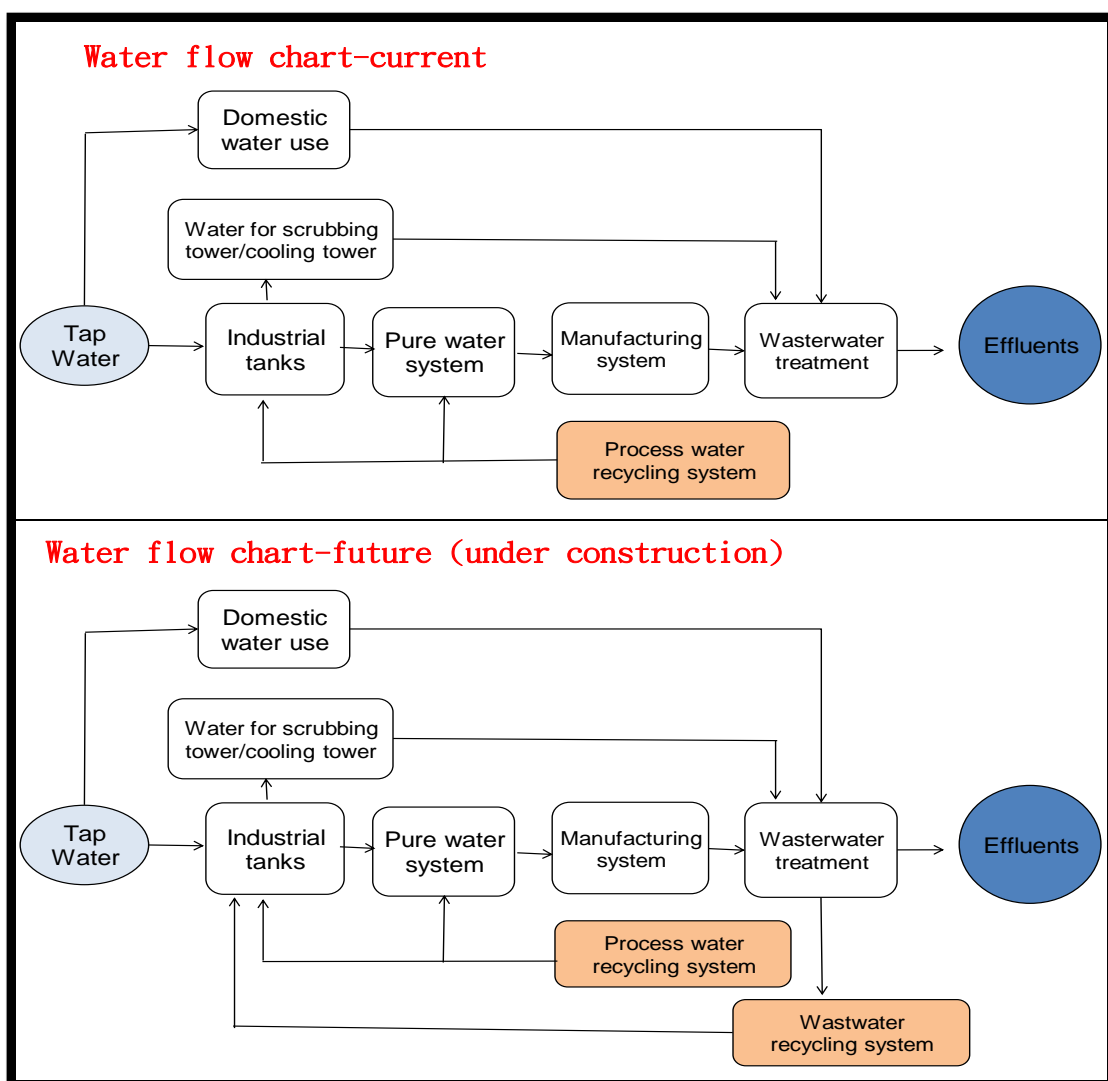
GHG emission intensity (scope 1 + scope 2)

Year	2019	2020	2021	2022
Total GHG emissions tCO₂e	48,157	47,541	51,451	55,204
Intensity (tCO₂e/Revenue in millions of NT\$)	5.167	4.912	4.022	3.825

3.3 Water Resources Management

CWTC is located in the Kaohsiung Nanzih Technology Industrial Park. Our water comes entirely from the Taiwan Water Corporation; therefore, water sources are not affected. In view of the limited water resources in Taiwan, we have gradually installed recycling systems with membrane filtration process at our Taiwan site since 2021 to increase our water recycling rate and lower tap water consumption. These systems also mitigate water risk during the dry and drought seasons.

Our overseas plants are located in industrial parks where water comes from local water companies. In line with our water saving and recycling policy, the Suzhou plant has installed a water reclamation system ahead of others to recycle and reuse process water above a certain quality level. The system is mainly for cleaning and electroplating processes where a large volume of water is required. The recycling and treating of secondary water bring our internal water cycle to a certain standard, thereby reducing raw water supply and achieving the goal of a significant reduction in water consumption. In view of the water-saving benefits in our Suzhou plant, other plants have started to schedule the installation of water reclamation systems.



● Use of Regional Water Resources

Region		Kaohsiung	China		Overseas
		Kaohsiung Plants	Chengdu Plant	Suzhou Plant	Malaysia Plant
Water Sources	Tap water	Gaoping-River Weir + Nanhua Interconnecting Pipeline and Fongshan Reservoir	Minjiang River	Taihu Lake	Selangor River
	Groundwater and others	Groundwater	-	-	-
Water supply (10 thousand metric tons/day)		158.7	60	45	49.6
Water withdrawal (10 thousand metric tons/day)		0.11	0.06	0.1	0.09
Use of Regional Water (%)		0.07%	0.1%	0.2%	0.18%

Note: Water supply is derived from data on the websites of the Water Resources Agency and the local water companies.

Water stewardship

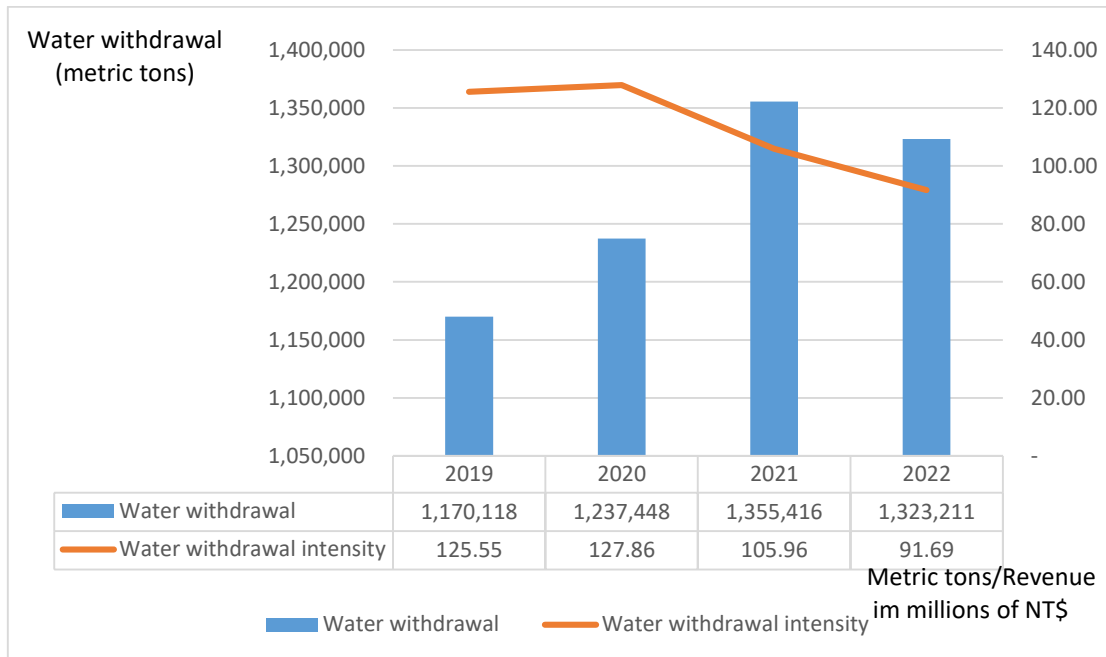
CWTC uses tap water mostly for wet processing (electroplating), cleaning and environmental protection. Water consumption by site for 2022 is shown in the table below. In the face of global climate changes in recent years, we continue to monitor our water consumption and proactively promote plant-wide water-saving measures to ensure there is no immediate water scarcity issue arising from a lack of water resources. Furthermore, our Taiwan plants have started to install systems for process water recycling since 2021. The systems treat and filter rinsing water with high acid concentration for reuse instead of releasing it directly from the wastewater treatment plant as was our previous practice, thereby increasing the reuse rate of process wastewater. There are also other water-saving measures in place to lower our water consumption.

Unit: Metric tons		Year			
Site	Item	2019	2020	2021	2022
China	Water withdrawal (A)	603,849	628,945	640,388	585,540
	Water recycled (B)	964	27,271	97,820	140,633
	Total used water (C=A+B)	604,813	656,216	738,208	726,173
	Water discharge (D)	474,900	472,011	527,604	474,698
	Water consumption	129,913	184,205	210,604	251,475

Unit: Metric tons		Year			
Site	Item	2019	2020	2021	2022
Taiwan	Water withdrawal (A)	278,415	306,547	387,883	417,085
	Water recycled (B)	36,261	47,694	70,084	95,757
	Total used water (C=A+B)	314,676	354,241	457,962	512,842
	Water discharge (D)	261,477	293,842	369,735	379,147
	Water consumption	53,199	60,399	88,232	133,695
Overseas	Water withdrawal (A)	287,854	301,956	323,892	320,586
	Water recycled (B)	215,919	245,082	266,632	265,953
	Total used water (C=A+B)	503,773	547,038	590,524	586,539
	Water discharge (D)	215,919	245,082	266,632	265,953
	Water consumption	287,854	301,956	323,892	320,586

Site	Item	2019	2020	2021	2022
China	Water recycled / Total used water (%) = (B/C)	0.2	4.2	13.3	19.4
	Recycling rate (%) = (B/A)	0.2	4.3	15.3	24.0
Taiwan	Water recycled / Total used water (%) = (B/C)	11.5	13.5	15.2	18.7
	Recycling rate (%) = (B/A)	13.0	15.6	17.9	23.0
Overseas	Water recycled / Total used water (%) = (B/C)	42.9	44.8	45.2	45.3
	Recycling rate (%) = (B/A)	75.0	81.2	82.3	83.0
Total	Water recycled / Total used water (%) = (B/C)	26.6	31.7	37.3	44.9
	Recycling rate (%) = (B/A)	21.6	25.9	32.1	38.0

● Changes in Water Withdrawal Intensity



● 2022 Water Withdrawal

Water Withdrawal (megaliters)				
Item			All Sites	Areas with Water Stress
Water withdrawal by sources	Third-party water (total)		1,323	383
	Freshwater		1,323	383
	Others		0	0
	Third-party water based on withdrawal sources (total)	Surface water	1,323	383
		Groundwater	0	0
		Seawater	0	0
		Produced water	0	0
Total water withdrawal	Surface water (total) + groundwater (total) + seawater (total) + produced water (total) + third-party water (total)		1,323	383

- Note: 1. The Company's water withdrawal sources exclude surface water, groundwater, seawater and produced water.
2. For areas with water stress, please refer to the Aqueduct Water Risk Atlas.

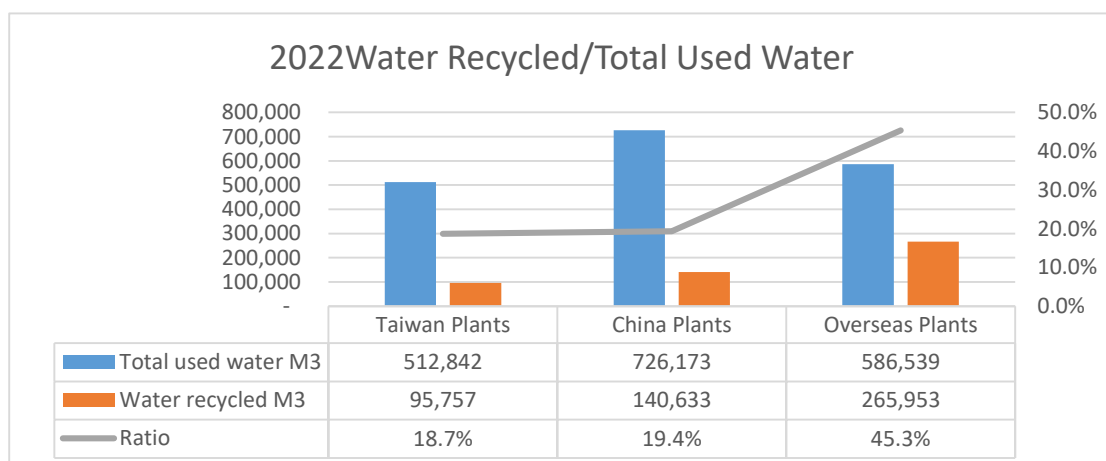
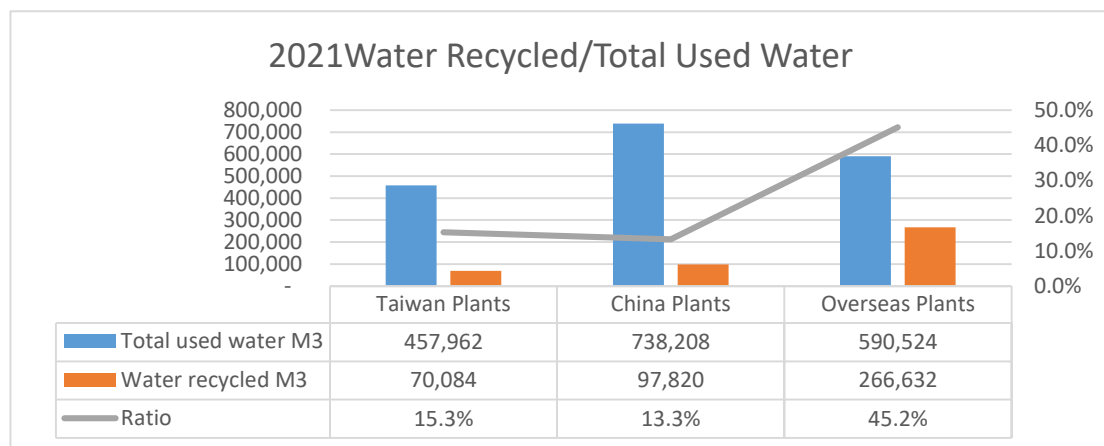
● 2022 Water Consumption

Water Consumption (megaliters)			
Item		All Sites	Areas with Water Stress
Water consumption by destinations	Total water consumption	706	233

Water conservation measures within the plants

✧ **Water Reclamation System - recycling and reuse of process water**

To cherish the water resources, all sites have gradually adopted the “water reclamation system” to recycle and reuse process water above a certain quality level. The system is mainly for cleaning and electroplating processes where a large volume of water is required. The recycling and treating of secondary water bring our internal water cycle to a certain standard, thereby reducing raw water supply and achieving the goal of a significant reduction in water consumption.



In 2021, the Taiwan plants installed recycling systems where process water is recycled for reuse through ultrafiltration (UF) and reverse osmosis (RO) processes. In 2022, we adopted membrane bioreactors (MBR) devices to replace the UF system. The enlarged membrane pore size increased fluxes and improved the fouling problem, thereby enhancing the efficiency of the water recycling system. At the same time, the switch

reduced the frequency of backflushing and chemical cleaning and consequently the consumption of recycled water. In addition, the replacement of filter bags at a lower frequency was equivalent to waste reductions. In 2022, the combination of MBR and RO processes increased the average daily volume of recycled water to the industrial tanks by 200 metric tons, lifting the water recycling rate by 5.1% compared to 2021.

We plan to install a second set of MBR system in 2023 and expect to have an additional 100 metric tons of recycled water every day.

✧ **Pure Water Recycling System - recycling and reuse of pure water**

Water derived by putting the concentrate water from RO systems through RRO system is used in our manufacturing process. Treatment by the 2B3T process in RO system allows the quality of concentrate water from RRO system to be superior than the tap water. Therefore, the water is recycled for reuse through the industrial tanks. In 2022, our pure water recycling system recovered 66,767 metric tons of water within our Taiwan plants, accounting for 13% of the total water volume.

✧ **Water-saving design of machinery and equipment**

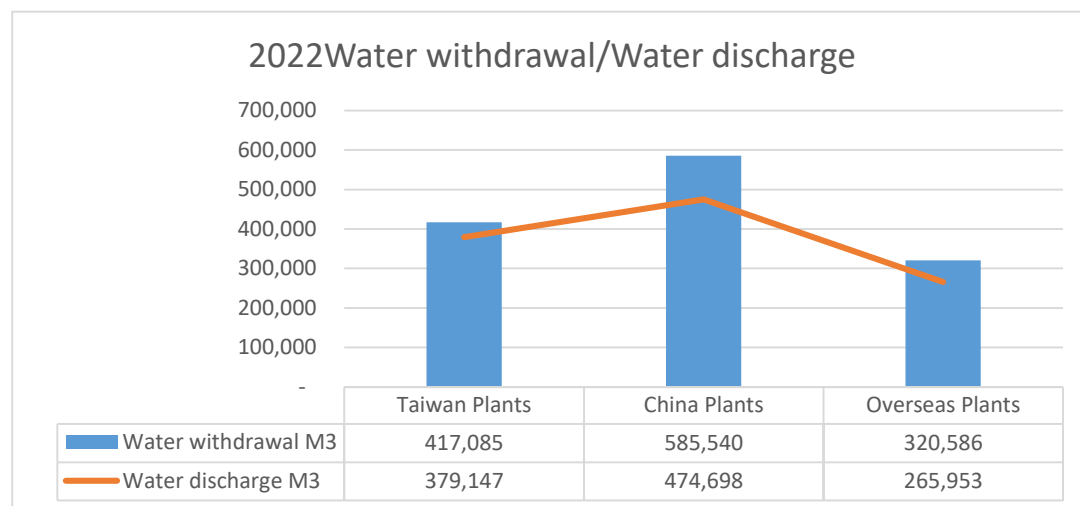
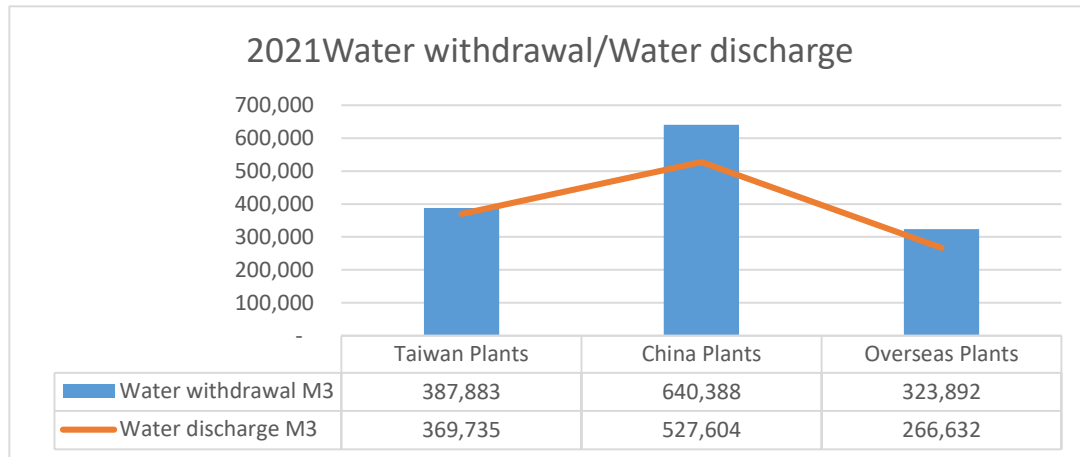
Electroplating equipment adopts the counter-current rinsing design where the rinse water is circulated through three washing tanks, achieving water conservation.

✧ **Related facilities**

Control panel of recycling system	Raw water tank for recycling
	
MBR filtration	RO filtration
	

Effluents and water quality monitoring and control

Effluents from our Taiwan, China and overseas sites amounted to 379,000 metric tons, 474,000 metric tons and 265,000 metric tons in 2022, and 370,000 metric tons, 527,000 metric tons and 266,000 metric tons in 2021, respectively. Effluents of each site was treated before being discharged.



CWTC regularly performs sampling and data review concerning effluents every year to ensure wastewater from the process fully complies with the current environmental laws and regulations and the management standards of the industrial park, so as to reduce the impact of pollution on the environment. The test results of effluents in 2022 are summarized in the table below. Since we proactively review and improve the wastewater pollution control systems in our plants, the quality of effluent discharged is currently in compliance with the standards set out in local laws and regulations.

● **2022 Water Discharge**

Water Discharge (megaliters)				
Item			All Sites	Areas with Water Stress
By destinations	A Surface water		266	0
	B Groundwater		0	0
	C Seawater		0	0
	D Third-party water (total)		854	283
	E Third-party water sent for use to other organizations		0	0
Total water discharge	F=A+B+C+D+E		1,120	283
Freshwater			0	0
Others			1,120	283
By level of treatment	Primary treatment	Aims to remove solid substances that settle or float on the water surface	9	0
	Secondary treatment	Aims to remove substances and materials that have remained in the water, or are dissolved or suspended in it	1,111	283

✧ **Water quality test results of Taiwan plants**

Year	Item	PH	Chemical oxygen demand (COD) (mg/L)	Suspended solids (SS) (mg/L)	Cu ⁺ concentration (mg/L)	Ni ⁺ concentration (mg/L)
2020	Test results	7.6	102	<1	0.126	0.028
	Standard	6~9	280	100	2	1
	Compliance	Yes	Yes	Yes	Yes	Yes
2021	Test results	6.8	63.4	7.3	0.325	0.033
	Standard	6~9	280	100	2	1
	Compliance	Yes	Yes	Yes	Yes	Yes
2022	Test results	7.6	68.2	1.9	0.223	0.047
	Standard	6~9	280	100	2	1
	Compliance	Yes	Yes	Yes	Yes	Yes

✧ Water quality test results of China plants

Year	Item		PH	COD (mg/L)	SS (mg/L)	Cu ⁺ concentration (mg/L)	Ni ⁺ concentration (mg/L)
2020	Test results	Suzhou	7.22	67	20	-	-
		Chengdu	8.01	55.5	-	0.68	-
	Standard	Suzhou	6~9	500	400	-	-
		Chengdu	6~9	500	-	2	-
	Compliance		Yes	Yes	Yes	Yes	-
2021	Test results	Suzhou	7.49	69.5	16	-	-
		Chengdu	7.25	38	-	1.39	-
	Standard	Suzhou	6~9	500	400	0.3	0.1
		Chengdu	6~9	500	-	2	-
	Compliance		Yes	Yes	Yes	Yes	Yes
2022	Test results	Suzhou	7.9	71.5	18	-	-
		Chengdu	7.8	157	-	0.3	-
	Standard	Suzhou	6~9	500	400	0.3	0.1
		Chengdu	6~9	500	-	2	-
	Compliance		Yes	Yes	Yes	Yes	Yes

✧ Water quality test results of overseas plants

Year	Item	PH	COD (mg/L)	SS (mg/L)	Cu ⁺ concentration (mg/L)	Ni ⁺ concentration (mg/L)
2020	Test results	8.41	28.69	7.84	0.44	0.20
	Standard	5.5~9.0	200	100	1	1
	Compliance	Yes	Yes	Yes	Yes	Yes
2021	Test results	8.46	30.60	9.00	0.49	0.07
	Standard	5.5~9.0	200	100	1	1
	Compliance	Yes	Yes	Yes	Yes	Yes
2022	Test results	8.45	32.80	6.00	0.51	0.13
	Standard	5.5~9.0	200	100	1	1
	Compliance	Yes	Yes	Yes	Yes	Yes

3.4 Pollution Emission and Prevention

With the philosophy of “contributing to the community” and recognizing “the concept of limited resources on the earth” and “the importance of environmental protection”, CWTC is committed to environmental protection in all aspects including business operations, products and services.

1. Adopt low-pollution raw materials and clean production, commit to environmental protection and reduce the environmental impact of our product supply chain.
2. Comply with relevant environmental laws and regulations and fulfill the environmental responsibilities of entities within the CWTC Group.
3. Continuously improve and enhance environmental performance through environmental target setting, regular audits and management reviews.
4. Adopt appropriate risk control techniques to effectively reduce the risk of hazards to stakeholders, and continuously strengthen relationships with contractors and suppliers.
5. Protect natural resources through efficient use and waste reduction programs.
6. Reduce and prevent the environmental impact of harmful substances in order to protect our employees and the environment.
7. Improve production quality to reduce waste.

Waste management

Waste generated by the Company can be classified into three categories: “general industrial waste”, “hazardous industrial waste” and “waste for reuse”. Besides waste sorting, the Company reports, sorts and stores all types of waste in compliance with local regulations and engages qualified vendors to assist in the removal, disposal and recycling of waste. We ensure our waste is properly handled through regular vendor reviews and audits.

In 2022, the volume of waste generated and reused went up slightly due to the increase in production capacity. However, their percentage weightings were similar to those in 2021, demonstrating our thorough implementation of waste sorting management. The reuse volume of Taiwan plants was higher than others mainly because the waste etching solution from the etching process was recycled by suppliers to be put back into the process, which not only improved the reuse rate of waste but also promoted circular economy. In addition, our Taiwan plant received the Outstanding Enterprise Award for Recycling in 2021. We will continue to set source reduction and recycling as our management goals, aiming to lower our operating costs and environmental impact through waste reduction.

Waste treatment methods and types

Category	Treatment Method	Disposal	Type
General industrial waste	Reuse & recycling	Off-site	Scraps, waste steel belt, resin, waste lubricant
	Landfill & incineration	Off-site	Household waste, waste dry film, waste plastic mixtures
	Physico-chemical treatments	Off-site	Waste electronics components, scraps and defectives
	Biological processing	Off-site	Waste such as nightsoil or excrements
	Offshore processing	Off-site	Scraps
Hazardous industrial waste	Reuse	Off-site	Waste filter cores, filter bags, chemical waste containers, waste glass containers, iron drums
	Incineration	Off-site	Waste solutions, acetone, empty drums (plastic bags)
	Physical treatment	Off-site	Waste solutions

Statistics of waste volume

Type	2020		2021		2022	
	Volume (metric tons)	%	Volume (metric tons)	%	Volume (metric tons)	%
General industrial waste	6,805	39%	5,408	26%	5,698	28%
Hazardous industrial waste	9,953	58%	13,247	64%	12,229	61%
Subtotal of waste volume	16,758	97%	18,655	90%	17,927	89%
Waste intensity (MT/thousands of NT\$)	0.0017		0.0015		0.0012	
Waste reused	534	3%	2,075	10%	2,114	11%
Total	17,292	100%	20,730	100%	20,041	100%

Note: Waste intensity = Waste volume / Revenue

Case of Circular Economy - Recycling of precious metal including silver, gold and palladium from waste produced during the manufacturing process

For a sustainable environment, CWTC has introduced precious metal recycling techniques and set up in-house treatment systems to reduce waste emissions. Our key recycling techniques are set out below:

★ Recycling and refinement of waste filter cores (bags) and silver soil into raw materials



Step 1: Silver stripping tanks

Step 2: Revive silver stripping plates

Step 3: Silver stripping tanks for plates

Step 4: Precipitation of silver on cathode plates

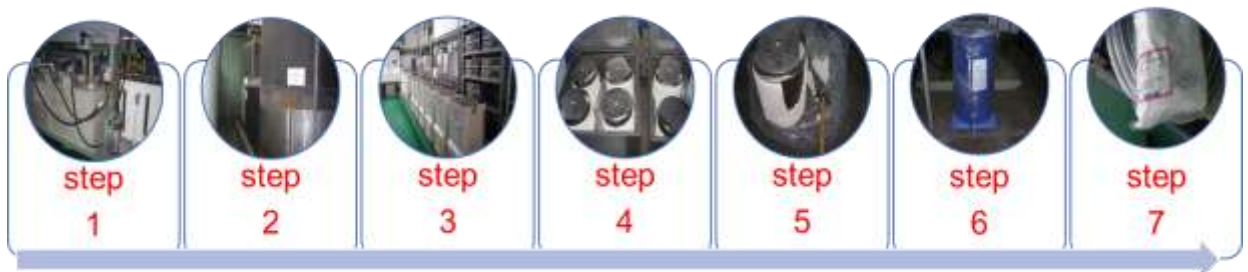
Step 5: Scrapping of silver precipitated on the cathode plants for collection

Step 6: Filter bags for silver stripping plates

Step 7: Packaging and shipment of silver/filter bags for refinement

Step 8: Made into raw materials (e.g., silver plates) by processors for reuse

★ Electrolytic recovery and refinement of waste solutions containing silver into raw materials



Step 1: Silver recovery tank

Step 2: Drums for waste solutions containing silver

Step 3: Electrolytic recovery equipment

Step 4: Dry storage for plated silver

Step 5: Stripping of silver from drums

Step 6: Packaging and shipment of electrolytic silver

Step 7: Made into raw materials (e.g., potassium silver cyanide) by processors for reuse

- ★ Set up resin towers to recover rinsing water with low concentration of gold and palladium and collect waste solutions with high concentration from plating tanks for outsourced treatment and recycling



Through packaging material reduction, incentive schemes for packaging material recycling and promotion on the use of environmentally friendly as well as reusable materials, our volume of general industrial waste drops every year. Thus, even with a 13% year-over-year revenue growth in 2022, there was no significant increase in the volume of general waste. We therefore set the target of another 5% decrease in the next 3 to 5 years.

4. Harmonious Workplace

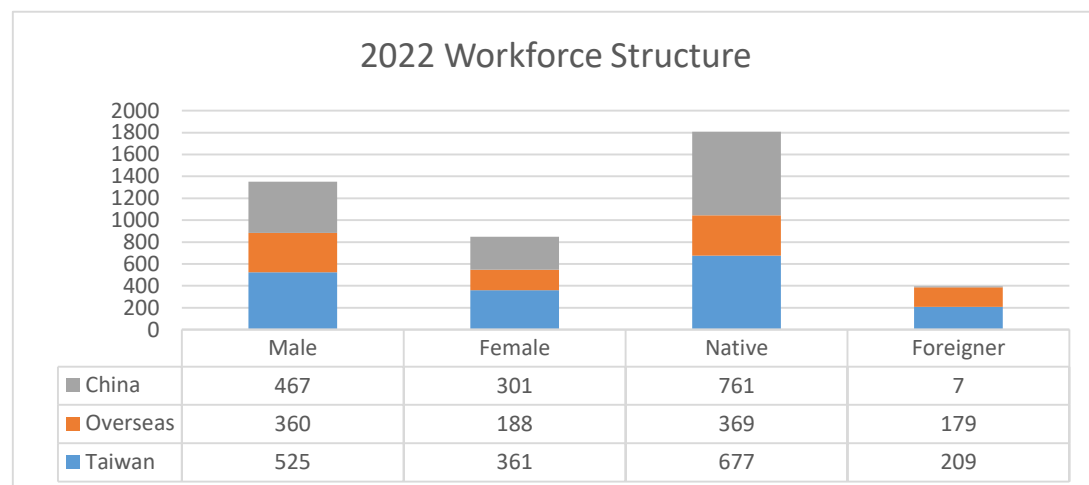
4.1 Talent Recruitment and Workforce Structure

Employees are deemed as the most important asset of the Company. Our policies and systems of recruitment, compensation design, performance management and training and development all aim to strengthen our growth momentum and employee performance. Locals are our priorities in terms of hiring and recruitment. We believe that prospering with employees is the only way to build vitality for sustainable developments, allowing employees to enjoy their work and unleash the potential of teamwork.

In accordance with the provisions of the International Labour Organization (ILO) of the United Nations and the Labor Standards Act, the Company does not employ child labor nor forced or compulsory workers to perform services.

Based on the basic human rights of equal employment opportunity, employees are recruited based on their professional competence and suitability. They are not treated differently based on race, ideology, religion, political affiliation, nationality, gender, marital status or disability. We also comply with relevant laws and recruit disabled employees where arrangements are made based on their abilities. There were no significant changes in the Company's operation in 2022. We would notify employees of significant operational changes 10 to 30 days in advance based on the seniority of employees in accordance with Article 16 of the Labor Standards Act.

● Diversity Performance



As of the end of December 2022, the Company had a total of 2,202 employees and 70 non-employee workers. The latter were janitors and security guards.

Year	Total	Male			Female			Gender Ratio
		Taiwan	China	Overseas	Taiwan	China	Overseas	
2020	1,927	373	477	349	241	296	191	1.64
2021	2,066	434	475	353	312	309	183	1.57
2022	2,202	525	467	360	361	301	188	1.59

Type	Year	2020			2021		2022	
	Category	Gender	No. of Employees	% to Total	No. of Employees	% to Total	No. of Employees	% to Total
Recruited	Regular employees	Male	1,094	56.77%	1,170	56.63%	1,262	57.31%
		Female	637	33.06%	727	35.19%	771	35.01%
	Temporary employees	Male	105	5.45%	92	4.45%	90	4.09%
		Female	91	4.72%	77	3.73%	79	3.59%
Contracted	Full-time employees	Male	1,199	62.22%	1,262	61.08%	1,352	61.40%
		Female	728	37.78%	804	38.92%	850	38.60%
	Part-time employees	Male	0	0.00%	0	0.00%	0	0.00%
		Female	0	0.00%	0	0.00%	0	0.00%
Age	Under 30	Male	358	18.58%	367	17.76%	390	17.71%
		Female	207	10.74%	206	9.97%	219	9.95%
	31 ~ 49	Male	711	36.90%	755	36.54%	810	36.78%
		Female	478	24.81%	544	26.33%	567	25.75%
	Over 50	Male	129	6.69%	139	6.73%	152	6.90%
		Female	44	2.28%	55	2.66%	64	2.91%
Total			1,927	100.00%	2,066	100.00%	2,202	100.00%
Ranking	Senior executives	Male	17	0.88%	16	0.77%	17	0.77%
		Female	5	0.26%	5	0.24%	5	0.23%
	Managers	Male	61	3.17%	62	3.00%	63	2.86%
		Female	23	1.19%	25	1.21%	25	1.14%
	Managerial personnel	Male	271	14.06%	279	13.50%	305	13.85%
		Female	118	6.12%	133	6.44%	137	6.22%
	Indirect personnel	Male	155	8.04%	152	7.36%	151	6.86%
		Female	157	8.15%	147	7.12%	156	7.08%
Direct personnel	Male	694	36.01%	752	36.40%	816	37.06%	
	Female	426	22.11%	495	23.96%	527	23.93%	
Function	Sales	Male	31	1.61%	20	0.97%	21	0.95%
		Female	25	1.30%	23	1.11%	23	1.04%
	Manufacturing	Male	1047	54.33%	1012	48.98%	1081	49.09%
		Female	550	28.54%	597	28.90%	623	28.29%
	Research and development	Male	39	2.02%	137	6.63%	172	7.81%
		Female	53	2.75%	76	3.68%	94	4.27%
	Administration + others	Male	81	4.20%	92	4.45%	78	3.54%
		Female	101	5.24%	109	5.28%	110	5.00%
Education	Master's Degree	Male	29	1.50%	32	1.55%	32	1.45%
		Female	11	0.57%	15	0.73%	22	1.00%
	College /Bachelor's Degree	Male	434	22.52%	459	22.22%	478	21.71%
		Female	277	14.37%	306	14.81%	307	13.94%
	Senior High School (and below)	Male	735	38.14%	773	37.42%	842	38.24%
		Female	441	22.89%	481	23.28%	521	23.66%

New Recruits

Age		2020			2021			2022		
		No. of New Recruits	No. of Employees	% of New Recruits	No. of New Recruits	No. of Employees	% of New Recruits	No. of New Recruits	No. of Employees	% of New Recruits
Under 30	Male	101	358	28%	158	374	42%	178	390	46%
	Female	55	207	27%	74	217	34%	90	219	41%
	Subtotal	156	565	28%	232	591	39%	268	609	44%
31 ~ 49	Male	60	710	8%	85	751	11%	130	810	16%
	Female	46	480	10%	108	540	20%	92	567	16%
	Subtotal	106	1,190	9%	193	1,291	15%	222	1,377	16%
Over 50	Male	3	126	2%	6	136	4%	7	152	5%
	Female	1	46	2%	5	48	10%	5	64	8%
	Subtotal	4	172	2%	11	184	6%	12	216	6%
Total		266	1,927	14%	436	2,066	21%	502	2,202	23%

Terminated Employees

Age		2020			2021			2022		
		No. of Terminated Employees	No. of Employees	Turnover rate	No. of Terminated Employees	No. of Employees	Turnover rate	No. of Terminated Employees	No. of Employees	Turnover rate
Under 30	Male	75	358	21%	100	374	27%	118	390	30%
	Female	53	207	26%	63	217	29%	55	219	25%
	Subtotal	128	565	23%	163	591	28%	173	609	28%
31 ~ 49	Male	62	710	9%	75	751	10%	94	810	12%
	Female	46	480	10%	48	540	9%	79	567	14%
	Subtotal	108	1,190	9%	123	1,291	10%	173	1,377	13%
Over 50	Male	2	126	2%	12	136	9%	15	152	10%
	Female	5	46	11%	5	48	10%	8	64	13%
	Subtotal	7	172	4%	17	184	9%	23	216	11%
Total		243	1,927	13%	303	2,066	15%	369	2,202	17%

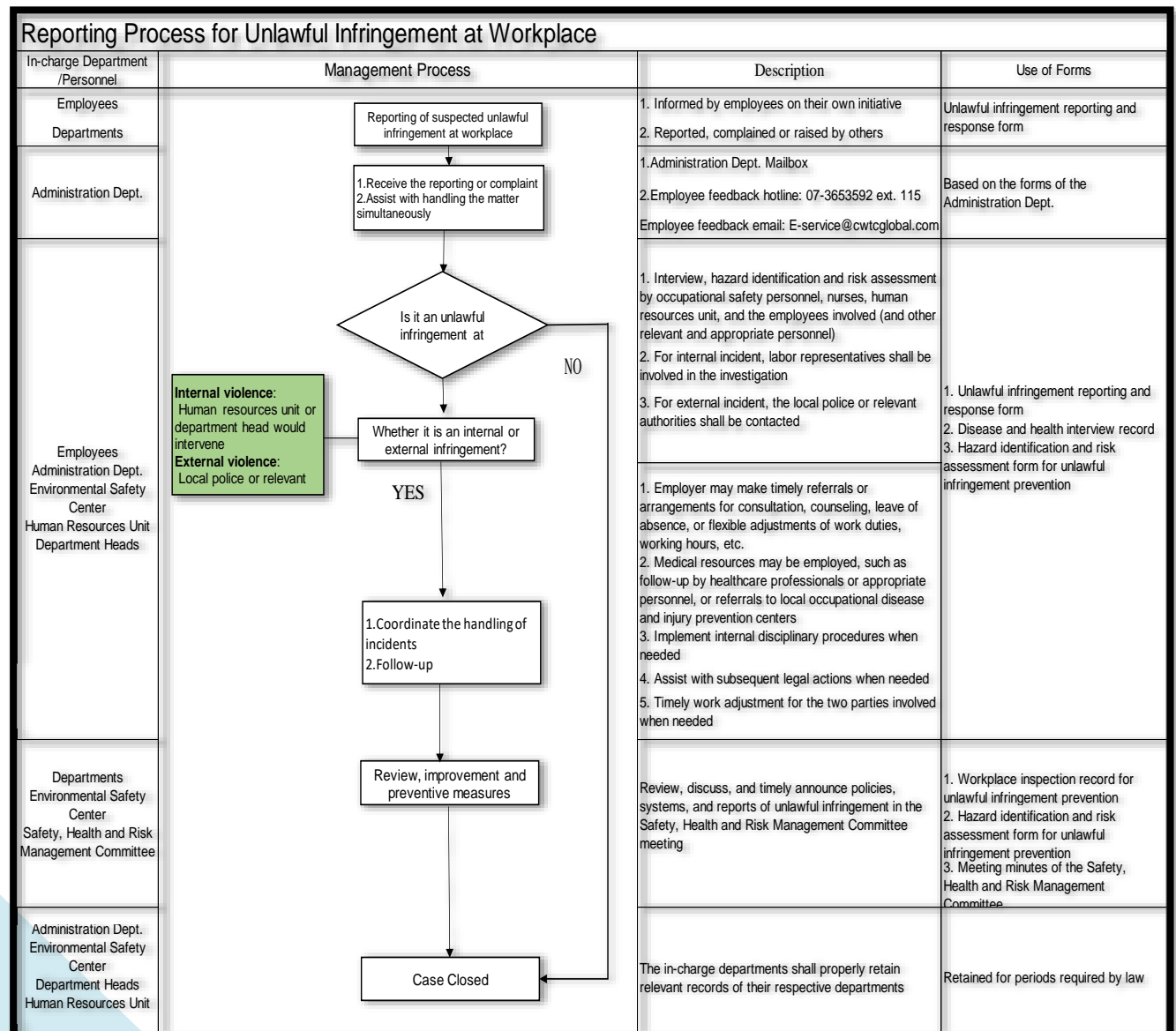
● Protection of Human Rights

CWTC strictly complies with labor laws and regulations of countries it operates in, protects the legal rights and interests of employees, and adheres to the spirit and basic principles of human rights protection outlined in the “United Nations Global Compact”, the “United Nations Universal Declaration of Human Rights”, the “ILO Declaration on Fundamental Principles and Rights at Work” and other international human rights conventions. We treat all employees with dignity and respect.

We include our “Human Rights Policy”, “Corporate Social Responsibilities Policy”, “Statement on Prohibiting Workplace Violence in the Workplace” and “Regulations Governing the Maternal Health Protection of Female Employees” as mandatory courses for orientation and annual education and training, so that all employees are fully aware

of the importance of human rights protection, elimination of all forms of discrimination against women, and prevention of workplace violence and sexual harassment.

In addition, employees who encounter problems concerning workplace safety and health, gender equality, and workplace violence at work can raise issues through our reporting channel where problems would be handled confidentially by dedicated personnel.



4.2 Talent Cultivation and Nurturing

We cultivate correct working attitude and behavior to effectively improve the working knowledge and skills of our employees, thereby successfully achieving the Company's business objectives. Our training programs include orientation and on-the-job training. Courses are evaluated and assessed for effectiveness in order to motivate and empower employees.

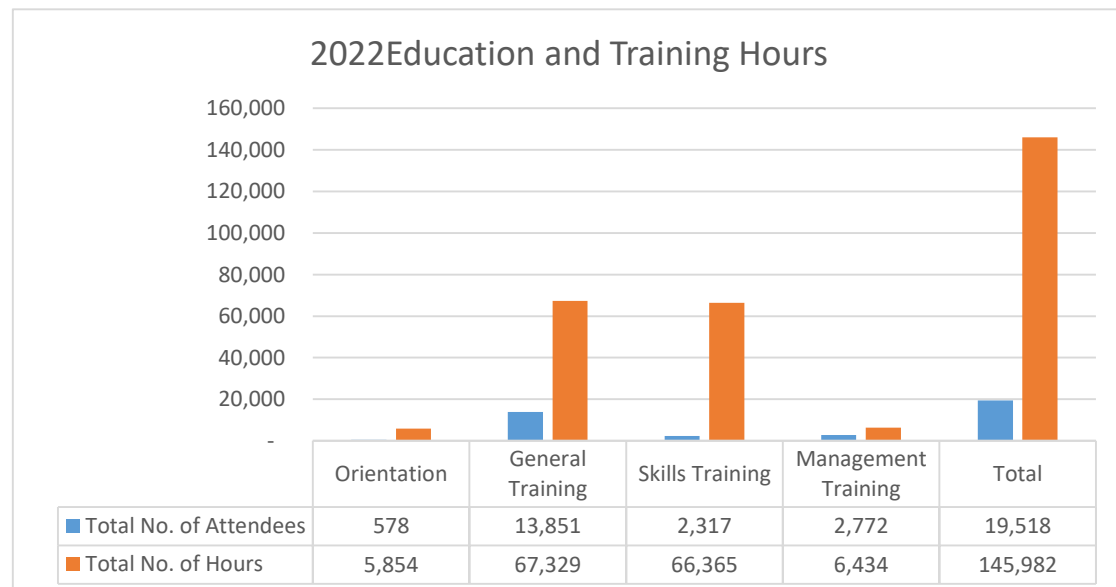
Orientation: General education and basic skills training.

On-the-job training: It is divided into general training and skills training. The training covers internal departmental training, quality system, occupational and environmental safety, internal audit and control, production management, and administrative management.

Human capital training: It focuses on management training and is regarded as the Company's long-term investments on employees. In addition to on-the-job training, it can be conducted through inspection tours abroad, visits to well-known domestic companies, attendance at various conferences, and job rotation.

CWTC also organizes internal and external training courses for employees pursuant to the ISO9001 Quality Management System and ISO14001 Environmental Management System. Occupational safety and health courses are arranged regularly based on the job characteristics for employees to fully understand the importance of occupational health and safety. We also assign employees to attend external training for occupational safety and health-related certificates pursuant to local laws and regulations. For example, we have supervisors of specific chemical substance operation and organic solvent operation and operators of ionizing radiation and forklift in our Taiwan plants.

Our training courses in 2022 are summarized as follows:



Category		Male	Female	Managerial Position	Non-managerial Position
Internal Training	Attendees	11,809	7,059	3,298	15,570
	Training hours	85,534	53,479	10,621	128,392
	Average hours per person	63	63	19	78
External Training	Attendees	483	167	313	337
	Training hours	5,705	1,264	3,306	3,663
	Average hours per person	4	1	6	2

4.3 Employee Benefits

The Company attaches great importance to employee compensation and benefits, and provides protections above the regulatory requirements. Employee salaries are not determined based on gender. Our employee benefits include base salary, allowances, bonuses, pensions and insurances. We design compensation packages based on education, work experience and market surveys for them to stay competitive, and consider the Company's overall operation, individual performance, the Consumer Price Index (CPI) and government policies for salary adjustments. There are two performance evaluations every year and we recognize, award and motivate employees with outstanding performance through effective incentive programs. In 2022, except for new hires, the percentage of employees who underwent performance evaluation was 100%. Employee career development review is conducted at the end of each year in our Taiwan plants with a coverage rate of 100%.

We expected our employees to unleash their maximum potential under a fair compensation and performance evaluation system in 2022.

Employee benefit expenses amounted to NT\$1,775,461 thousand in 2022, up 5% from the previous year.

Comparison of the Number of Full-time Non-managerial Employees and Their Average Salaries

Item/Year	2022	2021	Changes (%)	2020	Changes (%)
No. of employees	731	195	275	159	23
Average salary	NT\$757,000	NT\$681,000	11	NT\$568,000	20
Median salary	NT\$622,000	NT\$616,000	1	NT\$503,000	22

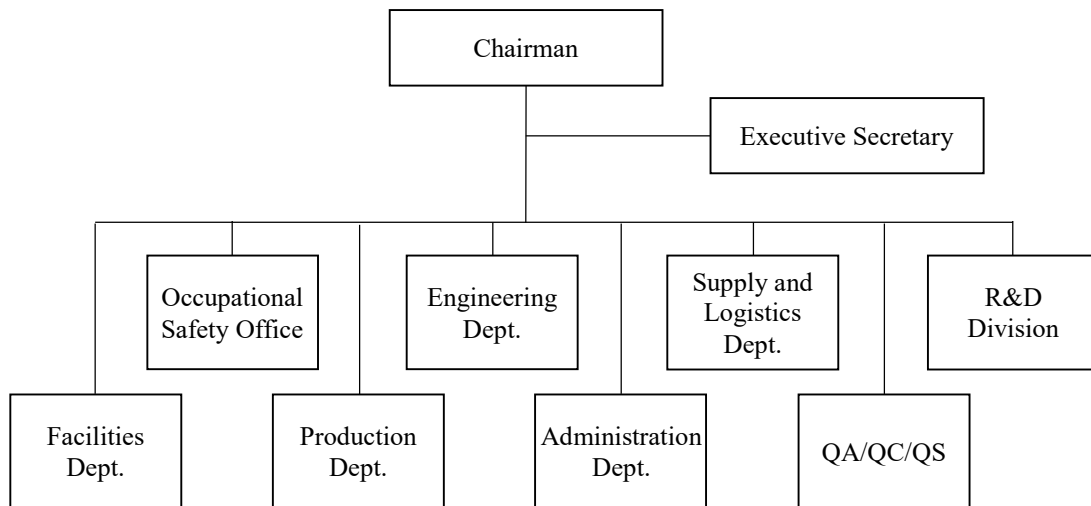
Note: The number of employees in this table excludes managers of the Company. The term “manager” is as defined in the Official Letter No. Taiwan-Finance-Securities-III-920001301 issued by the competent authority on March 27, 2003. It is consistent with the scope of managers disclosed in the Company's annual report.

Year	2020		2021		2022	
Gender	Female	Male	Female	Male	Female	Male
Average salary ratio of female to male in non-managerial position	0.85	1	0.88	1	0.92	1
Average salary ratio of female to male in managerial position	0.91	1	0.78	1	1.01	1
Average salary ratio of female to male in manager position	1.35	1	1.01	1	1.02	1
Average salary ratio of female to male in senior executive position	0.73	1	0.98	1	1.49	1

In addition, we provide special leave, half-pay sick leave, personal leave, marital leave, injury leave, and family care leave by law. In order to build a harmonious workplace with equality, female employees are entitled to menstrual leave, prenatal appointment leave and maternity leave while married employees are entitled to paternity leave.

Employees with family needs can apply for parental leave and leave without pay and be reinstated afterwards.

The Company has organized labor-management meetings by law and they are to be held at least once every quarter. Besides labor issues submitted by different units in accordance with the law, the meeting also appoints representatives from both parties to solicit employee proposals. Through these meetings, opinions of both the management and workers are fully communicated and negotiated. There were no labor disputes in 2022.



We have established the Employee Welfare Committee in accordance with local laws and regulations and allocated welfare funds accordingly. Each site has instructed relevant units to plan and implement welfare policies set out below:

Item	Description
Employee insurance	In addition to labor, health and pension insurances pursuant to local laws and regulations, employees are covered by group insurance.
Employee bonuses	In accordance with the Company's Articles of Incorporation, employee bonus shall be 1% of the Company's profit for the year.
Employee compensation plan	<p>In line with our corporate planning, employees are entitled to shares reserved from cash capital increase for employee stock purchase plans, transfer of treasury shares to employees, employee stock options and restricted shares.</p> <p>In 2021, the Company transferred 1,053 thousand treasury shares to employees.</p> <p>In 2022, the Company issued 5,925 thousand new restricted shares.</p>
Employee benefit plan	<p>In order to enhance welfare, motivate employees to engage in financial planning, and strengthen employee engagement, thereby delivering win-win solutions for management and employees, we initiated employee share ownership trust in 2020, allowing employees to own shares of the Group.</p> <p>The Company matches 100% of employee contributions. Employees are entitled to receive annual dividends and full redemption of shares after five years.</p> <p>To encourage the use of electric motorcycles, we provided a subsidy of NT\$30,000 per motorcycle for a total of 150 motorcycles in response to energy conservation and carbon reduction in 2022.</p> 
Group activities	Company trips, department gathering, and fun challenges are organized regularly.
Cash gifts	Cash gifts for birthdays and major festivals, and subsidies for weddings, funerals, etc.
Employee health check-ups	We arrange annual health check-ups for employees.

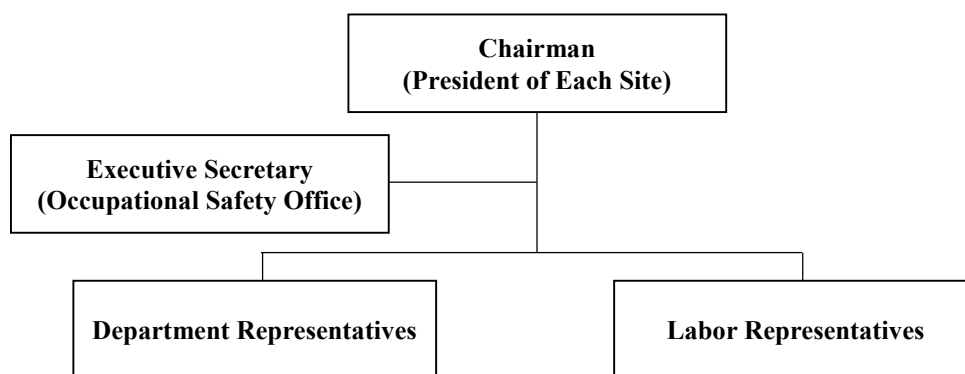
4.4 Occupational Safety and Health

● Occupational Safety and Health (OSH) Management System

Our OSH management system covers a total of 2,272 persons, including 2,202 employee and 70 non-employee workers, with an employee coverage rate of 100%. In order to effectively discuss and solve practical OSH issues, we have established the Safety and Health Committee.

The structure of the Safety and Health Committee is as follows:

The President of each site would serve as the chairman and hold regular meetings. In Taiwan, meetings are held at least once every three months while monthly meetings are arranged for our China and overseas plants.



Duties of the Committee are as follows:

1. Review OSH policies.
2. Review OSH management plans.
3. Review the implementation plan of safety and health education and training.
4. Review work environment monitoring plan, monitoring results and action plans.
5. Review health management, occupational disease prevention and health promotion matters.
6. Review various safety and health proposals.
7. Review self-inspections and safety and health audits of business units.
8. Review preventive measures for hazards of machinery, equipment, or raw materials and materials.
9. Review occupational disaster investigation reports.
10. Assess the performance of on-site safety and health management.
11. Review safety and health management of contractor business.
12. Responsible for other matters related to OSH management.

The Company conducts regular safety and health compliance audits to ensure our business operations comply with regulations. In 2022, all sites were in compliance with local regulations and there were no safety and health violations. In order to ensure that employees can work in a safe and healthy environment and to enhance the Company's competitiveness, each site conducts working environment and occupational hazards monitoring regularly as required by local laws and regulations, which are twice per year for plants in Taiwan and once every year for our overseas and China plants. The monitoring results have met all requirements and stayed below the regulatory threshold.

● Safety Promotion

Zero accident is the Company's goal of occupational disaster management, and we have initiate various safety enhancement activities accordingly. The Safety Risk Week held in each site annually is the highlight of our safety and health promotion activities. Everyone at the site, from top to bottom, proactively takes part in the event.

In order to reduce occupational injuries, hazard identification and risk assessment are conducted annually for each department at the sites, and the risk level is determined according to the severity and probability of occurrence. Additional risk control measures are required for operations with medium to high risk level to lower the risk level.

To avoid concealment in reporting, we encourage departments to identify safety concerns in their daily operations. Once unsafe conditions are discovered by observing employees' work behaviors, we would follow up with safety proposals for improvement. False alarms are included in the reporting procedures where improvement measures are implemented before injuries occur to eliminate the possibility of next accident.

Each site conducts at least two plant-wide disaster and emergency drills each year, covering earthquakes, fires, chemical spills, etc. and incorporating scenario setting based on operation characteristics and hazard types of each site.

Taiwan Plants



Overseas Plants



China Plants



● Occupational Accidents Management

In 2022, the Group had 9 occupational injuries and no fatal occupational accident. The number of occupational accidents increased slightly compared to the previous year, but the severity of injuries was lower, resulting in a disabling injury severity rate of 0.64 times the number last year. An accident report is required for each incident, investigating the direct/indirect/root causes of the accident. In addition to education, training and SOP review, we also need to examine the soundness of risk assessments for the operations. After exploring the true cause of each occupational accident, we would adopt appropriate improvement measures and apply them to similar work environments/types to minimize the hazards and effectively prevent the recurrence of the same type of accidents.

Occupational injury statistics of the Group



2022	Taiwan	Overseas	China	Total
No. of recordable occupational injuries	9	0	0	9
Fatality rate of occupational injuries	0	0	0	0
Severity rate of occupational injuries	0	0	0	0
Rate of recordable occupational injury	5.06	0	0	1.80

Note 1: Severe occupational injury are ones where employees cannot or hard to return to their pre-injury state of health within six months.

Note 2. Rate of recordable occupational injury = (No. of recordable occupational injuries / Working hours] \times 1,000,000.

Note 3. The statistics exclude ones from commuting.

Year	Disabling Injury Frequency Rate (FR)				Disabling Injury Severity Rate (SR)			
	Taiwan	Overseas	China	Total	Taiwan	Overseas	China	Total
2019	2.30	0	0	0.70	71	0	0	22
2020	5.72	0.91	0.50	2.08	155	16	2	49
2021	3.93	0	0	1.24	45	0	0	14
2022	5.06	0	0	1.80	26	0	0	9

● Contractor Safety and Health Management

There are Contractor Management Procedures at each site to ensure the safety management mechanisms are in place for contractors entering our premises, thereby achieving the goal of zero accident. Prior to their works, contractors shall hold a safety meeting with the project and occupational safety personnel where the occupational safety personnel would propose safety requirements for the project. Work can only begin after all requirements are met. If the project involves special operations, such as slinging and lifting operations, hot work, confined space or dangerous pipelines, applications must be submitted along with relevant safety plans for approval before the commencement of work.

The project and occupational safety personnel would perform random inspections during the work to ensure all operations are in compliance with the safety requirements so as to secure the operational safety of contractors. There were no occupational accidents of contractors at our domestic or overseas plants in 2022.

● Workplace Health Promotion and Management

The Company provides health check-ups at a frequency higher than the regulatory requirements. The annual employee health check-ups include general and special ones in order to protect and understand the health status of our employees. From 2019 onwards, electrocardiography is included for our Taiwan employees as an assessment for cerebrovascular and cardiovascular diseases to prevent overworking. The results of health check-ups are managed by risk levels. We monitor employees in the high-risk group and provide relevant health education and consulting services to safeguard their health and prevent occupational diseases. In 2022, there were 71 employees in Taiwan with Level 2 or Level 3 risk based on the results of their special health check-ups. They were interviewed and monitored by nurses and on-site physicians with results from follow-up doctor appointments uploaded to the official system as required by laws. There were no confirmed cases of occupational diseases at our domestic or overseas plants in 2022.

Year	No. of Participants in Health Check-ups			No. of Participants in Special Health Check-ups		No. of Employees with Abnormal Results from Special Health Check-ups	
	Taiwan	Overseas	China	Taiwan	Overseas	Taiwan	Overseas
2019	557	528	420	284	94	74	43
2020	566	507	462	312	40	116	12
2021	608	521	467	294	11	102	10
2022	761	532	457	346	82	71	40

Note: The health check-ups in our China site have already included special operation items; therefore, they are not listed separately.

On-site health service by occupational health physicians is arranged at our Taiwan site on a monthly basis. There was a total of 56 appointments in 2022 with services covering interviews and guidance on disease and health, assessments on return to work and job assignments, recommendations concerning improvement of environmental hazards at workplace, reviews of health interviews by nurses, etc.

Regular on-site health check-ups at Taiwan and Overseas Sites



We have gyms at our Taiwan and China sites with fitness equipment, table tennis, billiard, and basketball courts (Chengdu plant) for employees to use during their breaks. E-newsletter promoting various health information is released monthly at our Taiwan plant. We also organize health promotion activities from time to time, including brisk walking events and health education seminars. In order to enrich the healthy diet choices for employees, we ask our catering company to provide multigrain rice, cook a variety of vegetables with less oil, salt and sugar, and set up a vending machine that provides sugar-free drinks and fruits.

Gym



Taiwan Plants



Taiwan Plants



Chengdu Plants



Suzhou Plants

E-newsletter on health



Brisk walking event



Healthy Diet Poster



Multigrain rice



A variety of vegetables with less oil, salt and sugar



Vending machine providing sugar-free tea and fruit



COVID-19 Control Management

COVID-19 has wreaked havoc on a global scale since 2020. In order to protect the health of all employees, each site has formulated and implemented various control measures in accordance with the pandemic prevention requirements of local governments. These practices include an increased frequency of daily environmental cleaning, regular environmental disinfections, partitions for dining, checkerboard seating arrangements in the office, visitor control measures, bans on overseas trips and suspension of trips to domestic hot zones. We also encourage employees to be vaccinated, maintain a safety stock of 3-month pandemic medical supplies and personal protective equipment, release notices containing pandemic prevention information, establish procedures for managing suspected/confirmed cases, etc. In the second half of 2022, our China plant adopted closed-loop production due to the severity of the pandemic and in line with the local government's COVID-19 policy. Working shifts were adjusted to ensure the confirmed employees could be fully rested before returning to work.



5. Appendix

Comparison Table of GRI Standards

Statement of use		Chang Wah Technology Co., Ltd. has prepared this report in accordance with the GRI Standards for the period from January 1, 2022 to December 31, 2022.			
GRI 1 used		GRI 1: Foundation 2021			
Applicable GRI Sector Standards		None			
GRI Standard	No.	Disclosure Titles	Corresponding Chapter	Page	Note
General Disclosures					
GRI 2: General Disclosures 2021	2-1	Organizational details	1.1 Company profile	7	
	2-2	Entities included in the organization's sustainability reporting	1.1 Company profile	7	
	2-3	Reporting period, frequency and contact point	About this Report	1	
	2-4	Restatements of information	Not applicable		
	2-5	External assurance	About this Report	1	
	2-6	Activities, value chain and other business relationships	1.1 Company profile	7	
	2-7	Employees	4.1 Talent recruitment and workforce structure	68	
	2-8	Workers who are not employees	4.1 Talent recruitment and workforce structure	68	
	2-9	Governance structure and composition	1.2 Corporate governance	11	
	2-10	Nomination and selection of the highest governance body	1.2 Corporate governance	11	
	2-11	Chair of the highest governance body	1.2 Corporate governance	11	
	2-12	Role of the highest governance body in overseeing the management of impacts	1.2 Corporate governance	11	
	2-13	Delegation of responsibility for managing impacts	1.2 Corporate governance	11	
	2-14	Role of the highest governance body in sustainability reporting	1.2 Corporate governance	11	
	2-15	Conflicts of interest	1.2 Corporate governance	11	
	2-16	Communication of critical concerns	1.6 Stakeholders	39	
	2-17	Collective knowledge of the highest governance body	1.2 Corporate governance	11	
	2-18	Evaluation of the performance of the highest governance body	1.2 Corporate governance	11	
	2-19	Remuneration policies	1.2 Corporate governance	11	
	2-20	Process to determine remuneration	1.2 Corporate governance	11	
	2-21	Annual total compensation ratio	1.2 Corporate governance	11	
	2-22	Statement on sustainable development strategy	1.5 Risk management	33	
	2-23	Policy commitments (Environmental Policy)	1.5 Risk management	31	
	2-24	Embedding policy commitments	4.2 Talent cultivation and nurturing	72	
	2-25	Processes to remediate negative impacts	1.2 Corporate governance	11	
	2-26	Mechanisms for seeking advice and raising concerns	1.6 Stakeholders	39	
	2-27	Compliance with laws and regulations	1.2 Corporate governance	11	

GRI Standard	No.	Disclosure Titles	Corresponding Chapter	Page	Note
	2-28	Membership associations	1.2 Corporate governance	11	
	2-29	Approach to stakeholder engagement	1.6 Stakeholders	39	
	2-30	Collective bargaining agreements	4.3 Employee benefits	74	
Material Topics					
GRI 3: Material Topics 2021	3-1	Process to determine material topics	1.6 Stakeholders	39	
	3-2	List of material topics	1.6 Stakeholders	39	
	3-3	Management of material topics	All chapters		
Economic Performance					
GRI 201: Economic Performance 2016	GRI 201-1	Direct economic value generated and distributed	1.3 Business performance	29	
	GRI 201-2	Financial implications and other risks and opportunities due to climate change	1.5 Risk management	33	
	GRI 201-3	Defined benefit plan obligations and other retirement plans	4.3 Employee benefits	74	
	GRI 201-4	Financial assistance received from government	1.3 Business performance	29	
Procurement Practices					
GRI 204 Procurement Practices 2016	GRI 204-1	Proportion of spending on local suppliers	2.3 Local procurement policy	48	
Energy					
GRI 302: Energy 2016	GRI 302-1	Energy consumption within the organization	3.2 Energy management	51	
	GRI 302-3	Energy intensity	3.2 Energy management	51	
Water and Effluents					
GRI 303: Water and Effluents 2018	GRI 303-1	Interactions with water as a shared resource	3.3 Water resources management	55	
	GRI 303-2	Management of water discharge-related impacts	3.3 Water resources management	55	
	GRI 303-3	Water withdrawal	3.3 Water resources management	55	
	GRI 303-4	Water discharge	3.3 Water resources management	55	
	GRI 303-5	Water consumption	3.3 Water resources management	55	
Emissions					
GRI 305: Emissions 2016	GRI 305-1	Direct (Scope 1) GHG emissions	3.2 Energy management	51	
	GRI 305-2	Energy indirect (Scope 2) GHG emissions	3.2 Energy management	51	
	GRI 305-3	Other indirect (Scope 3) GHG emissions	3.2 Energy management	51	
	GRI 305-4	GHG emissions intensity	3.2 Energy management	51	
Sewage and Waste					
GRI 306: Waste 2020	GRI 306-1	Waste generation and significant waste-related impacts	3.4 Pollution emission and prevention	64	
	GRI 306-2	Management of significant waste-related impacts	3.4 Pollution emission and prevention	64	
	GRI 306-3	Waste generated	3.4 Pollution emission and prevention	64	
Employment					
GRI 401: Employment 2016	GRI 401-1	New employee hires and employee turnover	4.1 Talent recruitment and workforce structure	68	

GRI Standard	No.	Disclosure Titles	Corresponding Chapter	Page	Note
	GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	4.3 Employee benefits	74	
	GRI 401-3	Parental leave	4.3 Employee benefits	74	
Labor/Management Relations					
GRI 402: Labor/Management Relations 2016	GRI 402-1	Minimum notice periods regarding operational changes	4.1 Talent recruitment and workforce structure	68	
Occupational Health and Safety					
GRI 403: Occupational Health and Safety 2018	GRI 403-1	Occupational health and safety management system	4.4 Occupational safety and health	77	
	GRI 403-2	Hazard identification, risk assessment, and incident investigation	4.4 Occupational safety and health	77	
	GRI 403-3	Occupational health services	4.4 Occupational safety and health	77	
	GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	4.4 Occupational safety and health	77	
	GRI 403-5	Worker training on occupational health and safety	4.2 Talent cultivation and nurturing	72	
	GRI 403-6	Promotion of worker health	4.4 Occupational safety and health	77	
	GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.4 Occupational safety and health	77	
	GRI 403-8	Workers covered by an occupational health and safety management system	4.4 Occupational safety and health	77	
	GRI 403-9	Work-related injuries	4.4 Occupational safety and health	77	
	GRI 403-10	Work-related ill health	4.4 Occupational safety and health	77	
Training and Education					
GRI 404: Training and Education 2016	GRI 404-1	Average hours of training per year per employee	4.2 Talent cultivation and nurturing	72	
	GRI 404-2	Programs for upgrading employee skills and transition assistance programs	4.2 Talent cultivation and nurturing	72	
	GRI 404-3	Percentage of employees receiving regular performance and career development reviews	4.3 Employee benefits	74	
Diversity and Equal Opportunity					
GRI 405: Diversity and Equal Opportunity 2016	GRI 405-1	Diversity of governance bodies and employees	4.1 Talent recruitment and workforce structure	68	
	GRI 405-2	Ratio of basic salary and remuneration of women to men	4.3 Employee benefits	74	
Child Labor					
GRI 408: Child Labor 2016	GRI 408-1	Operations and suppliers at significant risk for incidents of child labor	4.1 Talent recruitment and workforce structure	68	
Forced or Compulsory Labor					
GRI 409: Forced or Compulsory Labor 2016	GRI 409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	4.1 Talent recruitment and workforce structure	68	
Supplier Social Assessment					
GRI 414: Supplier Social Assessment 2016	GRI 414-2	Negative social impacts in the supply chain and actions taken	2.1 Supplier sustainability management	44	
Customer Privacy					
GRI 418: Customer Privacy 2016	GRI 418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	1.5 Risk management	33	

Comparison Table of SASB Standards - Semiconductor industry

Topic	Code	Metric	Corresponding Chapter	Page	Note
GHG Emissions	TC-SC-110a.1	(1) Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	3.2 Energy management	51	
	TC-SC-110a.2	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	3.2 Energy management	51	
Energy Management in Manufacturing	TC-SC-130a.1	(1) Total energy consumed, (2) percentage of grid electricity and (3) percentage of renewable	3.2 Energy management	51	
Water Management	TC-SC-140a.1	(1) Total water withdrawn, (2) total water consumed; percentage of each in regions with water stress	3.3 Water resources management	55	
Waste Management	TC-SC-150a.1	Amount of hazardous waste from manufacturing, percentage recycled	3.4 Pollution emission and prevention	64	
Employee Health & Safety	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	4.4 Occupational safety and health	77	
	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	4.4 Occupational safety and health	77	
Recruiting & Managing a Global & Skilled Workforce	TC-SC-330a.1	Percentage of employees that are (1) foreign nationals and (2) located offshore	4.1 Talent recruitment and workforce structure	68	
Materials Sourcing	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	2.1 Supplier sustainability management	44	
Intellectual Property Protection & Competitive Behavior	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behaviors	In 2022, CWTC did not incur any monetary losses as a result of legal proceedings associated with anti-competitive behaviors.		
Total production	TC-SC-000.A	Varies by product type	Total production is disclosed in the Company's annual reports. Please refer to the annual report for details. Total production was 127,887KKPCS in 2022 and 150,580KKPCS in 2021.		
Percentage of production from owned facilities	TC-SC-000.B	Percentage (100%)	CWTC is a professional lead frame manufacturer with 100% of its production coming from its own facilities.		

Sustainability Disclosure Indicators

No.	Indicator	Category	Annual Disclosure	Unit of Measurement	Note
1	Total energy consumption, percentage of purchased electricity and renewable energy usage	Quantitative	Total energy consumption: 302,139 GJ Percentage of purchased power: 93% Renewable energy use rate: 0%	GJ, %	
2	Total water withdrawal and total water consumption	Quantitative	Total water withdrawal: 1,324 m ³ Total water consumption: 706 m ³	m ³	
3	Weight of hazardous waste generated and percentage of recovery	Quantitative	Hazardous waste: 12,229t Recovery percentage: 11%	MT, %	
4	Type, number and percentage of occupational disasters	Quantitative	Fall, 2: 22% Falling objects, 1: 11% Crushed or rolled up, 2: 22% Cut, slash, or scrape, 2: 22% Exposure to hazardous substances, 1: 11% Other, 1: 11%	%, Quantity	
5	Product lifecycle management disclosure: including the weight of scrapped products and electronic waste and the percentage of recycling (Note 1)	Quantitative	Hazardous waste: 12,229 MT Reuse of waste: 2,114 MT Recycled rate: 11%	MT, %	
6	Description of risk management related to the use of critical materials	Qualitative description	CWTC does not use conflict minerals in the manufacturing process and conducts supply chain due diligence concerning conflict minerals to ensure none of its products contain minerals from conflict areas.	Not applicable	
7	Total monetary loss resulting from legal proceedings related to anti-competitive regulations	Quantitative	In 2022, CWTC did not incur any monetary losses as a result of legal proceedings associated with anti-competitive regulations.	Reporting currency	
8	Production volume of major product by category	Quantitative	127,887KKPCS		

Note 1: Including the sale of scraps or other recycling treatments. Details shall be provided.

External Assurance Statement
ISO14064 1:2018



Independent Assurance Opinion

Statement No.:
CSD5685-2022-AG-TWN-DNV

Issued date:
19 June, 2023

Page 1 of 1

This is to verify initiate reporting of Greenhouse Gas Inventory Management Report (2022) of
Chang Wah Technology Co., Ltd.

Scope of Verification

DNV Business Assurance (DNV) has been commissioned by Chang Wah Technology Co., Ltd. (hereafter the "Organization") to perform a verification of the greenhouse gas statements of Greenhouse Gas Inventory Management Report (2022) (hereafter the "Inventory Report") in Taiwan, ROC with respect to the sites listed in Appendix A.

The Reporting Boundary for the verification including direct GHG emissions and removals, indirect GHG emissions from imported energy, indirect GHG emissions from transportation, and indirect GHG emissions from products used by the Organization. The further descriptions for the Reporting Boundary listed in Appendix B.

Verification Criteria and GHG Programme

The verification was performed on the basis of ISO 14064-1:2018 as well as criteria given to provide for consistent GHG emission identification, calculation, monitoring and reporting.
The verification was conducted in accordance with ISO 14066:2011, ISO 14065:2020, ISO14064-3:2019.

Verification Statement

It is DNV's opinion that the Inventory Report (2022), which was published on June 12, 2023 (Ver. 4), is free from material discrepancies in accordance with the verification criteria identified as stated above. The opinion is decided based on the following approaches,

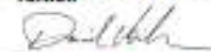
- For the Direct (Category 1) and Indirect GHG emissions from imported energy (Category 2), the reliability of the information within the Inventory Report (2022) were verified with reasonable level of assurance.
- For the other indirect GHG emissions, the involved information was tested using agreed-upon procedures, AUP, defined in Inventory Report.

Sophie Kim
GHG Verifier



Place and date:
Taipei, 19 June, 2023

For the issuing office:
DNV Business Assurance Co., Ltd.
29FL, No. 293, Sec. 2, Wenhua Rd.,
Banqiao District, New Taipei City 220,
Taiwan



Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
This Verification Opinion is based on the information made available to us and the engagement conditions detailed above. Hence, DNV cannot guarantee the accuracy or correctness of the information. DNV cannot be held liable by any party relying or acting upon this Verification Opinion.
立昂科技股份有限公司, 新北市板橋區文化路二段 293 號 29 樓, TEL: +886-3-82537883, website: www.dnv.com/tw
DNV ZNA7W-OP-F50, Rev.18, 2023-2



Statement No.: C605686-2022-AG-TWN-DNV
Place and date: Taipei, 19 June, 2023

Page 2 of 2

Supplement to Statement

Process and Methodology

The reviews of the Inventory Report and relevant documents, and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

Quantification of Greenhouse Gas Emission

The Inventory Report covering the period 1st January to 31st December, 2022, it is DNV's opinion that relevant GHG emissions and removals identified within the Reporting Boundary has been included in the Inventory Report as claimed in accordance with the verification criteria identified as stated above, and results in quantification of GHG emissions that are real, transparent and measurable.

Organizational Boundary of Verification

☐ Financial Management Control ☒ Operational Management Control ☐ Equity Share

GHGs Verified

☒ CO₂ ☒ CH₄ ☒ N₂O ☒ HFCs ☒ PFCs ☒ SF₆ ☒ NF₃

The Quantification of GHG emissions and removals in Direct and Indirect Emission Source: Tonnes CO₂ e

Category	BU1	BU2	Total
Direct Emissions	15.8192	551.9963	567.8155
Imported Energy Indirect Emissions	2,266.4284	12,223.7343	14,490.1627
Indirect GHG emissions from transportation	58.0501	1,069.9965	1,128.0466
Indirect GHG emissions from products used by organization	677.4196	7,227.6136	7,905.0332

*: Unless other indicated, the Indirect Emissions was calculated based on 2021 electricity emission factor of 0.509 kg CO₂-e/kwh, which was announced by Bureau of Energy, Ministry of Economic Affairs. The Global Warming Potential (GWP) defined in IPCC AR6 (2023) has been choose and correctly referred by the Organization.

**: The details subcategory of each category could be refer later in the Report.

Verification Opinion

☒ unmodified
☐ modified
☐ adverse

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
This Verification Opinion is based on the information made available to us and the engagement conditions detailed above. Hence, DNV cannot guarantee the accuracy or correctness of the information. DNV cannot be held liable by any party relying or acting upon this Verification Opinion.
立達能源國際股份有限公司, 台北市松山區文信路二號 293 號 29 樓, TEL: +886-2-82537800, website: www.dnv.com/tw
DNV ZNATW-CP-F50, Rev.10, 2023-2

Third-party Assurance Statement



Independent Assurance Statement

Scope and Approach

Chang Wah Technology Co., Ltd. ("CWTC" or "the Company") commissioned DNV Business Assurance Co., Ltd. ("DNV" or "we") to undertake independent assurance over the 2022 Sustainability Report for the year ended 31 December 2022 ("the Report").

We performed our work using DNV's assurance methodology VeriSustain™¹, which is based on our professional experience and international assurance best practices, including International Standard on Assurance Engagements 3000 (ISAE 3000) and the Global Reporting Initiative (GRI) Sustainability Reporting Standards.

The Report also incorporated disclosures with reference to relevant sustainability reporting guidelines, such as the Sustainability Accounting Standards Board's (SASB) Sustainability Accounting Standard for the Semiconductors industry (version 2018-10).

We understand that the reported financial data and information are based on the data from the Company's Annual Report and Accounts, which are subject to a separate independent audit process. The review of financial data taken from the Annual Report and Accounts and greenhouse gas emission data verified by other assurance engagements are not within the scope of our work.

We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our assurance opinion. We are providing the evaluation of reporting principles with a Type 1, Moderate level of assurance, according to the DNV VeriSustain™ Protocol.

Responsibilities of the Directors of Chang Wah Technology Co., Ltd. and of the Assurance Providers

The Directors of CWTC have sole responsibility for the preparation of the Report. In performing our assurance work, our responsibility is to the management of CWTC; however, our statement represents our independent opinion and is intended to inform all of CWTC's stakeholders. DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement.

This is the first year we have performed relevant assurance work, and we have no other contractual relationship with CWTC that constitutes a conflict of interest against the current assurance engagement.

DNV's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Basis of Our Opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at the Company and site level. We undertook the following activities:

- Review of the current sustainability issues that could affect CWTC and are of interest to stakeholders.
- Review of CWTC's stakeholder engagement approach and recent outputs.
- Review of information provided to us by CWTC on its reporting and management processes relating to the Principles.
- Interviews with selected senior managers responsible for the management of sustainability issues and review of selected evidence to support the issues discussed.
- Site visits to CWTC's Plant 2 in Kaohsiung City and data checks on the five selected production sites in Taiwan, China (Suzhou and Chengdu) and Malaysia to assess processes and systems for preparing site-level data and implementing sustainability strategies.
- Review of supporting evidence for key claims and 2022 data in the Report, as reported information beyond 2022 is not within the scope of the current engagement. Our checking processes were prioritised according to materiality, and we based our prioritisation on the materiality of issues at the consolidated corporate level.
- Review of the processes for gathering and consolidating the specified performance data and, for a sample, checking the data consolidation. Where data on financial performance and greenhouse gas emissions had been checked by other assurance providers or engagements, we tested the transcription from these sources to the Report.
- An independent assessment of CWTC's reporting according to the Global Reporting Initiative (GRI) Sustainability Reporting Standards.
- The verification was conducted based only on the Chinese version Report.

¹ The VeriSustain™ Protocol is available on [dnv.com](https://www.dnv.com)



Opinion

On the basis of the work undertaken, nothing came to our attention to suggest that the Report does not properly describe CWTC's adherence to the Principles.

In terms of reliability of the performance data, in accordance with Moderate level assurance requirements, nothing came to our attention to suggest that these data have not been properly collated from the information reported at the operational level nor that the assumptions used were inappropriate.

Observations

Without affecting our assurance opinion, we also provide the following observations.

- We encourage the continual development of material topic identification methodology to provide the basis for more focused and well-grounded sustainability initiatives.
- As the concept of impact has been reaffirmed, we encourage the Company to continue to develop due diligence mechanisms across its material sustainability topics, supported by coordinated annual targets and indicators to elucidate longer-term strategies.
- Considering the broad operating context of the Company and its subsidiaries, we also encourage continued efforts to advance data collection mechanisms for enhanced quality and entirety.

Stakeholder Inclusiveness

The Company has identified the expectations of stakeholders through internal mechanisms in dialogue with different groups of stakeholders. The stakeholder concerns are well identified and documented, and the significant sustainability issues identified through this process are reflected in the Report.

Sustainability Context

The Report provides an accurate and fair representation of the level of implementation of related corporate sustainability policies and meets the content requirements of the GRI Standards.

Materiality

The process developed internally has not missed out any significant, known material issues, and these issues are fairly covered in the Report. A methodology has been developed to evaluate the priority of these issues.

Completeness

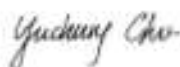
The Report covers performance data against the GRI Standards disclosures that are identified as material within the Company's reporting boundary. The information in the Report includes the Company's most significant initiatives or events that occurred in the reporting period.

Accuracy and Reliability

The Company has developed the data flow for capturing and reporting its sustainability performance. In accordance with Moderate level assurance requirements, we conclude that no systematic errors were detected which causes us to believe that the specified sustainability data and information presented in the Report are not reliable.

For and on behalf of DNV Taiwan

Date: 29 June, 2023



Yu Chung Chen
Lead Verifier
Business Assurance
DNV Taiwan

Statement Number: C607787-2022-AG-TWN-DNV



David Hsieh
District Manager,
Business Assurance
DNV Taiwan