



泰鼎國際股份有限公司
APEX INTERNATIONAL CO., LTD

2023 永續報告書 ESG REPORT

TWSE 4927

Published in June 2024



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1. Introduction

1.1 About this Report¹

Reporting Period

This is the eighth ESG report published by Apex International Co., Ltd. (hereinafter referred to as "Apex"). Since 2016, Apex has been issuing annual CSR reports, which were renamed as "ESG Reports" in 2023. The report is published annually in June, and the data and content disclosed in this report primarily cover the fiscal year 2023 (from January 1, 2023, to December 31, 2023). For information completeness and comparability, some data will be traced back to the fiscal year 2021 (from January 1, 2021, to December 31, 2021) and earlier periods.

Reporting Scope and Boundary

The boundaries and scope of this report include Apex International Co., Ltd. and its subsidiaries, comprising six operational locations. The operational regions encompass Taiwan, Thailand, mainland China, and Singapore. The boundary selection principle considers the nature of the business, industry relevance, and control. Financial data is derived from the audited consolidated financial statements of Apex by KPMG, which include six subsidiary companies. Environmental and social data also align with those of the consolidated financial entities.

Data collection and measurement

This report's information and statistical data are derived from self-conducted surveys and statistics. The performance data presented in this report are aggregated by relevant department personnel through daily operational management data, education and training, issue discussions, and interviews with various units in accordance with the requirements of GRI guidelines and indicators and presented in commonly used numerical descriptions.

¹ Based on the regulation of industry type and paid-in capital announced by Taiwan Stock Exchange Corporation (TWSE), Apex does not need to prepare ESG report, such report is voluntarily prepared by Apex.

Report Writing Guidelines

This report adheres to the disclosure principles of the Global Reporting Initiative (GRI) framework, utilising the core option. Additionally, it references the Task Force on Climate-Related Financial Disclosures (TCFD) framework by the Financial Stability Board (FSB) and the Sustainability Accounting Standards Board (SASB) standards as reporting principles.

Assurance Statement

This report has been verified by the third-party assurance provider, AFNOR Asia, in accordance with the AA1000 AS v3 assurance standard, achieving Type 2 Moderate Level assurance. This ensures that the content disclosed in this report follows the GRI Standards and the AA1000 AccountAbility Principles (AA1000 AP). Please refer to [Verification Statement](#) within this report for further details.

Contact Information

Apex International Co., Ltd.

Sustainable Development Committee Secretary Ms. Wu

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1.2 Letter from The Sustainable Development Committee Chairperson

The evolving industry landscape and changing lifestyles signify the emergence of a new business environment. The driving force behind this change is our aspiration for long-term development and the continuous enhancement of our social and environmental responsibilities. In this context, at Apex, we firmly believe that besides focusing on business and maximising revenue and shareholder returns, companies must also consider their impact on the environment and society and become part of a socially beneficial cycle.

Corporate sustainability has always been one of our core values. We recognise that long-term success and sustainable development can only be achieved by actively addressing environmental, social, and governance issues. Therefore, we integrate the three major corporate governance goals, sustainable environment, and social welfare into our daily operations. We are committed to finding innovative ways to achieve sustainability goals and continuously improving our business practices to ensure our actions have a positive impact.

Regarding information transparency, our company's 2023 annual shareholders' meeting was conducted via live streaming, and the entire session was recorded uninterruptedly and uploaded to the company's official website for shareholders who couldn't attend in person. Regarding information disclosure, we uploaded the annual shareholders' meeting report before the statutory deadline and published the financial reports in Chinese within two months after the end of the fiscal year. Since 2016, we have voluntarily prepared annual sustainability reports in Chinese and English. In 2024, we released our first Climate-Related Financial Disclosure (TCFD) and Risk Management Report to ensure investors have timely access to company information.

Regarding corporate sustainability, we are actively developing green energy and wastewater recycling systems. In 2021, we launched the "GREEN Project" to enhance our company's renewable energy and water resource management. By 2023, the carbon reduction from our solar power generation system exceeded 3,700 tons, with a wastewater recycling rate of approximately 30%. Additionally, we are actively involved in social welfare by allocating funds annually to support hospitals, local communities, and schools around our factories. Through activities such as charity carnivals, Songkran festivals, and employee appreciation events, we strive to create a happy workplace.

We recognise that good corporate governance is a crucial cornerstone of sustainable development. Our efforts in this area have been internationally recognised. In Sustainalytics' ESG assessment, we received a low-risk rating; in the 2023 CDP Water Security Questionnaire, we received a B rating for the management level. Furthermore, we have been honoured multiple times with the AREA Awards from the Asian Enterprise Associations.

At Apex, we adhere to principles of transparency and integrity. Through the functioning of functional committees, we collectively ensure compliance with relevant laws and regulations and foster an understanding among directors, managers, employees, and contractors about the importance of ethical business practices. We strive to enhance our governance standards and ensure our operations meet the highest standards. We are committed to building a positive corporate culture and continuously improving management systems to enhance efficiency and effectiveness.

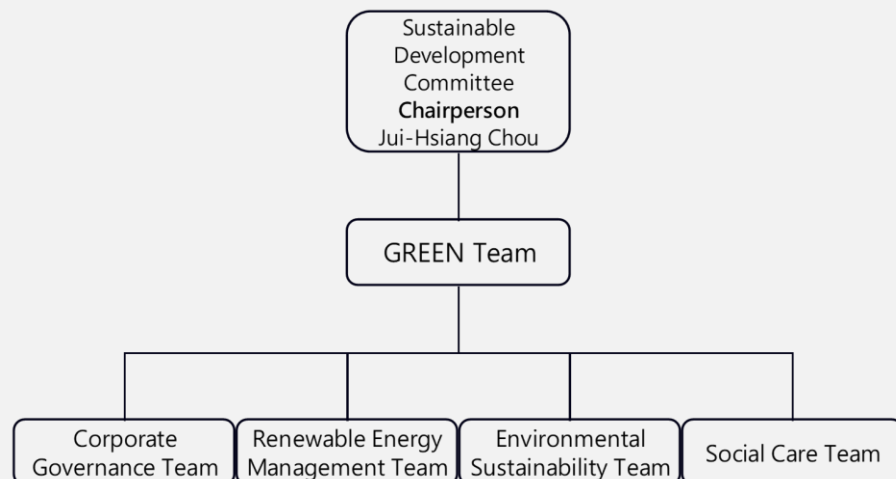
We understand that many challenges must be overcome on the path to sustainable development, such as climate change, resource scarcity, and social inequality. In this process, we recognise the crucial role of stakeholders' participation and support. We look forward to establishing closer cooperation with various sectors to achieve corporate sustainability goals and jointly create a better future.



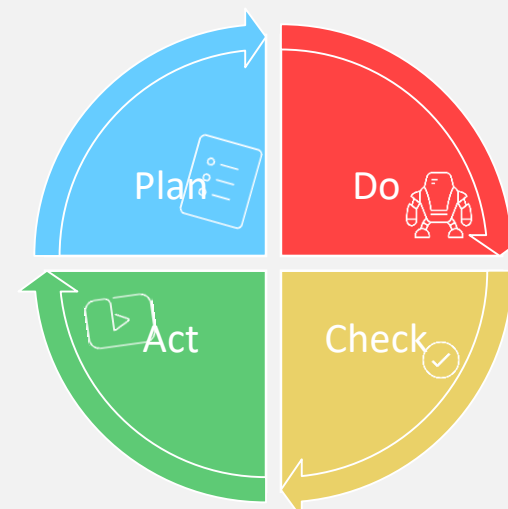
1.3 Promoting and Managing Sustainability

Organisation Structure

The Company established a functional committee, the Sustainable Development Committee, composed of directors, as the highest driving unit for overseeing and governing climate-related risks, opportunities, and sustainable development. The convener is an executive director, and the company's management conducts assessments based on relevant risks and opportunities to formulate strategies and objectives, continuously analysing and controlling them. The effectiveness of operational-level risk control management is examined through audits conducted by the audit unit according to the plan. Additionally, internal self-assessments are conducted annually within the company. The Sustainable Development Committee is responsible for reviewing the implementation of risk management and making necessary improvement recommendations, reporting the audit results to the Audit Committee and the Board of Directors for review annually.



Sustainable Development Management Process



Plan

Creating value
Risk management

Do

Internal consolidation
External disclosure

Check

Assessment criteria
Improvement items

Action

Correction adjustment
Improvement actions

Sustainability Promotion

Vision

To create value for stakeholders and cultivate mutually beneficial relationships, sustainability and resilience are the long-term goals we strive for.

Mission

Manufacture single side~20-layer PCB and HDI.
To plan the best plan of production and sales to satisfy customers' requirement of price and quality and control risks simultaneously.

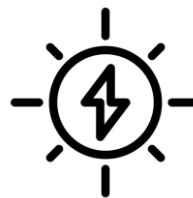
Tenet

Apex culture is people-oriented, emphasizing the integration of Western management disciplines and Eastern philosophical spirit, balancing "emotion" and "reason". Facing changes in the internal and external environment, the Middle Way is our code of conduct. We operate according to the "Middle Way" and respond to all changes.



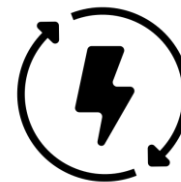
Sustainability Performance

Environmental



5,122.29kWp

The installed solar capacity



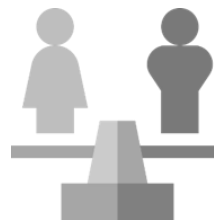
2.03%

Usage of renewable energy



Wastewater recycling rate
24.64%

Social



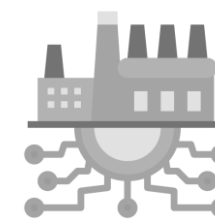
56.79%

Proportion of Female



57.11 hours

Average Training Hours



Occupational training for
electronic technicians

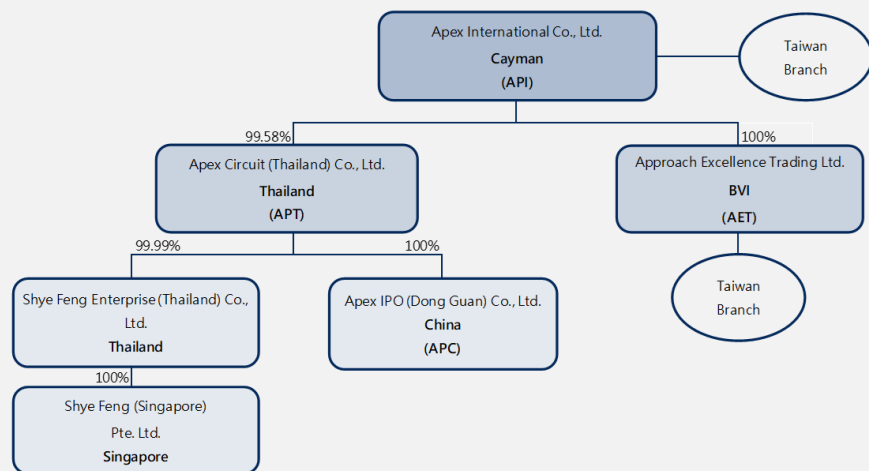
Governance

No significant instances of legal proceedings involving violations of unfair competition, antitrust, or monopolistic behaviours.

Certified
ISO/IEC 27001
Information Security
Management System

Rank in the **top 5%** of
10th(Y2023) Corporate
Governance Evaluation

1.4 Company Overview



Establishment Date	October 28, 2009	Company Registration	Cayman Islands
Headquarters	Taiwan	Apex International Co., Ltd.	(Acronym: Apex)
Branch office	Taiwan	Approach Excellence Trading Ltd.	(Acronym: AET)
Subsidiary	Thailand	Apex Circuit (Thailand) Co., Ltd.	(Acronym: APT)
	Thailand	Shye Feng Enterprise (Thailand) Co., Ltd.	(Acronym: APC)
	China	Apex IPO (Dong Guan) Ltd.	(Acronym: APS)
	Singapore	Shye Feng (Singapore) PTE. LTD.	(Acronym: APSS)
Paid-Up Capital	NTD 1.89 Billion		
Consolidated Revenue	NTD 12.63 Billion		
Employees	7,515 People		
Products	Single-sided, Double-sided, Multi-layer, Printed Circuit Board (PCB) and HDI		
Production Facilities	APT: APEX1, APEX2, APEX3 APS		

Products and Application



Home Appliances
LCD TV, DVD,
Recreation
appliance



PC-Related
Printer, HDD

Communication
Set-top box,
Telephone,
Router, Tuner



Auto Parts
Car Audio,
Navigator



Outlook



Consumer Electronics
Air Conditioners, DVD Players,
Audio-Visual Entertainment
Devices



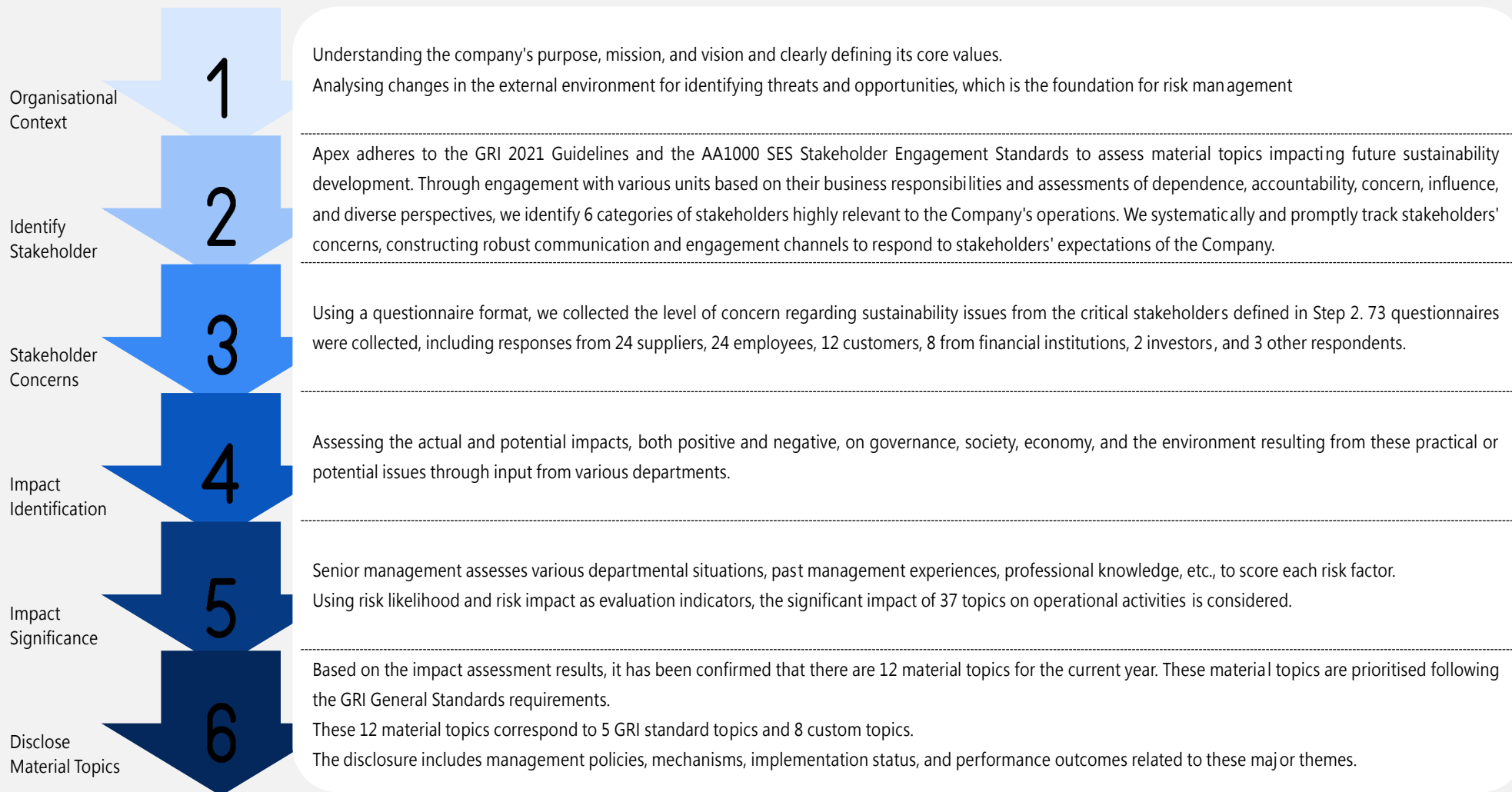
EV Applications
Car Audio



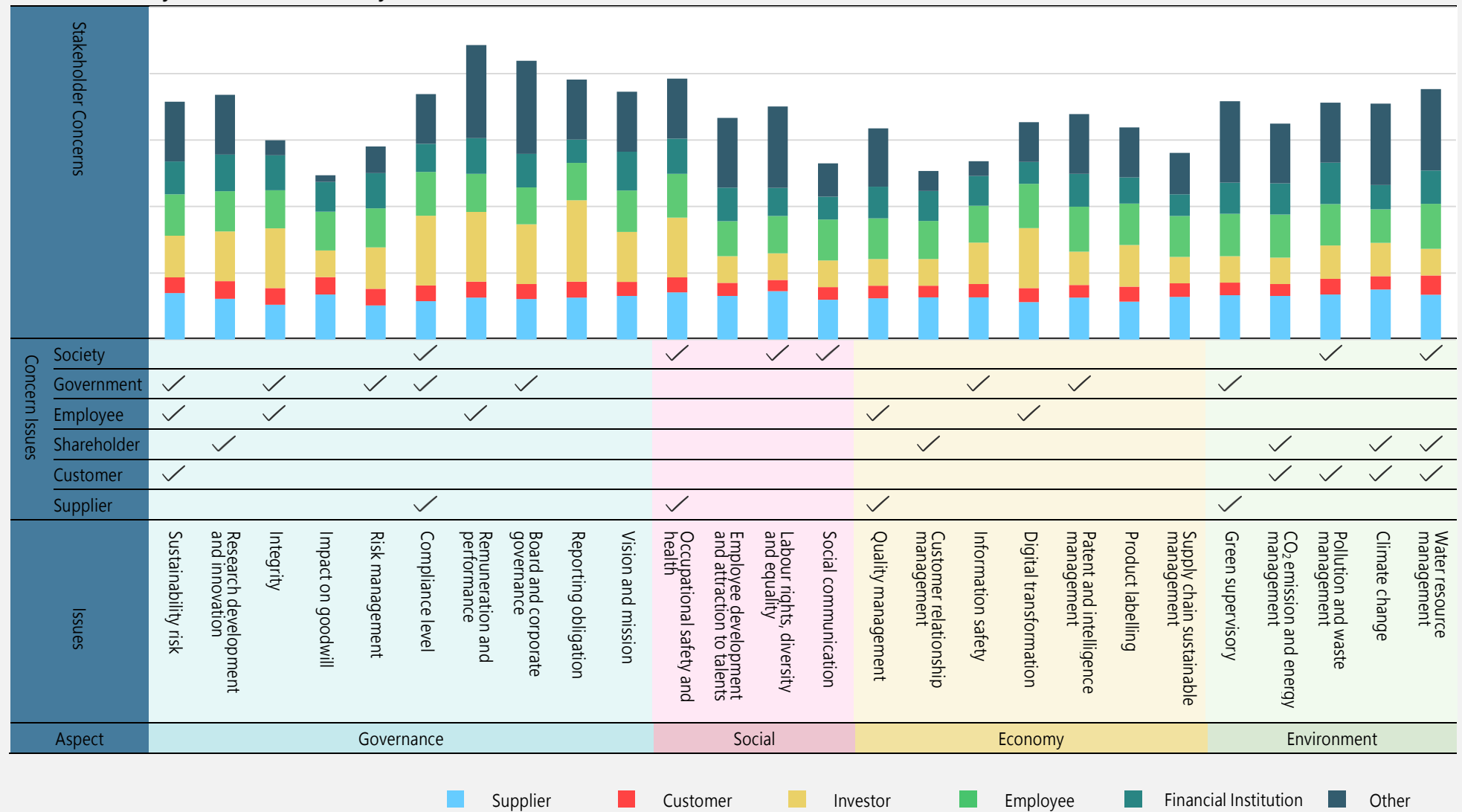
Satellite/5G Applications
Navigation Devices

2. Material Analysis and Stakeholder Engagement

2.1 Material Analysis Process

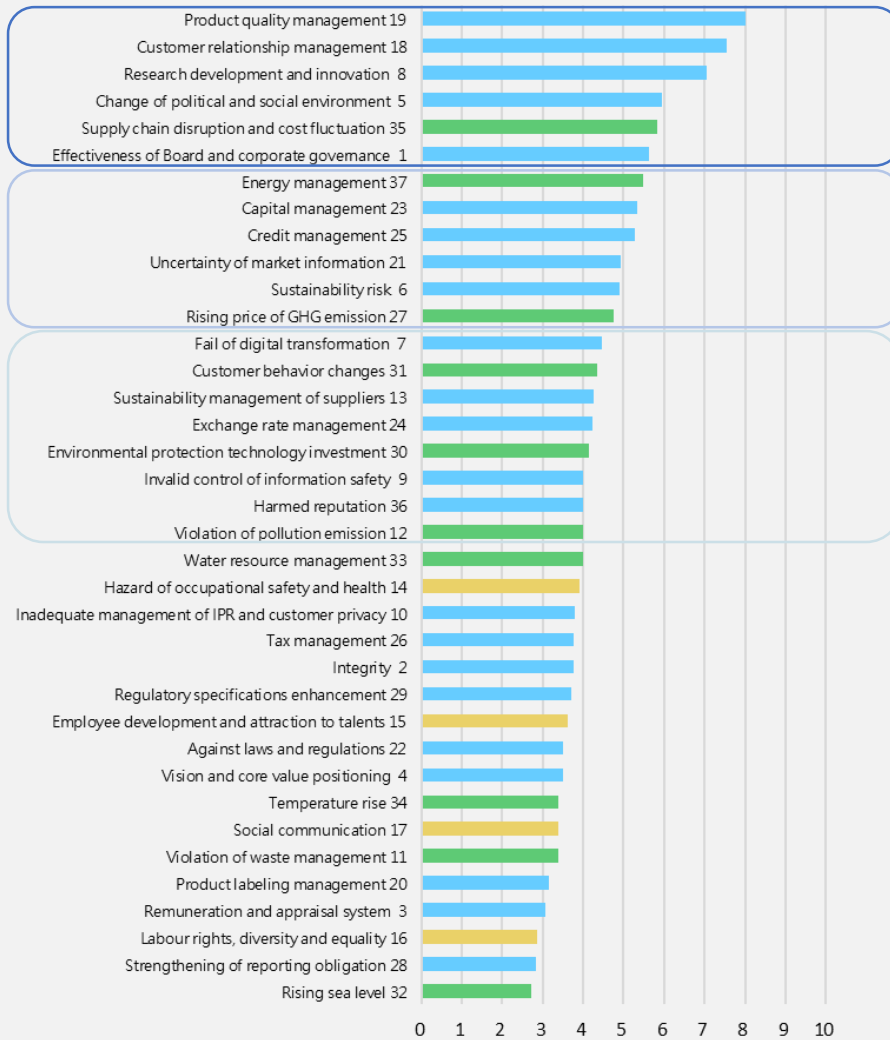


2.2 Sustainability Issues External Survey

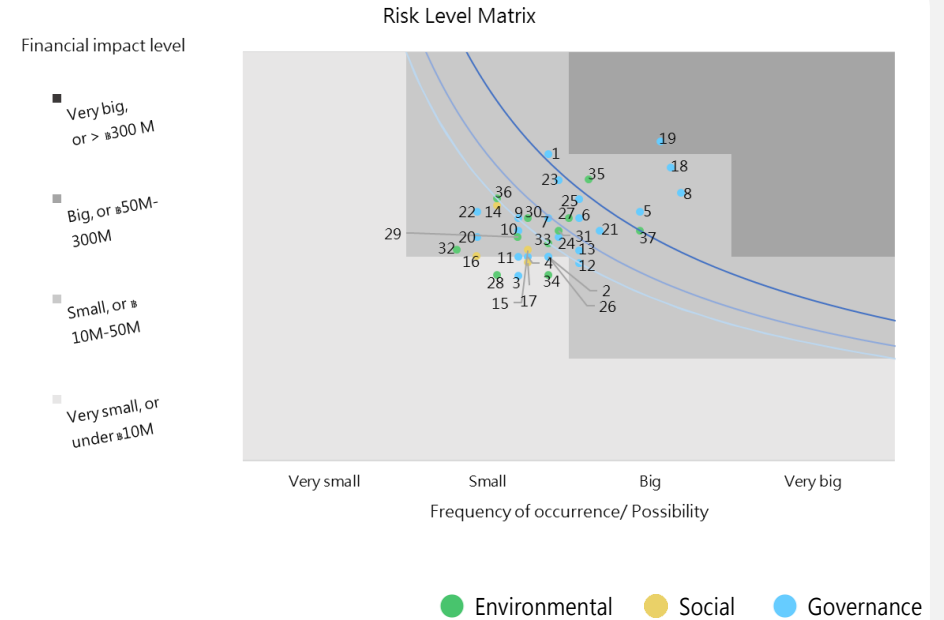


2.3 Impacts Identification

Significance of Impact


















Note: The evaluation score = possibility * impact



Risk Level		Classification	Amount
A	Highest Risk	Product ≥ 5.5	6
B	High Risk	Product ≥ 4.5 , but < 5.5	6
C	Moderate Risk	Product ≥ 4.0 , but < 4.5	8
D	Low Risk	Product < 4.0	17

2.4 Impact Identification and Value Chain

2023 Material Topics	Significance ^{Note}		GRI Topic /Custom Topics	Value Chain Impact			Positive And Negative Impacts	Disclosure sections	UN SDGs
	2023	2022		Upstream	Operations	Downstream			
Product quality management	A	○	Custom Topic	✓	✓	✓	Negative: Potential impacts are (1) difficulty introducing new products, which blocks business development; (2) present orders could drain. Positive: Catch the trend of industry movement and then introduce more orders from European and American areas.	3.3 Products and Services	
Customer relationship management	A	○	Custom Topic		✓		Negatives: Inaccurate judgment of market demand, misplaced production and sales planning, failure to take customer complaints seriously, resulting in loss of orders or obstruction of new product development. Positive: Use existing scale and industry trends well, inject new orders to maintain scale and niche advantages, and create shareholder value.	3.6 Customer Service	  
Research development and innovation	A	-	Custom Topic	✓	✓	✓	Negative: Insufficient competitiveness may lead to loss of orders. Positive: Beneficial to marketing development, energy saving and efficiency increasing, increase job opportunity and shareholder value.	3.3 Products and Services	 
Supply chain disruption and cost fluctuation	A	○	308 Supplier Environmental Assessment 414 Supplier Social Assessment	✓	✓	✓	Negative: (1) unstable plans and implementation of material preparation; (2) trends of fragmentation of the global market, pandemic disease, carbon cost and climate change make regional supply unstable. In addition, metal and material prices are affected by political and economic situations that make the range and frequency of price fluctuation of materials bigger. The purchase department faces the significant challenge of cost control. Positive: The irreversible change in international politics has pushed the industry to move to Southeast Asia, which indirectly induces joint suppliers.	3.4 Industry Supply Chain	  
Change of political and social environment	A	○	Custom Topic	✓	✓	✓	Negative: The rising uncertainty level of market demand will control the ability of orders to decline; population structure and social environment change will make recruiting harder, which affects integral competitiveness. Positive: Based on existing scale advantage, strengthen linkage to society and counterparties, keep a competitive advantage and inject new blood of orders and talents.	5 Social Prosperity	
Effectiveness of Board and Corporate Governance	A	○	2-18 Evaluation of the Performance of the Highest Governance Body	✓	✓	✓	Negative: A decline in governance effectiveness would significantly impact operations; it could result in a strategic mistake, major operation loss, or damage to survival ability. Positive: Good governance effectiveness could increase scale, continuously growing profit and shareholder value.	3 Corporate Governance	

2023 Material Topics	Significance ^{Note}		GRI Topic /Custom Topics	Value Chain Impact			Positive And Negative Impacts	Disclosure sections	UN SDGs
	2023	2022		Upstream	Operations	Downstream			
Energy management	B	○	302 Energy		✓	✓	Negative: An unstable supply of energy and its price would directly impact operating costs. The trend of increasing electricity prices is certain and clear. If the supply of electricity is not stable, the cost of shutdown is quite high. Positive: speed up innovation by reducing cost or increasing efficiency; think of the possibility of a self-owned power plant in the future.	4 Sustainable Environment	  
Capital management	B	○	Custom Topic		✓		Negative: Insufficient working capital will disrupt operations. Positive: Capital management can expand operation leverage and create room for business upgrades.	3.2 Financial Performance	
Credit management	B	-	Custom Topic		✓		Negative: failure of account receivable management, declining investor confidence. Positive: helpful to capital management.	3.2 Financial Performance	
Uncertainty of market information	B	○	Custom Topic	✓	✓	✓	Negative: Increased uncertainty about market information could lead to mistakes in planning and balancing production and sales, indirectly increasing the risk of stock and cash flow. Positive: We have a scale advantage on the quantity of purchase and amount of financing; therefore, if we could plan and well utilise the scale advantage, it could increase negotiation room	3.4 Industry Supply Chain	
Sustainability risk	B	-	Custom Topic	✓	✓	✓	Negative: Overly chasing short-term performance would harm long-term competitiveness. Positive: Consider an operating strategy based on macro and chronic aspects to improve the competitive base.	3.7 Ethics and Integrity	
Rising price of GHG emission	B	○	305 Emissions	✓	✓	✓	Negative: Carbon fees could be reflected in energy costs, material costs, management costs, regulation fees, transportation costs, etc. This may gradually increase operation costs. Positive: Speed up innovation by reducing cost or increasing efficiency.	4 Sustainable Environment	 

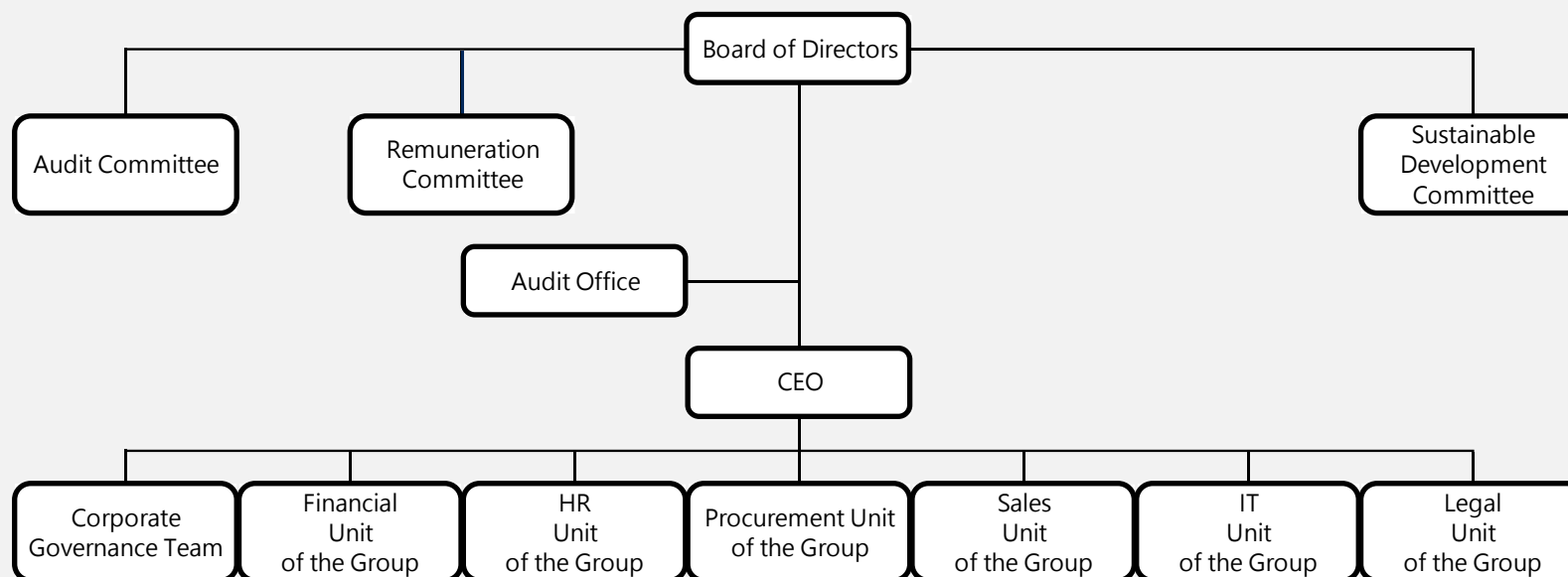
Note: A is the highest material topic, B is the high material topic, ○ is the material topic in 2022

2.5 Stakeholder Engagement

Stakeholder	Concerned Topic	Response Department	Communication Channels	Frequency	Communication in 2023
Society	Compliance level		Compliance with Relevant Regulations	Irregular	1. Engage in community outreach activities
	Water resource management	• RBA Team	Website Announcements	Irregular	2. Comply with environmental regulations
	Pollution and waste management	• ADM			3. Continuously improve water resource and waste management systems
	Social communication	• HR	Community Maintenance, Public Welfare Activities	Irregular	4. Plant greenery
	Occupational safety and health				5. Support women's employment
	Labour rights, diversity and equality		Interaction with Local Government	Irregular	
Customer	Sustainability risk	• BIZ	Phone Calls, Email Correspondence, Meetings, Site Visits	Irregular	1. Enhance sustainability reporting content
	Pollution and waste management	• QA	Internal and External Audits	Irregular	2. Respond to CDP questionnaire
	CO ₂ emission and energy management	• ADM	Customer Satisfaction Surveys	Semi-annual	3. Continuously improve water resource and waste management systems
	Water resource management	• R&D			
	Climate change	• PUR	International Regulations (RoHS, HF, Etc.) Compliance Assessments, Compliance Assessments of Customer-Requested Items	Irregular	
Employee	Integrity	• Employee Welfare Committee	Email Notifications, Facebook Announcements, Line Official Account Announcements, Intranet Announcements	Irregular	1. Enhance sustainability reporting content
	Sustainability risk		Employee Welfare Committee Meetings, Internal Meetings, Complaint Box	Irregular	2. Compliance with regulations, no major compliance incidents
	Remuneration and performance		Employee Satisfaction Surveys	Yearly	3. Link compensation with performance and conduct regular performance reviews
	Quality management	• ADM	Occupational Physical Check-ups	Yearly	4. Obtain various certifications such as ISO to ensure quality management
	Digital transformation	• HR	Safety Awareness Campaigns, Safety and Occupational Committees; ISO45001 Committee	Irregular	5. Actively embrace digitalisation in operations
			Fire Drills	Yearly	
			Employee Training	Annual Plan	

Stakeholder	Concerned Topic	Response Department	Communication Channels	Frequency	Communication in 2023
Government	Compliance level	<ul style="list-style-type: none">BoardCorporate GovernanceF&AADM	Official letters, Media, Official Website, Email, MOPS, Seminars	Irregular	1. Participate in advocacy and seminars organised by regulatory authorities
	Sustainability risk				2. Compliance with regulations, no major compliance incidents
	Risk management		TCFD Report, ESG Report	Yearly	3. Conduct annual risk management analysis
	Board and corporate governance				4. Receive ESG-related awards and international ratings
	Integrity				5. Rank in the top 5% of 10th(Y2023) Corporate Governance Evaluation
	Patent and intelligence management		Compliance with Relevant Regulations	Irregular	
	Information safety				
	Green supervisory		Corporate Governance Evaluation	Yearly	
Shareholder	Research development and innovation	<ul style="list-style-type: none">IR	Shareholders’ Meetings, Annual Report, ESG Report	Yearly	1. Shareholders' meeting
	Water resource management				2. Enhance sustainability reporting disclosure content
	Customer relationship management				3. Publish significant information and various announcements in accordance with laws and regulations
	Climate change				4. Participate in 4 domestic earning calls in 2023
	GHG emission and energy management		Earning Call, Spokesman Window, Mops, Official Website	Irregular	
Supplier	Compliance level	<ul style="list-style-type: none">PURPDQA	Supplier Audit, Acceptance Review	Yearly	1. Compliance with regulations, no major compliance incidents
	Quality management				2. Obtain various certifications such as ISO to ensure quality management, occupational health and safety management, and labour rights
	Green supervisory				Irregular
	Occupational safety and health		Phone Calls, Emails, Meetings		

3. Corporate Governance



Material Topic	EffectivenessCorporate Governance
Policies and Commitments	Memorandum of Association and Articles of Association Principle of Corporate Governance Compliance with the Establishment of the Board of Directors and the Board's Exercise of Powers Ethical Corporate Management Best Practice Principles Code of Ethics for Directors and Officers
Governance Structure	Corporate governance team, Remuneration committee, Audit committee and Internal audit unit
Management Actions	Establish corporate governance regulations Conduct annual board performance evaluations (including individual director self-assessment, board self-assessment, and functional committee self-assessment) Conduct a comprehensive board performance evaluation by engaging external professionals every 3 years

Execution objectives	Annual Corporate Governance Evaluation 6%~20%	
Stakeholder Engagement	Stakeholders	Society, Customers, Employees, Government, Shareholders
	Communication Channels	Society: Website announcements, participation in community events Customers: Customer satisfaction surveys, periodic communication Employees: Platform announcements, internal meetings, complaint mailbox, educational training programs Government: Corporate governance evaluation, correspondence Shareholders: Reporting via the official website
Performance in 2023	Rank in the top 5% of 10th(Y2023) Corporate Governance Evaluation	

3.1 Board Governance

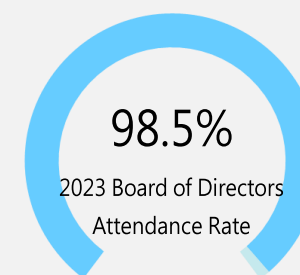
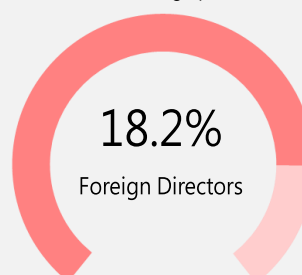
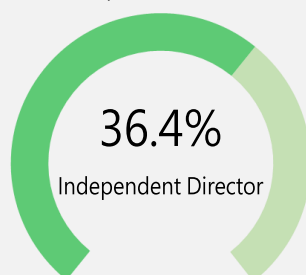
Board of Directors Selection

According to Apex' s Memorandum and Association, the Directors (including Independent Directors) shall be nominated by adopting the candidate nomination system specified in the Applicable Public Company Rules as long as the shares are listed on the TPEX or the TWSE. The rules and procedures of the nomination of candidates shall comply with the procedure approved by the Board of Directors and ordinary resolution, provided that such procedure shall comply with the Law, Memorandum of Association, Articles of Association, and the Applicable Public Company Rules. (The information on the 6th director selection, please refer to the [company's website](#).)

Composition of the Board of Directors

Name		Chairman	Director	Director	Director	Director	Director	Director	Independent Director	Independent Director	Independent Director	Independent Director
Diversified Core Items		Shu-Mu Wang	Jui-Hsiang Chou	Yung-Yuan Cheng	Shun-Chung Lee	Sen-Tien Wu	Somkiat Krajangjaeng	Tu-Chuan Chen	Chau-Chin Su	Yung-Tsai Chen	Jesadavat Priebjrvat	Ray-Hua Horng
Date Elected		May 24, 2022										
Basic Requirements	Nationality	R.O.C.	R.O.C.	R.O.C.	R.O.C.	R.O.C.	Thailand	R.O.C.	R.O.C.	R.O.C.	Thailand	R.O.C.
	Gender	Male	Male	Male	Male	Male	Male	Male	Male	Male	Male	Female
	Age	64	64	65	54	55	62	63	68	63	67	59
Professional Background	Bank					✓				✓		
	Securities									✓	✓	
	Accounting & Finance	✓	✓			✓				✓	✓	
Professional Background	Industry Experience	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Marketing	✓	✓		✓	✓				✓	✓	
	Risk Management	✓	✓	✓		✓					✓	
Independence ^{Note}		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: None of the directors are spouses or relatives within the second degree of kinship, in compliance with Article 26-3, Paragraph 3, and Article 26-4 of the Securities and Exchange Act.



Board of Directors Operations

Board Responsibilities	Apex's Board of Directors is accountable for the shareholders' meeting. The operations and arrangements of its corporate governance system should ensure that the Board exercises its powers in accordance with laws, the company's articles of association, or resolutions of the shareholders' meeting.
Developing Vision	Embrace the initiative of sustainable development, align with international standards, and actively engage with society to foster a virtuous cycle.
Sustainable Development Strategy	Understanding significant issues of concern to stakeholders, capturing internal and external information, proposing strategies, overseeing implementation, and enhancing relevant information disclosure.

Directors Professional Development

Directors and executives of the company, in accordance with Taiwan regulations, each completed a minimum of 6 hours of training, achieving a 100% completion rate. The total training hours for the year 2023 amounted to 90 hours.

Course	Total Hour	Participants
Corporate Carbon Management Following the Promulgation of the Climate Change Act	90	27
New Thinking of Enterprise Risk Management - Integrating Strategies Development and ESG Risk Management		
Promoting Sustainable Development through Risk Management -Best Practice Principles on Risk Management for TWSE/TPEX Listed Companies		
CATHAY SUSTAINABLE FINANCE AND CLIMATE CHANGE SUMMIT		
'Sustainable Development Action Plans for TWSE and TPEX Listed Companies (2023)' Seminar		
2023 Insider Trading Prevention Seminar		
2023 Seminar of Shareholding Trading and Law Compliance for Insiders		

The Performance Evaluation of the Board of Directors

According to the "Board Performance Evaluation Measures," Apex conducted a comprehensive assessment of the board's performance, including individual self-assessment by directors, an internal evaluation of the board by its members, an internal assessment of various functional committees by the board, and an external evaluation conducted every three years to ensure the effectiveness of the board's operations.

The internal assessment results for 2023 were positive, contributing significantly to the enhancement of corporate governance and the board's effectiveness. Members attended various functional committees at a high rate, and each committee comprised professionals who provided valuable insights into the Company's operations.

In 2022, an external evaluation conducted by the Taiwan Investor Relations Institute (TIRI) recommended promoting diversity in board composition, improving board meeting formats, and enhancing director training programs. In response to these recommendations, Apex proposed measures to gradually improve and strengthen the board's functions.

(Please refer to the [company's website](#) for detailed assessment information.)

Executive Compensation and Incentives

The critical management tier consists of the first-level supervisors of crucial departments in our company. The company conducts annual performance evaluations through a performance appraisal system to assess senior management's compensation bonuses and retention. Key management personnel must appoint job delegates for training purposes and encourage staff to participate in educational training and on-the-job learning. In major project initiatives, there is significant emphasis on cross-departmental communication and collaboration among crucial employees to cultivate comprehensive skills and achieve succession effectiveness.

The Compensation Committee is responsible for establishing and periodically reviewing annual and long-term performance goals and compensation policies, systems, standards, and structures to evaluate the achievement of performance objectives for directors and executives. Based on the evaluation results according to performance assessment criteria, individual compensation content and amounts are determined.

Functional Committees

	Audit Committee	Remuneration Committee	Sustainable Development Committee
Composition of Members	4 Independent Directors	2 Independent Directors and 1 External Expert	1 Director and 2 Independent Directors
Key Functions	<ul style="list-style-type: none"> Assist the Board of Directors in fulfilling its oversight responsibilities Compliance with relevant regulations Proper expression of financial statements oversight Execution of internal control system within the company 	<ul style="list-style-type: none"> Review the Company's compensation committee regulations and propose amendments. Establish and periodically review annual and long-term performance objectives and the policies, systems, standards, and structures for compensation for directors and executives. Assess directors' and executives' achievement of performance objectives regularly and, based on the evaluation results obtained from performance evaluation criteria, establish the content and amount of their individual compensation. 	<ul style="list-style-type: none"> Formulate sustainability policies. Guide, monitor, and review the effectiveness of sustainability initiatives and report to the board of directors. Promote and oversee the implementation of enterprise risk management. Handle other matters as instructed by the board of directors after resolution.
Meeting Activities in 2023	The Audit Committee met 6 times in 2023 Attendance Rate 95.8%	The Remuneration Committee met 2 times in 2023 Attendance Rate 100%	Held 1 meeting in 2023 Attendance Rate 100%
Implementation Status in 2023	<p>The Audit Committee regularly communicates with internal audit and external auditors.</p> <p>Please click and refer to the company's website:</p> <ul style="list-style-type: none"> Communication of Independent Directors, Auditing Office and Accountants The operational status of the Audit Committee in 2023 	<p>The Remuneration Committee regularly reviews the compensation system and performance evaluation methods for employees, directors, and executives.</p> <p>Please click and refer to the company's website:</p> <ul style="list-style-type: none"> The operational status of the Remuneration Committee in 2023 	<p>Regularly monitor the operation of corporate governance, corporate social responsibility, and the implementation of integrity management.</p> <p>Please click and refer to the company's website:</p> <ul style="list-style-type: none"> The operational status of the Sustainable Development Committee in 2023

3.2 Financial Performance

Material Topic	Capital management	
Policies and Commitments	<ul style="list-style-type: none"> Regularly conduct financial and internal systems audits and provide reports. 	
Governance Structure	Financial & Accounting Department, Audit Committee	
Management Actions	<ul style="list-style-type: none"> Periodically review long-term/short-term capital arrangements and manage financing channels and financial tools. 	
Execution objectives	<ul style="list-style-type: none"> Independent directors, audit executives, and accountants regularly communicate and conduct audits to examine and assess the reliability and integrity of financial and operational information; review existing systems to ensure compliance with significant policies, plans, procedures, laws, and regulations; inspect methods of asset safeguarding to verify the existence of assets; evaluate the economic efficiency of resource utilisation. 	
Stakeholder Engagement	Stakeholders	Customers, Government, Shareholders, Suppliers
	Communication Channels	Customers: Internal and external audits Government: Compliance with relevant regulations Shareholders: Shareholders' meetings, annual reports Suppliers: Supplier audits
Performance in 2023	Please click and refer to the company's website: <ul style="list-style-type: none"> Financial Information Quarterly Financial Report 	

Material Topic	Credit management	
Policies and Commitments	<ul style="list-style-type: none"> Regularly conduct financial and internal system audits and provide reports. 	
Governance Structure	Financial & Accounting Department, Audit Committee, Business Department	
Management Actions	<ul style="list-style-type: none"> Regularly analyse accounts receivable ageing and review with business units to monitor customer dynamics proactively; conduct periodic credit reviews for existing customers; perform credit checks for new customer applications; finance department continuously monitors macroeconomic and industry changes. Continuously engage with professional institutions (such as banks and accounting firms) to enhance credit management mechanisms. 	
Execution objectives	<ul style="list-style-type: none"> Independent directors, audit executives, and accountants regularly communicate and conduct audits to examine and assess the reliability and integrity of financial and operational information; review existing systems to ensure compliance with significant policies, plans, procedures, laws, and regulations; inspect methods of asset safeguarding to verify the existence of assets; evaluate the economic efficiency of resource utilisation. 	
Stakeholder Engagement	Stakeholders	Customers, Shareholders
	Communication Channels	Customers: Internal and external audits Shareholders: Shareholders' meetings, annual reports
Performance in 2023	Please click and refer to the company's website: <ul style="list-style-type: none"> Financial Information Quarterly Financial Report 	

Consolidated Statement of Comprehensive Income in the Most Recent 3 Years

Unit: Thousands of NTD

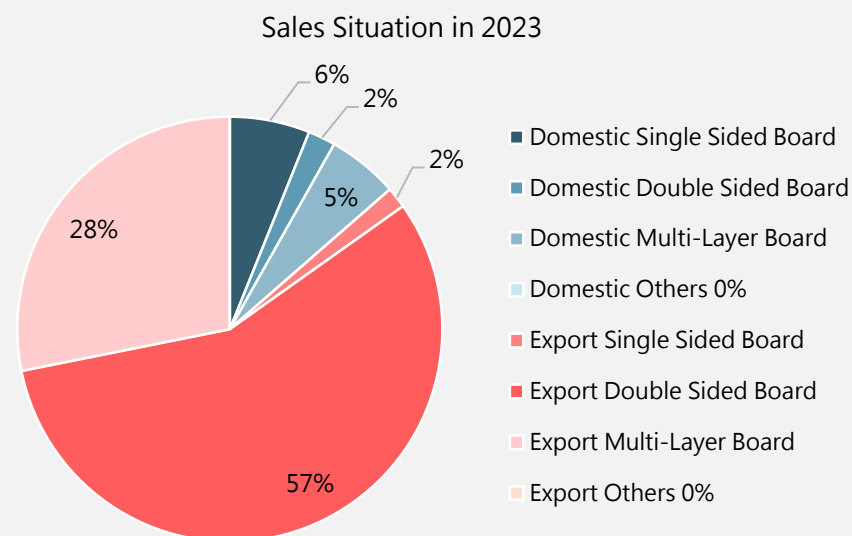
Subject \ Year	2021	2022	2023
Revenue	14,800,683	14,906,225	12,628,251
Operating cost	11,681,718	12,076,878	11,599,833
Gross profit	3,118,965	2,829,347	1,028,418
Operating expenses			
Marketing expenses	797,226	975,651	845,964
Administrative expenses	755,522	742,145	774,367
R&D expenses	45,440	53,600	57,095
Anticipated impairment loss of credit	43,369	46,627	(44,506)
Total operating expenses	1,641,557	1,818,023	1,632,920
Net profit	1,477,408	1,011,324	(604,502)
Total non-operating income and expenses	(41,380)	(65,685)	(201,105)
Profit before tax	1,436,028	945,639	(805,607)
Less: Tax expense	52,146	67,272	(5,655)
Current Year's Net Profit/Loss	1,383,882	878,367	(799,952)
Current Year's Other Comprehensive Income (after-tax net amount)	(1,040,596)	489,070	83,202
Total Current Year's Comprehensive Income	343,286	1,367,437	(716,750)
Basic earnings per share	7.25	4.60	-4.2
Diluted earnings per share	7.25	4.60	-4.2

Production Value in the Most Recent Two Years

Unit: square meter, NT\$ thousand

Production Value \ Main Product	Year	2022		2023	
		Production	Output Value	Production	Output Value
Single Sided Board		755,837	577,717	641,914	459,245
Double Sided Board		2,890,919	5,310,947	2,462,313	4,231,267
Multi-Layer Board		3,471,394	11,513,776	3,180,244	9,610,423
Total		7,118,150	17,402,440	6,284,471	14,300,935

Sales situation in 2023



3.3 Products and Services

Material Topic	Product quality management	
Policies and Commitments	<ul style="list-style-type: none"> Enhance and improve the quality control personnel's quality management knowledge through employee training and education. Regularly pursue ISO 9001 certification for quality management systems. 	
Governance Structure	Quality Assurance Department, Manufacturing Department, Management Information System Department, Research & Development Department, Business Department	
Management Actions	<ul style="list-style-type: none"> Promote implementation of quality concept (14Q project) Improve quality management system and innovate management method (method for handling different quality specs in the same factory). 	
Execution objectives	<ul style="list-style-type: none"> Strengthening employee quality awareness (14Q project) Achieve a customer satisfaction rating of 45 points (out of 50) 	
Stakeholder Engagement	Stakeholders	Customers, Employees, Suppliers
	Communication Channels	Customers: Customer satisfaction surveys Employees: Advocacy activities, Employee training Suppliers: Supplier audits, Acceptance reviews
Performance in 2023	<ul style="list-style-type: none"> All factory locations have successfully obtained ISO 9001:2015 Customer satisfaction with quality ratings: APT Score 44.4, APS Score 45.1 (Out of 50) Host 14Q Day to reinforce quality awareness 	

Material Topic	Research development and innovation	
Policies and Commitments	<ul style="list-style-type: none"> Continuously enhance product and manufacturing capabilities Protect own and respect others' intellectual property rights 	
Governance Structure	Quality Assurance Department, Manufacturing Department, Management Information System Department, Research & Development Department, Business Department	
Management Actions	<ul style="list-style-type: none"> Continuously review manufacturing capabilities and quality management Invest in research and development and new equipment Improve the collaboration system between industry and education to nurture talent Strengthen awareness of intellectual property rights Apply for invention patents 	
Execution objectives	<ul style="list-style-type: none"> Initiate industry-academia collaboration Enhance technology or product development 	
Stakeholder Engagement	Stakeholders	Customers, Employees, Shareholders
	Communication Channels	Customers: Phone calls, Email correspondence, Meetings, Site visits Employees: Employee education and training Stakeholders: Earning call, Spokesman window, Shareholders' meetings
Performance in 2023	<ul style="list-style-type: none"> R&D expenses NTD 57,095 million Providing professional training for electronic technicians to vocational school students in Thailand. 	

Business of Apex and its Subsidiaries

Apex's business strategy is centered around understanding market demands and delivering products of stable quality. This approach emphasises high standards in production management and forward-looking operational strategies, complemented by an efficient and harmonious corporate culture. This enables the company's products to offer a diverse range of applications in the consumer electronics market.

The primary focus is on the manufacturing and sale of double-sided and multilayer rigid printed circuit boards, which are used in LCD TVs, set-top boxes, hard drives, printers, wireless transmission equipment, TFT panels, automotive multimedia products, and more. Apex's products are not only manufactured and sold in Thailand but have also expanded to become suppliers to international consumer electronics brands.

Health Safety and Products

Apex is committed to producing products that meet health, safety, and quality requirements. The company strictly adheres to international regulations such as RoHS, REACH, and Halogen Free in inspecting materials, production processes, and emissions. The percentage of product sales complying with RoHS reaches 100%. Apex also incorporates these standards into employee training programs to ensure that employees have a thorough understanding of product ingredients and engineering manufacturing standards.

(Please refer to page 22. [International Certifications and Awards for relevant certifications.](#))

Quality Policy

In order to provide customers with stable supply and product quality, Apex emphasises strict quality control throughout the design, production, testing, and delivery processes. We aim to enable our customers to gain a competitive edge in the fiercely competitive market. Therefore, we are committed to (1) meeting customer requirements, (2) providing high-quality products to downstream manufacturers, (3) adhering to quality standards and delivering on time, taking pride in customer satisfaction, and (4) continuously improving and innovating quality control processes.



New Products and Upcoming Service Offerings

Consumer products such as LCD TVs, set-top boxes, and home entertainment continue to experience moderate growth, while almost all Japanese brand manufacturers are facing a shrinking market share. Apex has started developing new products such as automotive components, small-scale WI-FI and RF applications, and PCB transformers. By leveraging its new factories and upgraded production capacity, the Company aims to gain an advantage in these product categories and expand its involvement beyond the existing orders for LCD TVs and set-top boxes from Korean customers. In addition to ongoing research and development efforts for new products and technologies, Apex will continue to focus on the traditional market for hardboard PCBs to meet customer demands. On the other hand, Apex will establish a Product traceability system to enhance quality improvement processes and risk management. The Company will also develop automated processes to improve quality stability.

Technologies and products developed

Year	Development Result	
2019	<ul style="list-style-type: none"> IOT for drilling process evaluation had been done Auto printing function for solder mask process and faster-changing ability Lab for reliability ability ready for TCT / CAF / SIR / THB / Material thermal stress analysis 	
2020	<ul style="list-style-type: none"> Gold finger process had been done MES system implement Acquired ISO17025 Lab Certification 	
2021	<ul style="list-style-type: none"> Auto Plating line Micro PAD 160x200um product Zero emission micro etching process 	
2022	<ul style="list-style-type: none"> Micro PAD 180x200um function tester development Thicker copper (3-5oz) board process development Microvia (diameter < 0.15mm and aspect ratio 1) 	
2023	<ul style="list-style-type: none"> 10-20 Layer (Thickness < 2.0) multilayer PCB develop Single build-up HDI Micro LED TV PCB 	<ul style="list-style-type: none"> Plasma de smear process High Tg (up to 220C), Low loss (Df < 0.005) material process

Intellectual Property Management Plan

To ensure the Company's intellectual property, strengthen its competitive advantages, achieve operational goals, increase profits, and ensure sustainable operations, the Company will actively assist R&D personnel in the right of R&D results and strive to promote internal intellectual property management plans to continue accumulating the Company's intellectual property volume, and promote the Company to use intellectual property as an advantage to its customers.

The Company regularly reports matters related to intellectual property to the board of directors every year, and the latest date of submission is December 19, 2023.

Intellectual Property and Patent Management Process



Patents

As of November 30, 2022, the performance of the intellectual property rights of the Company is as follows:

- In 2021, a Republic of China invention patent titled "ANODE SLUDGE REMOVAL DEVICE, CLEANING METHOD, ELECTRONIC DEVICE AND CLEANING SYSTEM" has been granted under patent number No. I738115.
- In 2022, a People's Republic of China invention patent titled "ANODE SLUDGE REMOVAL DEVICE, CLEANING METHOD AND CLEANING SYSTEM" has been granted under patent number No. 5139485.

Trade Secret Management



Employee personal account password login to computer equipment



Management of magnetic card access for company personnel entry and exit



Employees are contractually bound to maintain the confidentiality of the Company's trade secrets

International Certifications and Awards for relevant certifications

Apex is committed to protecting the rights and interests of customers and labourers and maintaining the safety, hygiene, and quality management of the production process. It has also been recognised by inspection agencies and partners.

Certificates	Valid Period	Range
ISO 14001 : 2015 Environmental Management Systems	11 Oct. 2023 - 10 Oct. 2026	Apex 1
	28 Dec. 2022 - 27 Dec. 2025	Apex 2&3
	19 Mar. 2024 - 18 Mar. 2027	Apex S
ISO 9001 : 2015 Quality Management Systems	19 Jul. 2023 - 18 Jul. 2026	Apex 1
	12 Dec. 2023 - 11 Dec. 2026	Apex 2&3
	19 Mar. 2024 - 18 Mar. 2027	Apex S
ISO 45001 : 2018 Occupational Health and Safety Management Systems	31 Jan. 2023 - 30 Jan. 2026	Apex 1
	31 Jan. 2023 - 30 Jan. 2026	Apex 2&3
IATF 16949 : 2016 International Automotive Task Force to harmonise quality management system	19 Jul. 2023 - 18 Jul. 2026	Apex 1
	05 Jan. 2024 - 11 Dec. 2026	Apex 2&3
TLS 8001 : 2020 Thailand Labour Standard	15 Feb. 2022 - 14 Feb. 2025	Apex 1
	15 Feb. 2022 - 14 Feb. 2025	Apex 2&3
Fire Drills Certificate	Issue Date: 25 Nov. 2021	Apex 1
	Issue Date: 01 Dec. 2021	Apex 2&3
	Issue Date: 03 Dec. 2021	Apex S
ISO/IEC 27001:2013 Information Security Management System	27 Aug. 2023 – 31 Oct. 2025	Apex
ISO 14064-1:2018 GHG Inventory Standard	14 May 2024	Apex
ISO 14644-1:2015 Cleanroom Standards ISO Class 7	20 Jun. 2023 – 20 Jun. 2024	APT
Canon Certificate of Supplier Environmental Evaluation	26 Dec. 2022 - 25 Dec. 2024	APT
Sony Green Partner Certification	28 Apr. 2022 - 30 Apr. 2025	APT

3.4 Industry Supply Chain

Material Topic	Supply chain disruption and cost fluctuation	
Policies and Commitments	<ul style="list-style-type: none"> Require suppliers to comply with environmental protection regulations. Require suppliers of processed raw materials to provide statements ensuring that their products do not contain internationally prohibited substances harmful to the environment. Audit whether manufacturers have established or achieved environmental management systems and environmental objectives (ISO 14001 or RC14001). Procure conflict-free raw materials. 	
Governance Structure	Management Information System Department, Business Department, Sustainable Development Committee	
Management Actions	<ul style="list-style-type: none"> Plan and establish supplier development and evaluation processes. Conduct annual assessments of critical suppliers, provide guidance for improvement to those who fail to meet requirements, and reduce transaction volumes or cease transactions with suppliers who fail to improve over the long term. Monitor industry movement dynamics, increase the selection and auditing of localised suppliers, and explore innovative collaboration models. 	
Execution objectives	<ul style="list-style-type: none"> Percentage of local suppliers in Thailand 	
Stakeholder Engagement	Stakeholders	Customers, Suppliers
	Communication Channels	Customers: Compliance assessment with international regulations and customer requirements Suppliers: Supplier audits, acceptance reviews
Performance in 2023	The percentage of local suppliers in Thailand is 40.66%	

Material Topic	Uncertainty of market information	
Policies and Commitments	<ul style="list-style-type: none"> Strengthen negotiation skills, customer relationships, and market analysis through employee training Conduct regular stakeholder communication 	
Governance Structure	Business Department, Manufacturing Department, Administrative Department, Financial & Accounting Department	
Management Actions	<ul style="list-style-type: none"> Enhance management rigour in existing processes such as market analysis, customer and distributor management, and logistics management to improve the ability to assess market changes. Supplement education and training content in negotiation, customer relationship management, and market analysis, and establish channels for collecting political and economic trend analysis information. 	
Execution objectives	<ul style="list-style-type: none"> Factory output Employee training 	
Stakeholder Engagement	Stakeholders	Customers, Employees, Suppliers
	Communication Channels	Customers: Compliance assessment with international regulations and customer requirements. Employees: Employee training. Suppliers: Supplier audits, acceptance reviews.
Performance in 2023	Factory output value 10,507,611 thousand NT dollar Total employee training hours: 429,204 hours	

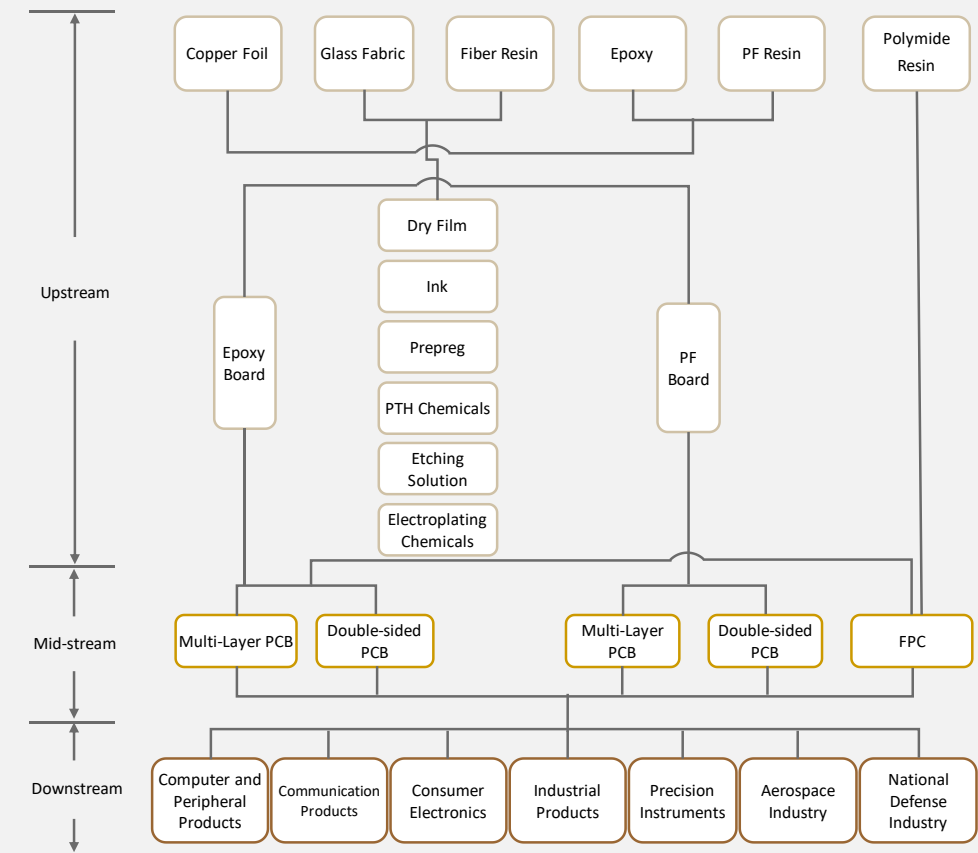
The Roles in the Industry Value Chain

Printed Circuit Boards (PCBs) are the largest value-generating industry in the global electronic components sector and serve as a fundamental industry for manufacturing electronic information products. Apex primarily focuses on the production of double-sided and multi-layer PCBs, positioning itself in the industry's midstream. Upstream has related components and materials, such as various substrates, copper foils, and films. Downstream industries encompass information technology, communications, consumer electronics, semiconductor products, industrial control equipment, automotive, medical instruments, aerospace, and defence industries. The upstream raw material supply is moderately concentrated, and there are long-term cooperative relationships with our company and its subsidiaries, ensuring stable and sufficient material sources. The downstream industry has a wide range of applications, and the development of both upstream and downstream sectors is robust.

In recent years, the shipments of electronic terminal products, including smartphones, computers, and televisions, have not grown significantly, actually with a recession, while the overall PCB output value maintains its growth. 5G infrastructure in the early stage is a crucial point. In the future, as the application of high-end PCB products such as 5G and AI continues to be promising, it is expected that the market competition for high-end products will continue to intensify. In terms of product structure, the current multi-layer PCB market still dominates the market. With the rapid development of electronic circuit industry technology, the integrated functions of components have become more and more extensive. Electronic products have become more prominent in the high density of PCBs, and high-end PCB products such as high multi-layer boards, HDI boards, flexible boards, and package substrates have gradually taken over market dominance.

Apex's major multi-layer board products are consumer electronic products, and its market will experience moderate growth because the Group's current revenue generation in this area is still relatively low. Therefore, if Apex can meet the market's product requirements and enhance process capability, there is considerable room for growth. The main competitors of such conventional hardboards are manufacturers in Mainland China, including Taiwan-funded plants and China-funded plants. In recent years, companies in Mainland China have increasingly strengthened their competitiveness through government support, self-technology upgrading, and the gradual integration of upstream and downstream industries. However, in recent years, the increasingly stringent environmental protection ban in mainland China has increased the cost of environmental protection.

Apex Supply Chain



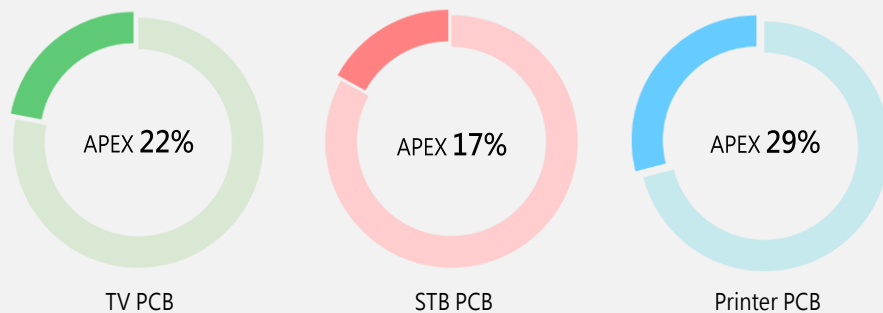
Reference: Material and Chemical Research Laboratories, Industrial Technology Research Institute

Five business concepts



Market Share

In 2023, the total annual sales of our company and its subsidiaries amounted to NT\$12,628,251,000. Although our market share in the global market for double-layer, 4-layer to 12-layer printed circuit boards are relatively low, our company is currently a leader in the printed circuit board industry among Taiwanese businesses in Thailand.



3.5 Supplier Management Policy

Apex operates as the main operations body and has established long-term close relationships with suppliers based on mutual trust and mutual benefit, aiming for win-win outcomes. Among them, raw material suppliers have a significant impact on product production. Therefore, Apex attaches great importance to suppliers' compliance with environmental protection regulations: suppliers must comply with local government regulations related to air pollution prevention, water pollution prevention, and waste and toxic substances management. In case of violations, they must promptly submit improvement plans. In addition, Apex also requires suppliers of process raw materials to provide statements ensuring that their products do not contain internationally prohibited substances harmful to the environment, ensuring that the products meet customer and international legal requirements, such as EU RoHS, products do not contain perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), and the EU REACH directive. When conducting supplier environmental audits, procurement supervisors will request improvements from the suppliers if significant deficiencies are found. Establishing an environmental management system and ecological objectives and auditing suppliers to assess whether they have ISO 14001 or RC14001 are also part of Apex's supplier management policies. Apex strictly adheres to the RBA Code of Conduct, which also drives suppliers to respond accordingly, procuring non-conflict minerals and advocating for humanitarianism and the practice of human dignity, fulfilling corporate social responsibilities, and avoiding the use of raw materials extracted in situations involving armed conflict and human rights violations.

The Supplier Management Implementation

The procurement department of Apex conducts regular annual assessments, audits, and reviews of critical suppliers. In 2023, following the Company's supplier audit mechanism, comprehensive performance evaluations were conducted for critical suppliers, considering ESG sustainability aspects. The standards referenced include the Responsible Business Alliance (RBA) Code of Conduct, ISO 14001, ISO 9001, and ISO 45001 certifications. These standards aim for both parties to fulfil social responsibilities such as quality, environmental protection, and actions to eliminate forced or compulsory labour.

Apex continues to provide guidance for improvement and track progress for suppliers that do not comply with the Company's supplier management policies and standards. If suppliers fail to comply, Apex will consider reducing transaction volumes or terminating transactions based on specific circumstances.

Local Procurement

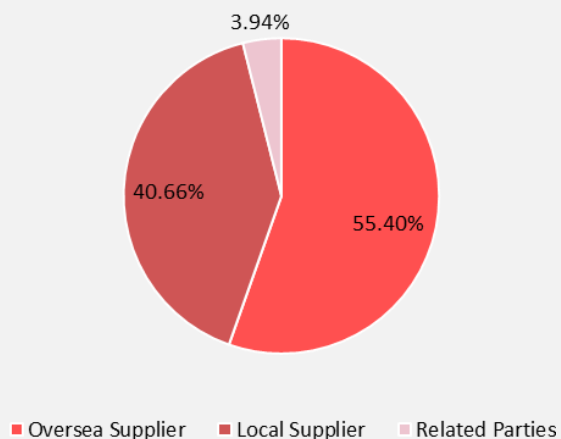
In recent years, with the formal launch of the ASEAN Economic Community (AEC), Thailand has not only enjoyed advantages in exporting to ASEAN countries but also participates in zero-tariff border trade, making the trade environment in Thailand more open and convenient. Additionally, Thailand's land transportation system has undergone significant improvements in recent years, resulting in a substantial reduction in transportation time to any region of mainland China from Thailand, making it faster and more convenient than ever before. This has shortened delivery times and reduced associated costs, enhancing the competitiveness of Thai businesses.

Regarding local procurement, our company collaborates with domestic suppliers in Thailand to procure the necessary materials and services. This collaboration meets production needs and effectively saves waiting time, improving production efficiency.

Apex's procurement from Thai suppliers accounted for 40.66% of the total procurement amount in 2023, with these suppliers accounting for 67.71% of the total. Among our top ten suppliers, 40.82% of the procurement amount comes from local suppliers. This demonstrates our emphasis on trust in the local supply chain.

Thailand's PCB industry supply chain has continued to grow in recent years. Considering that using local materials can significantly reduce carbon emissions during transportation, support local economic development, and increase employment opportunities, we will continue to promote the proportion of local procurement as a procurement goal for Apex and further strengthen cooperation with local suppliers.

Local Supplier Procurement Ratio



3.6 Customer Service

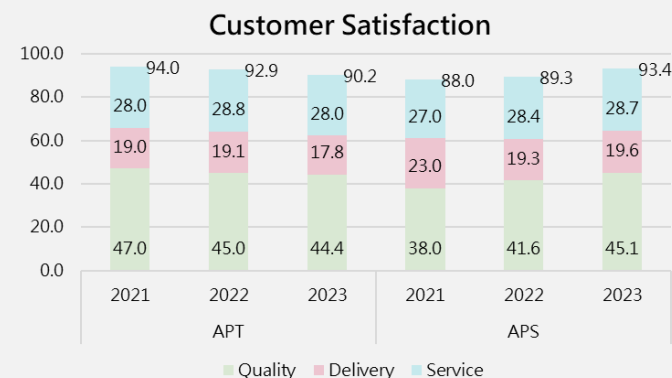
Material Topic	Customer relationship management	
Policies and Commitments	<ul style="list-style-type: none"> Provide diverse communication channels for customers 	
Governance Structure	Business Department	
Management Actions	<ul style="list-style-type: none"> Review market demand regularly, interact frequently with customers and agents to confirm feasibility, periodically review customer complaint content and progress, and manage core issues. Supplement negotiation, customer relationship management, and market analysis training content and establish channels for collecting political and economic trend analysis information. 	
Execution objectives	<ul style="list-style-type: none"> Achieve a customer overall satisfaction score of 93. 	
Stakeholder Engagement	Stakeholders	Customers, Employees
	Communication Channels	Customers: Irregular communication, customer satisfaction surveys Employees: Employee training
Performance in 2023	<ul style="list-style-type: none"> Customer overall satisfaction score. (Out of 100) APT Score 90.2 APS Score 93.4 	

Customer Satisfaction

Apex values customer needs and expectations. We improve internal processes by gathering customer feedback through irregular communication to continuously enhance satisfaction. We also regularly use satisfaction surveys to collect customer opinions for further improvements.

All Apex products are labeled in compliance with relevant regulations and international standards, including RoHS and HF markings. Moreover, we are ISO 9001 certified, ensuring our continued presence on our customers' supplier lists. In 2023, there were no significant legal violations.

Evaluation Frequency	Once every six months
Scope	Apex' s main PCB product customers
Assessment Content	Product quality, product delivery speed, service
Handling Procedure	Analysing the survey results and reporting customer feedback information directly to the management level to improve internal or external processes
Regular Communication	Dedicated service window to promptly address customer feedback and provide comprehensive product information
Improvements	In 2023, overall customer and quality satisfaction at APT did not meet the targets. Customer satisfaction was primarily impacted by a significant drop in delivery satisfaction. To address this, we have enhanced training on delivery processes and quality management.



Note: Scoring Allocation

APT' s score allocation is 50% for quality, 30% for delivery, and 20% for service.

APS 2021 H1: quality 40%, delivery 30%, service 30%.

After 2021 H2: quality 50%, delivery 20%, service 30%.

3.7 Ethics and Integrity

Material Topic	Sustainability risk	
Policies and Commitments	<ul style="list-style-type: none"> Principle of Corporate Governance Principle of Sustainability Development Ethical Corporate Management Best Practice Principles Risk Management Policy and Procedure 	
Governance Structure	Sustainable development committee, Corporate governance team, Audit committee and Internal audit unit	
Management Actions	<ul style="list-style-type: none"> Establish and adhere to internal control systems related to corporate governance to maintain diversity in decision-making processes. Execute all significant investment projects in accordance with internal control management regulations, with adequate management and discussion by executives. Provide multiple internal channels for employees to voice their opinions. Continuously enhance risk management mechanisms. 	
Execution objectives	<ul style="list-style-type: none"> Conduct risk management and provide reports on execution status yearly Annual Corporate Governance Evaluation 6%~20% Morningstar Sustainability Rating: Low Risk 	
Stakeholder Engagement	Stakeholders	Employees, Government, Shareholders
	Communication Channels	Employees: Internal meetings, complaint mailbox, employee satisfaction surveys Government: TCFD and risk management reports, compliance with relevant regulations Shareholders: Compliance with relevant regulations
Performance in 2023	<ul style="list-style-type: none"> 2023 TCFD and Risk Management Rank in the top 5% of 10th(Y2023) Corporate Governance Evaluation Morningstar Sustainability Rating: Low Risk (Last Update: Jul 20, 2023) 	

Integrity Management

Integrity and honesty have always been the core values of Apex's corporate culture and the foremost principle of its business philosophy. The Company is committed to conducting all business activities with integrity and prohibits corruption and fraudulent behaviour. Apex's board of directors establishes policies and regulations related to integrity management and constantly monitors the development of domestic and international corporate governance systems to review and improve the corporate governance system established by the Company, thereby enhancing corporate governance effectiveness. (Please refer to the company's website: [Major Internal Policies](#))

Promotion and Implementation

The Company has clearly defined policies in its Integrity Management Code to prevent conflicts of interest. Independent directors regularly review audit reports and communicate with audit supervisors to understand any conflicts of interest within the company. Communication channels with stakeholders are kept open. The Company has established a reporting system overseen by independent directors and audit managers to address ethical issues and inspections. The channels include:

Internal: CEO BOX, BROTHER BOX

External: Contact information for the audit manager is disclosed on the company's official website. Through the reporting system, no ethical issues occurred in 2023, and regular audit checks did not reveal any abnormal matters related to the following topics:

- The benefits of external providers
- Private transactions
- Commitments to external
- Compliance with international regulations
- Political donations
- Insider trading
- Large-scale donations
- Customer/Supplier ethical issues
- Protection of trade secrets and intellectual property

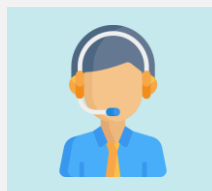
Investigation Procedures and Reporting Channels

The Company has established standard operating procedures for reporting matters, where the reporting acceptance, investigation process, and results should all be documented in writing and retained for five years. Matters involving general employees should be reported to department heads, while those involving directors or senior executives should be reported to independent directors. Upon verifying the validity of reported matters, relevant units must review internal control systems and operational procedures, proposing improvement measures to prevent the recurrence of similar behaviours. The dedicated unit responsible for handling reports should report the reported matters, their handling methods, and subsequent review and improvement measures to the board of directors.

Compliance with regulations

Apex strictly adheres to local laws at all operational sites and actively participates in various global initiatives or conventions covering multiple areas such as environment and human rights. Through establishing multiple internal regulations by the board of directors, Apex rigorously binds company personnel, demonstrating zero tolerance for unlawful conduct. In the event of suspicious behaviour or potential violations of Apex's code of conduct by any employee or representative, the Company has established a whistleblowing inbox on its website for internal and external parties to report misconduct anonymously. The Company's audit manager directly handles reported matters.

In 2023, Apex did not experience any major integrity violations in its operations, nor were there any significant incidents involving infringement of customer privacy, environmental protection violations, or human rights issues.



Reporting Channel

TEL: (02) 2717-0032

E-mail: ethics@apex-intl.com.tw



4. Sustainable Environment

As a major manufacturer of printed circuit boards in Thailand, Apex recognises climate change's risks and potential impacts and the importance of green sustainability for corporate development. Therefore, Apex is committed to environmental protection and energy conservation, aiming to integrate production with environmental protection, optimise energy and resource use efficiency, and reduce carbon emissions and waste generation.

Apex has proposed a GREEN Project consisting of three main elements: renewable energy, water resource recycling, and reduction of GHG emissions. Firstly, the plan involves adopting ISO 14064 certification standards, developing an internal carbon footprint information collection platform, establishing a more comprehensive carbon inventory mechanism, and deepening the investigation of other GHG to develop carbon reduction plans. Secondly, Apex actively seeks alternative energy sources, building on the foundation of its Sandbox and Solar Project, collaborating with energy-saving organisations and equipment manufacturers to explore more energy-saving opportunities, expand the breadth of renewable energy programs, and strengthen carbon reduction policies. Thirdly, addressing the issue of waste pollution management, Apex plans to reduce waste generation through new processes and developments, coupled with the Apex wastewater recycling project to enhance waste management and water resource management systems, moving towards resource recycling.

In addition to launching various large-scale environmental-friendly projects by relevant departments, the management team at Apex is also committed to raising employees' awareness of carbon reduction, integrating environmental sustainability and corporate social responsibility into employees' thinking patterns, and leading employees to participate in green actions to protect the environment in their daily practices.



Aqua Project

Target	2025	Achieving 30%
Wastewater Recycling Rate	2030	Achieving 40%
	2035	Achieving 50%

Performance in 2023:

The average monthly recycling rate reached 24.64% in 2023.



Solar Project

Renewable energy usage ratio target

2025	5%	2045	30%
2035	10%	2060	50%

Performance in 2023:

Renewable energy usage ratio in 2023 was 2.03%.

GHG Emission

Target	2027	Reduce 5% GHG emission (Base year 2022)
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Performance in 2023:

Emissions from Category 1+2: 156,326.46 t CO₂e



Material Topic	Energy management	
Policies and Commitments	<ul style="list-style-type: none">Comply with customer requirements and local government regulations.Continuously implement energy-saving improvements for high-energy-consuming equipment and departments.Increase the proportion of renewable energy use.	
Governance Structure	Sustainable Development Committee, Financial & Accounting Department	
Management Actions	<ul style="list-style-type: none">Energy-saving improvement plans for high-energy-consuming equipment and departments.Installation and expansion of solar energy facilities for self-generation.Implementation of ISO 50001 certification.	
Execution objectives	<ul style="list-style-type: none">Renewable energy usage ratio target<ul style="list-style-type: none">2025 5%2035 10%2045 30%2060 50%	
Stakeholder Engagement	Stakeholders	Customers, Government, Suppliers
	Communication Channels	Customers: Compliance with customer audits and international regulations. Government: Regular disclosure of climate-related actions. Suppliers: Supplier audits.
Performance in 2023	Self-generated solar power: 5,989.47 MWp Renewable energy usage ratio reaches 2.03%.	

Material Topic	Rising price of GHG emission	
Policies and Commitments	<ul style="list-style-type: none"> Comply with customer requirements and local government regulations. Continuously implement energy-saving improvements for high-energy-consuming equipment and departments. 	
Governance Structure	Sustainable Development Committee, Financial & Accounting Department	
Management Actions	<ul style="list-style-type: none"> Continuously conduct GHG inventories. Plan to adopt ISO 50001 certification. Develop a timeline for the introduction of carbon footprinting and carbon pricing; adjust carbon strategies during the implementation process. 	
Execution objectives	<ul style="list-style-type: none"> 2027 Reduce 5% GHG emission (Base year 2022) 	
Stakeholder Engagement	Stakeholders	Customers, Government, Suppliers
	Communication Channels	Customers: Compliance with customer audits and international regulations. Government: Regular disclosure of climate-related actions. Suppliers: Supplier audits.
Performance in 2023	GHG emission performance Category 1: 11,937.01 t CO ₂ ^e Category 2: 144,389.45 t CO ₂ ^e	

4.1 Climate Change Risks and Opportunities

Since 2022, Apex has integrated stakeholder concerns into its risk and opportunity assessments. Through the ESG-related departments, stakeholder issues are consolidated, and senior executives assess risks and opportunities based on their impact level, categorised by frequency or likelihood. These are then ranked based on the product of impact level and frequency or probability, identifying significant risks and opportunities for management.

Climate risk scenarios in this assessment combine Shared Socioeconomic Pathways (SSPs) and Representative Concentration Pathways (RCPs). Scenarios are simulated to evaluate policy implementation's social and economic impacts, considering future GHG concentrations and radiative forcing from other climate model inputs to estimate various degrees of global warming scenarios.

The scenario used in this report, SSP2-4.5, falls into the moderate category. This indicates a focus on regional economic and security issues over broader development, with uneven development among countries leading to unclear policy effectiveness. Despite efforts from global and national institutions, progress towards sustainable development goals remains slow. RCP 4.5 represents a moderate emissions scenario, with CO₂ emissions declining only by the mid-century and unable to achieve net-zero emissions before 2100, aligning more closely with the current development path.

Climate change risks and opportunities impact the Company's strategic and financial planning. Therefore, Apex follows TCFD recommendations to assess the resilience of climate strategies by analysing transition and physical risk types alongside climate opportunities within a moderate scenario context. The scenario is set as follows:

The scenario description of moderate global warming (SSP2-4.5) in the Intergovernmental Panel on Climate Change's 6th Assessment Report is as follows:

Temperature	Estimation indicates a continuous rise in global temperatures in the future. Under the moderate scenario of global warming (SSP2-4.5), it is projected that the global temperature will exceed 2°C relative to the period from 1850 to 1900 during the 21st century and may even approach 3°C. The average temperature rise in Thailand is forecasted to be 1.6°C and 2.4°C by the middle and end of this century, respectively.
Extreme heat	Future temperature changes will be more significant and pronounced. In 1995, the median number of days with temperatures above 35°C across Thailand was 44. Under the SSP2-4.5, it is anticipated that by the end of this century, the median number of days with temperatures above 35°C in Thailand will reach 195 days.
Intense rainfall	Under the moderate global warming scenario (SSP2-4.5), Thailand's average daily maximum rainfall is expected to increase by approximately 4.99% and 11.01% by the middle and end of this century, respectively.
Rising sea levels	The global average sea level will continue to rise in the 21st century. Under the SSP2-4.5, the possible range of global average sea level rise by the end of this century is estimated to be 0.66–1.33 meters.

1.5°C scenario, Thailand's Climate Change Master Plan (2015-2050), Taiwan's 2050 Net Zero Emissions Pathway and Strategies, Taiwan's Climate Change Adaptation Act scenario estimates, etc.

Carbon tax imposition	According to the Climate Change Adaptation Act, the Taiwan government imposes carbon fees on businesses. The estimated short-term rates are 300 NTD per ton of CO ₂ ^e , the mid-term rates are 500 NTD per ton of CO ₂ ^e , and the long-term rates range from 750 to 1500NTD per ton of CO ₂ ^e .
Implementation of Thailand's V-ETS	Since 2013, Thailand has been promoting the voluntary carbon emission trading system (V-ETS), which sets upper limits on direct and energy-related indirect carbon emissions for high-carbon industries and plans to implement a nationwide mandatory ETS policy.
Enhanced regulatory standards	The Thailand Climate Change Master Plan (2015-2050) proposes comprehensive enhancements to green building standards, building energy efficiency standards, lighting and air conditioning standards, and promoting efficient transportation systems, aiming to restrict GHG emissions while achieving economic expansion simultaneously.
Energy shortages	The National Economic and Social Development Council (NESDB) of Thailand's analysis indicates that Thailand's regional energy resources can only provide reserves for 20 years.
Shifts in customer behaviour	Customers demand carbon reduction strategies or evidence of carbon neutrality for mid to long-term periods.
Government-provided subsidies	The Taiwan government provides subsidies to businesses for carbon reduction, renewable energy, energy storage systems, carbon capture, and other related measures under the Climate Change Adaptation Act.

Explanation and Response Strategies for Climate Change Risks and Opportunities

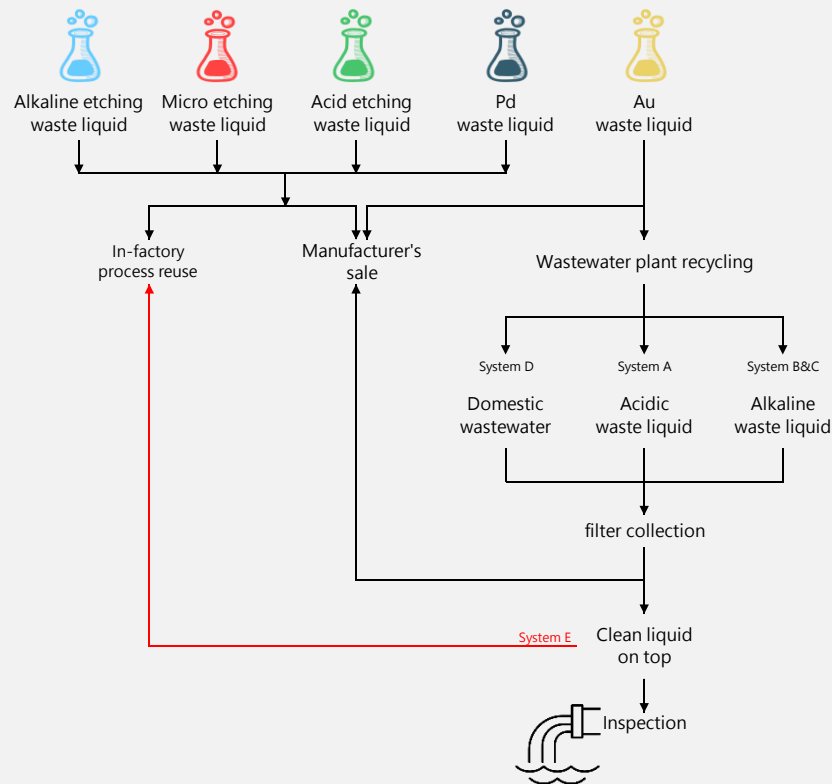
Category	Topic	Positive/ Negative Impact	Management Measures	Level
Transition-Market	Supply chain disruption and cost fluctuation	Please refer to “2.4 Impact Identification and Value Chain” for the same topic.	Please refer to “3-4 Industry Supply Chain”	A
Transition-Policy & Legal	Rising price of GHG emission	Please refer to “2.4 Impact Identification and Value Chain” for the same topic.	Please refer to “4 Sustainable Environment”	B
Transition-Policy & Legal	Energy management	Please refer to “2.4 Impact Identification and Value Chain” for the same topic.	Please refer to “4 Sustainable Environment”	B
Transition-Technology	Investment in new technologies	Negative: Falling behind in adopting or developing new technologies may result in loss of orders or operational difficulties in the industry. Positive: Embracing technological transformation under the carbon reduction trend may lead to potential orders, benefiting business development.	Short-term: Continuously introduce new products and collaborate with customers to enhance technical capabilities. Medium to long-term: Deliberating on integrating carbon reduction strategies into the technological transformation plan.	C
Transition-Market	Customer behaviour changes	Negative: Loss of business orders. Positive: The Company has a strong ESG foundation and is well-positioned to capitalise on industry mobility trends, thereby increasing orders opportunistically.	Short-term: Proactively engage with customers and suppliers to discuss expectations regarding various ESG indicators and the timeline for implementing audits. Medium to long-term: Seek opportunities for innovative management models and transformation.	C
Transition-Reputation	Harmed reputation	Negative: Potential impacts include production halts, loss of orders, talent drain, and financial losses. Positive: Continuously invest in ESG-related management improvements based on existing scale and reputation advantages and leverage operational strengths in the ASEAN region to fuel growth momentum.	Short-term: Continuously manage operational and related ESG tasks effectively. Medium to long-term: Continuously enhance risk management mechanisms and discuss the timeline for adopting international standards.	C
Opportunity	Improvement in resource efficiency	Negative: System maintenance and depreciation costs. Positive: (1) Reduction in production costs; (2) Potential for better performance or incentives in evaluations, government fees, subsidy programs, etc.	Through internal and external initiatives, plan adjustments to production equipment and component replacements, actively improve equipment operational efficiency and reduce energy consumption. Enhance the efficiency of wastewater recycling systems and maximise the value of waste materials.	C
Opportunity	Enhancement of climate governance and carbon management capabilities	Positive: It helps the Company make more comprehensive operational decisions, reduces decision-making risks associated with climate issues, and accelerates the Company's implementation of net-zero targets.	Organise promotional events periodically. Provide relevant education and training to employees at all levels.	C
Transition-Policy & Legal	Strengthening of reporting obligation	Negative: Fines, investor claims, damage to financing capability. Positive: Enhance social trust, aiding operational development and market value.	Short-term: Relevant internal control regulations have been established, and there have been no significant findings from supervisory authorities or auditors. Medium to long-term: Continuously learn various reporting standards and updates to regulations; conduct internal education and training.	D

Category	Topic	Positive/ Negative Impact	Management Measures	Level
Transition-Policy & Legal	Regulatory specifications enhancement	<p>Negative: Under the trend of decarbonisation and ESG, businesses typically require time to seek tools or solutions, and there may not be readily available tools or solutions in the market. In other words, significant time investment is needed. Therefore, the negative impact of lagging in specifications leads to a loss of competitiveness, resulting in business loss or a rapid increase in operating costs.</p> <p>Positive: Anticipating or adapting to potential specification requirements early can maintain a competitive advantage and facilitate future business expansion.</p>	<p>Short-term: Unit supervisors responsible for periodically monitoring updates in regulations within their business scope and assessing their impact on current operations; ESG-related projects have been initiated, and educational training has commenced.</p> <p>Medium to long-term: Continuously propose feasible improvement projects and proactively prepare for increasingly stringent external environments.</p>	D
Physical-Chronic	Rising sea level	<p>Negative: Increasingly severe climate conditions in the factory area affect facilities and production efficiency.</p> <p>Positive: Assessing the possibility of other suitable factory locations and leveraging the synergies of emerging industry clusters.</p>	<p>Short-term: Proper engineering management models and systems have been established, and maintenance budgets and schedules are planned based on past experiences, internal knowledge, supplier recommendations, etc. A continuous operations team has been set up to regularly assess significant risks and relevant external information, focusing on specific studies on sea-level rise assessments.</p> <p>Medium to long-term: Continuously monitor external research findings; keep track of the development status of electronic industry clusters in Thailand or ASEAN and assess the possibility of other factory locations as needed.</p>	D
Physical-Acute & Chronic	Water resource management	<p>Negative: Production interruptions and occupational hazards.</p> <p>Positive: Improving water resource efficiency can qualify for tax incentives and reduce long-term operational costs.</p>	<p>Short-term: Internal water management workflows and review mechanisms have been established; there are currently no major compliance issues; the investment project for wastewater recycling facilities has been initiated.</p> <p>Medium to long-term: Complete the investment project for wastewater recycling facilities at the Sinsakhon plant and monitor its effectiveness; consider adopting the ISO 46001 Water Efficiency Management Standard.</p>	D
Physical-Chronic	Temperature rise	<p>Negative: Due to the increasingly severe climate conditions at the plant, power limitations due to extreme heat could lead to shutdowns that affect facility operations and production efficiency.</p>	<p>Short-term: A well-established facilities management model and system have been implemented, incorporating past experiences, internal knowledge, and supplier recommendations to plan maintenance budgets and schedules.</p> <p>Medium to long-term: Researching innovative building materials and innovative facility-related supplier services.</p>	D
Opportunity	Sustainable finance	<p>Negative: Increased costs associated with various assessments.</p> <p>Positive: Opportunities provided by financial institutions can lead to interest savings.</p>	Engaging in ESG, CDP, and other disclosure, management, and ratings processes to enhance the company's access to financial opportunities such as market credit, low-interest loans, and financing.	D
Opportunity	Industry collaboration	<p>Positive: (1) Advancing the development process of carbon reduction initiatives to reduce implementation costs; (2) Collaboratively enhancing carbon management capabilities across the supply chain.</p>	<p>Participate in courses offered by industry associations to learn sustainable improvement methods.</p> <p>Promote sustainable supply chain management and actively respond to customer expectations.</p>	D
Opportunity	Transition to decentralised energy sources	<p>Negative: System setup, maintenance, operation, and depreciation costs.</p> <p>Positive: Reduce energy loss and gain control over the types of energy inputs.</p>	Continue to monitor developments in renewable energy.	D

Note: A represents topics of the highest material, B represents high material topics, C represents moderately material topics, and D represents issues of low material.

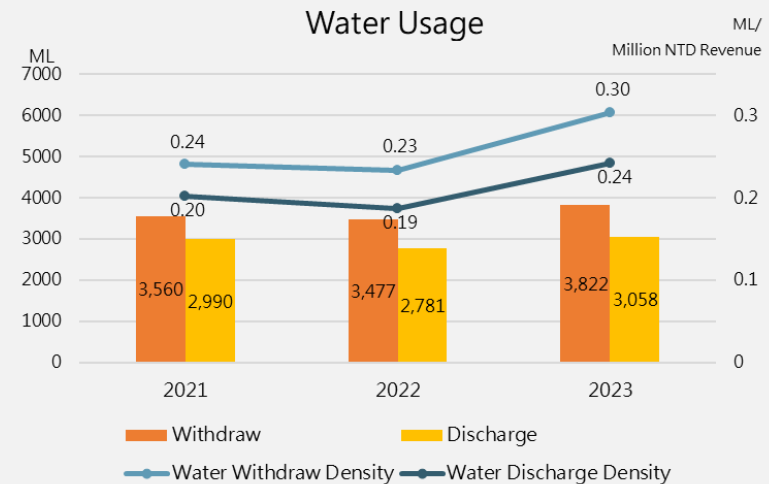
4.2 Management of Water Resources and Wastes

PCB manufacturing processes rely on stable water resources, electricity, and chemicals, with complex wastewater characteristics and process flows. Apex initiated the Aqua Project in 2022, establishing a dedicated water resources task force and collaborating with suppliers to segregate liquids from various methods. These liquids undergo physical, chemical, and biological treatments for reuse or are sold to recycling companies to ensure resource recycling. Discharges that cannot be reused or sold are controlled within standard parameters per industrial zone regulations and discharged into designated channels according to rules.



Apex's water sources are obtained from third parties, specifically local water supply companies and industrial zone treatment plants. In 2023, Apex's withdrawal water was 3,822 megaliters, with a discharge of 3,058 megaliters. In 2022, withdraw water was 3,477 megaliters, with a discharge of 2,950 megaliters.

Category	Unit	2021	2022	2023
Water Withdraw	Megalitre (ML)	3,560	3,477	3,822
	Thousand Cubic Metre (m ³)	3,560	3,477	3,822
Water Discharge	Megalitre (ML)	2,990	2,781	3,058
	Thousand Cubic Metre (m ³)	2,990	2,781	3,058
Water Consumption	Megalitre (ML)	570	695	764
	Thousand Cubic Metre (m ³)	570	695	764



Apex's water supply is entirely sourced from third parties, including local water utilities and industrial area treatment plants. After use in various processes, wastewater is discharged into holding tanks through different process routes:

- Alkaline etching solution is treated with RecoCell equipment for electrolysis to recover copper from waste liquid. The processed alkaline etching solution is then returned to the respective process.
- Certified vendors handle acidic etching solutions in the industrial area, where electrolysis is used to recover the remaining copper from waste liquid, maximising resource value.
- Other process wastewater is filtered through RO systems, and over 90% of it is recycled for reuse in the original process.
- Remaining wastewater is mixed with domestic sewage for sedimentation filtration to separate sludge, which vendors then treat.
- Before discharging wastewater to treatment plants, the parameters of discharged wastewater are controlled within standard limits according to industrial area regulations.

In 2023, Apex's water intake was 3,822 megaliters, with water consumption estimated at approximately 764 megaliters and wastewater discharge at 3,058 megaliters.

All discharge paths comply with industrial area regulations and Thai industrial laws to achieve environmental protection objectives. There were no significant violations of relevant laws in 2023.

Considering the risk of water shortage in the region where the production plant is located, which is deemed low based on past experiences, Apex has measures to mitigate the impact of water scarcity on production downtime. This includes maintaining agreements with water suppliers to ensure continuous water supply and reduce disruptions to customer deliveries.

	Treatment Method	Recycled/Treatment Amount			Unit
		2021	2022	2023	
Alkaline Etching Waste Liquid	Use RecoCell equipment for electrolytic recycling and reuse	1,022	684	47	tons
Waste Liquid Waste Liquid	Use RecoCell equipment for electrolytic recycling and reuse	-	-	74.45	tons
Micro Etching Waste Liquid	Sale waste liquid	10,580	9,510	5,755	tons
Waste Liquid Waste Liquid	Discharge to the wastewater treatment plant in the industrial zone	2,990	2.78	3.06	ML
Non-hazardous	Food Scraps	6044	6044	7,910	tons
	Pd waste liquid	578	578	641	tons

	Treatment Method	Recycled/Treatment Amount			Unit
		2021	2022	2023	
Hazardous	Pd waste liquid	-	123	641	tons
	Resin	-	-	93	g
	PCB Waste	-	-	29	g
	Precipitation	155	196	165	tons
	Rubbish	5,224	6,816	4,323	tons

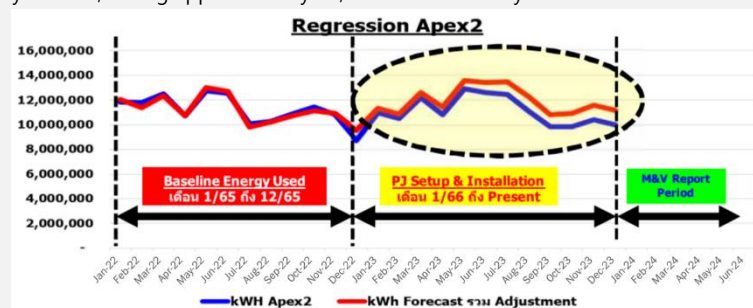
4.3 Energy Efficiency and Policy

Since the commencement of the Solar Project in 2022, construction has been progressively underway, with some solar equipment already in operation. In 2023, solar energy usage increased fourfold compared to the previous year, accounting for 2.03% of the energy usage. Throughout 2023, the installed facilities collectively generated 5,990 MWh of solar energy.

Energy	Unit	2021	2022	2023	
Non-Renewable Energy	Outsourcing Energy	MWh	295,631	283,679	288,995
		GJ	1,064,272	1,021,244	1,040,382
	Diesel	L	420,048	413,624	486,022
		GJ	15.30	15.06	17.70
	Petrol	L	34,493	36,301	50,568
		GJ	1.09	1.14	1.59
	LPG	L	1,824,810	2,210,103	2,217,774
		GJ	91.66	111.01	111.40
Renewable Energy	Self-Generated Solar Power	MWh	46	1,491	5,990
		GJ	164	5,367	21,562
Energy intensity	GJ/ Million NTD Revenue	71.92	68.88		84.10

Lean Project

The project, which included six measures to improve equipment operational efficiency, was implemented from 2022 to 2023. By the end of 2023, the equipment's energy consumption had been reduced by 11.48%, saving approximately 14,904 MWh annually.



Solar Project

Solar Plant	2022	2023	2024	2025	2026-2027
Completed	2,771				
Phase 1		2,351			
Rooftop Apex 2			3,175		
New Chemicals & Hazardous waste plant				371	
Phase 2				500	
Rooftop Apex 1				3,461	
New AREA					4,500
Phase 3					1,800
Rooftop Apex 3					1,800
Rooftop Apex 4					3,000
Solar Capacity (kWp)	2,771	2,351	3,175	4,332	9,300
Accumulate Solar Capacity (kWp)	2,771	5,122	8,297	12,629	21,929
GHG Reduction (Tons)	2,022	3,739	6,055	9,217	16,005

The Solar Project has a total investment of 33 million USD, divided into 3 phases for installing solar energy systems from 2021 to 2027. Upon completion of all phases, the total installed capacity of the solar energy system is expected to exceed 21,000 kWp, equivalent to reducing over 15,000 tons of GHG emissions annually. Compared to the Company's GHG inventory data for the base year 2021, this represents a reduction of over 8% in carbon emissions. In 2023, an additional investment of approximately 80 million New Taiwan Dollars was made in major environmentally sustainable equipment related to green energy (solar power generation systems), with a cumulative installed capacity of 5,122.29 kWp. In addition to the commitment to sustainable development, professional vendors conducted safety-focused training sessions during the solar panel installation process, which were open to employee participation. Through collaborative efforts in energy sustainability construction, a sense of cohesion and pride as members of the Apex Family is fostered.

4.4 Mitigating Global Warming

Apex recognises the global concern for climate change and GHG emissions, as well as the importance of actions taken by all departments to reduce GHG emissions. Since 2016, Apex has established a GHG inventory as a basis for its emission reduction targets, using 2019 as the baseline year. The Company planned to reduce GHG emissions by 5% (Scope 1 + Scope 2) over the next five years, and by the end of 2022, Apex had successfully achieved this goal. With the establishment of the new Apex3 facility in 2022, the emissions for Scope 1 and Scope 2 in that year were used as the new baseline. The new interim targets set for 2023, based on the 2022 baseline, aim to reduce GHG emissions by 5% over the next five years.

Apex primarily consumes electricity for manufacturing and power supply. With the implementation of the FA Goal, energy consumption and GHG emissions have gradually decreased. Through the GREEN Project, Apex continuously increases the output and proportion of renewable energy. The first phase of the solar power generation project began partial operation in 2022, with an annual carbon reduction of over 3,700 tons. The project consists of 3 phases, with the first phase still under construction, aiming to reduce purchased electricity and carbon emissions effectively in the future.

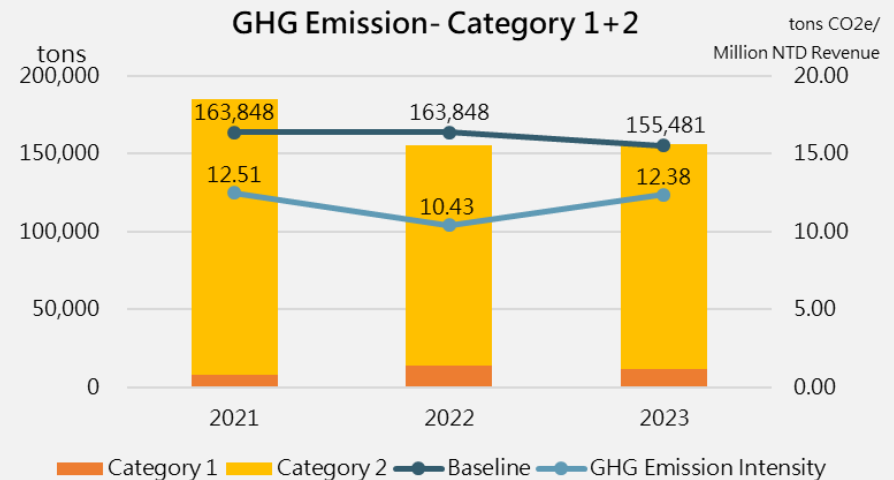
Apex uses ISO 14064-1:2018 as the reporting standard, establishing a GHG inventory covering CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃ applicable to the Company's operational control methods. Information collection for reporting is done regionally. If the Company has offices but no factories in a region, only the electricity consumption of the local office is collected. Taiwan uses the carbon emission coefficient published by the Ministry of Economic Affairs, China follows the notice issued by the Ministry of Ecology and Environment, and Thailand follows the emission factor published by TGO-CFO. The Global Warming Potential (GWP) values are referenced from IPCC AR6. Apex collaborates with suppliers to conduct Scope 3 GHG inventories to control indirect GHG issues in the supply chain.

GHG Emissions Situation

Unit: tons CO₂^e

Category	2021	2022	2023
Category 1 (A)	8,158	13,667	11,937
Category 2 (B)	176,959	141,814	144,389
Subtotal (A)+(B)	185,117	155,481	156,326
GHG Emission Intensity (CO ₂ ^e /Million NTD Revenue)	12.51	10.43	12.38
Category 3 (C)	21,289	18,312	17,199
Others (D)	5	5	5,720
Total (A+B+C+D)	206,411	173,798	179,245

Note: In 2023, refrigerant emissions are included in others.



4.5 Compliance with Environmental Regulations

The Company operates all its facilities in compliance with government regulations related to environmental protection, ensuring adherence to all legal requirements, and conducts self-assessment according to various international standards. Continuous improvement of production processes is pursued to minimise sources of pollution, and the Company actively invests in pollution prevention and control equipment in alignment with environmental strategies. Qualified environmental service providers are engaged to handle pollution and waste, reducing the environmental impact on local communities, both actual and potential.

In 2023, all Apex facilities incurred no significant losses (including compensations) or penalties due to environmental pollution. Apex consistently operates at the highest standards to mitigate environmental costs during production processes, striving for mutual benefit with the environment.



5. Social Prosperity

Material Topic	Change of political and social environment	
Policies and Commitments	<ul style="list-style-type: none"> Advocating for employee rights and stability through the Employee Welfare Committee. Implementing fair compensation policies and comprehensive training programs to nurture and retain talent. 	
Governance Structure	Corp. & Legal Department, Management Information System Department and Administrative Department	
Management Actions	<ul style="list-style-type: none"> Interacting with external stakeholders through procurement, sales, finance, and other departments to gather market intelligence for analysis and feedback to management for planning and management activities. Establishing channels for gathering and analysing political and economic trends; devising mature education-industry collaboration models; enhancing the quantification system for employee competencies. Convening regular meetings of the Employee Welfare Committee. 	
Execution objectives	<ul style="list-style-type: none"> Annual employee turnover rate² below 40%. 	
Stakeholder Engagement	Stakeholders	Society, Customers, Employees, Government, Shareholders, Suppliers
	Communication Channels	Society: Community maintenance, charity events, communication with local government Customers: Periodic communication, assessment of compliance with requested items Employees: Employee welfare committee meetings, employee education and training Government: Regulatory compliance Shareholders: Shareholders' meetings, annual reports, sustainability reports, spokesperson window Suppliers: Periodic communication, supplier audits
Performance in 2023	Annual employee turnover rate 34.7%	

² Employee turnover rate = (Number of resignations + Number of layoffs and retirements) / (End-of-period headcount + Number of resignations + Number of layoffs and retirements).

5.1 Happy Workplace

Apex is like one big family. The top management of Apex prioritises the safety, profession, and health of all employees, including those from outsourcing partners. Employees are seen as vital resources for maintaining the successful operation of Apex, hence the company's commitment to zero workplace accidents and its emphasis on employees' physical and mental well-being, workplace rights, environmental hygiene, and safety. We strive to create a happy and safe working environment, providing employees with diverse and equal opportunities and fair compensation and fostering mutual trust and respect in the labour-management relationship.

Apex has an Employee Welfare Committee elected through democratic processes and organises charity events periodically to support vulnerable groups. Following laws and various initiatives, the Company has established internal regulations to ensure equal and fair treatment regardless of gender, race, socioeconomic status, age, marital status, or family situation, ensuring equal opportunities for employment, working conditions, salaries, benefits, training, performance evaluations, and promotions. A harmonious and pleasant work atmosphere is crucial for maximising the benefits of teamwork. To facilitate smooth communication and consensus-building between management and employees, Apex consistently prioritises reasonable salary levels, a good working environment, and effective communication channels.

Employees can voice their suggestions and concerns to the management team through channels like the CEO BOX and BROTHER BOX. In 2023, Apex did not receive any significant³ complaint letters. The labour-management relationship at Apex is harmonious, with no major labour disputes. Apex has established fair salary and compensation policies and performance evaluation mechanisms, including performance assessments that are aligned with the company's sustainable business objectives.

Apex has established a Safety and Occupational Committee, conducting regular inspections to ensure compliance with safety regulations and minimize workplace safety hazards. Additionally, Apex regularly provides health check-ups for employees to promote their physical and mental well-being. Apex's subsidiary, APT, has also obtained ISO 45001 certification for creating a healthy and safe working environment.

³ "Significant" in this report refers to significant litigation or official correspondence from regulatory authorities.

Personnel Distribution

All Apex employees have signed employment contracts, and there are no temporary, dispatched, or non-employee workers. The following table provides information based on the number of employees as of December 31, 2023, including the average length of service, average age, and educational level of Apex employees.

Year		2021	2022	2023
Number of Employees	Manager and above	94	124	142
	Production Departments	5,722	4,535	3,501
	General Employees	2,850	2,758	3,872
	Total	8,666	7,417	7,515
Position	Manager and above	94 ⁴	124 ⁵	142 ⁶
	General Employees	8,572	7,293	7,038
Gender	Male	3,703	3,126	3,247
	Female	4,963	4,291	4,268
Regional	Taiwan	8	10	10
	China	4	3	3
	Thailand	8,654	7,404	7,515
Employee Structure	Over 50 years old	98	123	114
	30-50 years old	3,437	1,390	3,203
	Under 30 years old	5,131	5,904	4,198
Average Age		29.93	29.60	30.1
Average Seniority		3.97	3.60	4.00
Education Level	Master and above	14	16	15
	University	544	575	1,687
	Senior High School	4,816	4,070	3,176
	Below Senior High School	3,292	2,756	2,637

⁴ 60 Thai, which is 63.83% of Manager and above. 31 female, which is 32.99% of Manager and above.

⁵ 86 Thai, which is 69.35% of Manager and above. 39 female, which is 31.45% of Manager and above.

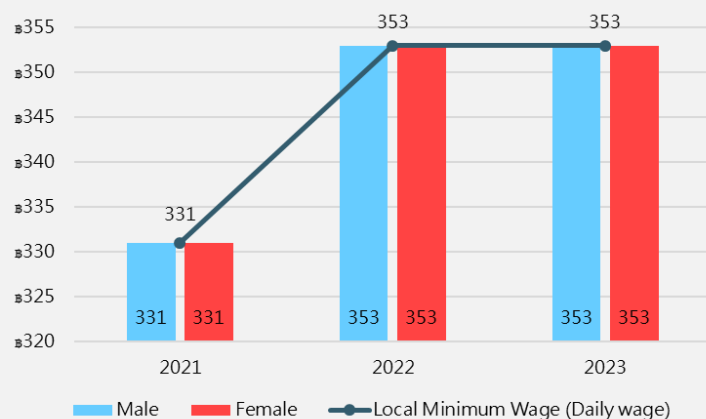
2023									
Gender/People (%)	Male				Female				Sum
	Thai	Chinese	Korean	Others	Thai	Chinese	Korean	Others	
Manager and above	0.79	0.45	0.04	0.09	0.48	0.07	-	-	1.92
Engineer	3.66	0.15	-	-	1.42	0.01	-	-	5.24
R&D	0.09	0.01	-	-	0.12	-	-	-	0.23
IT	0.28	-	-	-	0.13	-	-	-	0.41
Others	37.37	0.23	0.04	0.01	54.34	0.20	-	0.01	92.20
Sum	42.19	0.84	0.08	0.10	56.49	0.28	-	0.01	100.00

2022									
Gender/People (%)	Male				Female				Sum
	Thai	Chinese	Korean	Others	Thai	Chinese	Korean	Others	
Manager and above	0.71	0.35	0.03	0.05	0.44	0.08	-	-	1.67
Engineer	3.49	0.18	-	-	1.43	-	-	-	5.10
R&D	0.07	-	-	-	0.11	-	-	-	0.18
IT	0.32	-	-	-	0.13	-	-	-	0.46
Others	37.01	0.27	0.04	0.01	55.14	0.11	-	0.01	92.60
Sum	41.61	0.80	0.07	0.07	57.26	0.19	0.00	0.01	100.00

⁶ 93 Thai, which is 65.49% of Manager and above. 41 female, which is 28.87% of Manager and above.

Employee Compensation Policy

The Company offers fair and market-competitive compensation based on corporate profitability, performance evaluation results, and consideration for long-term employee development to attract, retain, and motivate top talents and reward employees who create performance and make long-term contributions. We are committed to maintaining a stable employee livelihood through robust compensation and fostering a friendly work environment, positively impacting employee morale and operational stability. Upholding sustainability principles and practising corporate social responsibility is our mission, and we strive to integrate environmental friendliness and social benefits at every level, laying the foundation for sustainable operations.



Note: The ratio of the starting salary of grassroots personnel to the local minimum salary is 1.00, which is the same for both males and females.

The salary policy is implemented to realise the concept of shared achievements in business operations. The Company allocates up to 2% of its profits as employee compensation, with regular annual performance evaluations conducted. Salary adjustments and bonuses are based on individual performance, level of responsibility, and future potential for development. Apex provides fair compensation based on employees' education, professional knowledge and skills, professional experience, and individual performance, without differentiation based on age, gender, race, religion, political affiliation, marital status, or union affiliation.

New Hires and Employee Turnover

In 2023, the average age of Apex employees was 30.1, with employees under 30 accounting for 55.86% of the workforce. Therefore, the proportion of new hires and departures also predominantly consists of individuals under 30.

Category		New Hires		Employee Turnover	
		Number	Ratio	Number	Ratio
Male	Under 30 years old	1,632	37.40%	1,250	31.30%
	31-50 years old	286	6.55%	458	11.47%
	51 years old	4	0.09%	2	0.05%
Female	Under 30 years old	2,062	47.25%	1,676	41.96%
	31-50 years old	379	8.68%	602	15.07%
	51 years old	1	0.02%	6	0.15%
Sum		4,364	100.00%	3,994	100.00%

Retirement System and Implementation Status

The retirement system for employees complies with relevant local laws as follows:

- I. **Thailand area:** Section 118 of Chapter 11 of the Thai Labour Protection Act provides retirement benefits to local employees. This constitutes a defined benefit plan wherein employees meeting the retirement criteria are eligible for a retirement benefit equivalent to a certain number of days' salaries based on their tenure. The related liability has been recognised in the financial statements based on actuarial reports prepared by qualified actuaries in the local area.
- I. **Taiwan area:** Employees in Taiwan are subject to the Labor Pension Act, which allocates a portion equivalent to 6% of monthly wages as retirement benefits to individual retirement accounts managed by the Bureau of Labour Insurance.

Employee Training and Development Program

The employee training and development program is designed to enhance employee skills and serves as a crucial policy for attracting top talents. Apex provides comprehensive education, training, and development plans for employees, aiming to foster a sense of belonging and promote a culture of teamwork within the company through continuous learning. We encourage employees to participate in various company projects, fostering self-expectations and enhancing the company's competitive edge.

Project			2021	2022	2023
New Employee Training	Male	Training Hours (Hours)	52,422	40,800	45,576
		Trainees (People)	19,416	15,300	17,091
	Female	Training Hours (Hours)	74,185	54,840	58,536
		Trainees (People)	27,380	20,565	21,951
Professional Training	Male	Training Hours (Hours)	30,970	57,702	156,861
		Trainees (People)	8,671	10,338	25,210
	Female	Training Hours (Hours)	37,072	80,739	196,602
		Trainees (People)	11,134	14,521	32,136
Director and Manager Training	Male	Training Hours (Hours)	96	94	75
		Trainees (People)	11	28	22
	Female	Training Hours (Hours)	-	14	39
		Trainees (People)	-	5	9
Total	Male	Training Hours (Hours)	83,488	98,596	174,027
		Trainees (People)	28,098	25,666	42,323
	Female	Training Hours (Hours)	111,257	135,593	255,177
		Trainees (People)	38,514	35,091	54,096
	Total Training Hours (Hours)		194,745	234,189	429,204
	Total Trainees (People)		66,612	60,757	96,419

Employee Welfare Policy

As the electronics components industry falls under labour-intensive sectors, labour relations are crucial, with stakeholders prioritising this issue. Therefore, Apex has established labour-related regulations that adhere to international standards such as TLS and the Responsible Business Alliance (RBA) Code of Conduct, aiming for zero labour complaints.

Apex ensures fair and equal treatment for all employees and implements a voluntary overtime application system. The HR department collaborates with department heads to formulate annual education and training plans based on departmental objectives and competency requirements. Clear promotion assessment criteria for each job level are defined to promote talent development, retention, and utilisation. Apex takes a comprehensive approach to employee compensation, benefits, and communication, fostering personal achievements and development and enriching employees' spiritual growth to achieve work-life balance.

Remuneration System	<ul style="list-style-type: none"> Employee compensation Seniority awards Employee retirement system in compliance with local regulations
Welfare Policy	<ul style="list-style-type: none"> Shuttle bus service for commuting Provision of employee uniforms The employee cafeteria provides three meals Perfect attendance bonus Medical and funeral assistance Annual sports events and employee parties Maternity leave and benefits during pregnancy Employee loans
Employee Care and Communication	<ul style="list-style-type: none"> Employee Welfare Committee Official website CEO BOX BROTHER BOX, etc.

Employee Organisation

Apex has not established a labour union but a comprehensive employee organisation to safeguard employees' rights and interests. The ISO 45001 Committee and the Safety and Occupational Committee are responsible for establishing, implementing, and maintaining all occupational health and safety regulations and related laws related to Apex's operations. 387 employees joined the committee, accounting for approximately 5.04% of the total employees.

Apex's labour relations are harmonious, with no significant labour disputes, and it attaches great importance to employee welfare. It focuses on subjective and objective environmental changes and formulates corresponding welfare measures to meet employees' needs. There is an Employee Welfare Committee within the company, and all employees can stand for election and vote. The committee allows employees to express their opinions, make suggestions, and strive for a reasonable working environment, rights, and development, thus expanding the company's social participation.

Committee		Safety & Occupational Committee			ISO 45001 Committee:		
Member Distribution		2021	2022	2023	2021	2022	2023
APT	Assistant Manager Level or above	76	64	55	186	226	234
	Others	85	67	79	10	-	-
APS	Assistant Manager Level or above	6	5	3	-	-	-
	Others	8	12	16	-	-	-
Total		175	148	153	196	226	234

Human Rights Education and Training

RBA is the largest corporate social responsibility alliance in the global industrial supply chain. Apex adheres to the highest standards of social, environmental, and ethical requirements from suppliers to internal factories based on relevant guidelines set forth by RBA. The company disseminates relevant knowledge and concepts to its employees. Additionally, the Thai Labour Standard (TLS) is incorporated into the curriculum to ensure that employees clearly understand and can safeguard their rights. We demonstrate our commitment to employees' physical and mental well-being through action and hold ourselves accountable to consumers for product production and employee treatment.

In 2023, Apex accumulated 1,116 hours of internal human rights-related education and training.

Course	Hours	People	APEX 1		APEX 2		APEX 3	
			Male	Female	Male	Female	Male	Female
Responsible Business Alliance Version 7.1	6	45		2	17	26		
Internal Audit RBA&TLS (RBA Version 7.0 (2021) & TLS 8001:2563)	6	91	14	21	13	34	3	6
Responsible Business Alliance & TLS Awareness Requirement	6	50	1	3	19	27		

Actions on Human Rights Issues



In 2023, the completion rate for all new employees' human rights education courses was 100%.



In 2023, 22 advocacy sessions were conducted on human rights protection and related complaint channels.



Employee health check-ups are provided every year. In 2023, 92% of registered employees completed the check-up.

Human Rights Policy Commitment

To uphold and safeguard fundamental human rights, Apex recognises and supports the spirit and basic principles of human rights protection as articulated in various international human rights conventions, including the International Labour Organization Declaration on Fundamental Principles and Rights at Work, International Labour Organization Conventions, International Labour Organization Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, OECD Guidelines for Multinational Enterprises, Universal Declaration of Human Rights, and United Nations Global Compact Ten Principles. This commitment reflects our responsibility to respect and protect human rights and to comply with labour-related regulations in the countries where the company operates. Therefore, Apex has established the Human Rights Policy Management Measures.

Concerns	Goal and Practice	Measures	Appeal Channel
Providing a Safe and Healthy Environment	Implementing workplace safety and occupational disease prevention, providing employees with a safe, healthy, and hygienic work environment.	Conducting safety and health work, providing education and training, organising employee health check-ups, or hosting various health promotion activities.	Employee Welfare Committee
Prohibiting Child Labor	Refusing to employ any child under the age of 18.	Following national hiring regulations, only applicants at least 18 years old are considered for any position, and thorough checks are conducted during recruitment to avoid oversight.	The business website "Irregular Business Conduct Reporting" allows external individuals to report or file complaints.
Prohibiting Forced Labor	Adhering to RBA regulations on freedom of employment choice, strictly complying with local government labour laws, and international standards to eliminate forced or involuntary labour.	According to local government labour laws, overtime work is voluntary and may not be enforced in any form. Employees are entitled to compensatory time off or overtime pay as required by law.	The business website "Irregular Business Conduct Reporting" allows external individuals to report or file complaints.
Eliminating Unlawful Discrimination	Ensuring no discrimination against employees based on race, class, language, ideology, religion, political affiliation, birthplace, gender, sexual orientation, age, marital status, appearance, facial features, disabilities, astrological sign, blood type, or union membership, to effectively safeguard employees' workplace rights and provide a workplace environment that is dignified and equitable.	Establishing the "Procedures to Human Rights Policy and Management" to safeguard employees' human rights and eliminate unlawful discrimination.	The business website "Irregular Business Conduct Reporting" allows external individuals to report or file complaints.
Promoting Employee Well-being	Offering legitimate and diverse activities to enhance the balance between employees' work and life.	The Welfare Committee organises recreational activities for all employees at least once a year and conducts monthly care activities for new colleagues, inviting department heads to participate. These activities enhance employee morale and a sense of belonging through interactive team-building games.	Employee Welfare Committee CEO BOX BROTHER BOX
Maintaining a Harassment-Free Workplace	Ensuring a work environment free from sexual harassment for all employees.	Through advocacy and public announcements, employees are made aware of their responsibility to help ensure a harassment-free workplace during their duties, and avenues for complaints, such as hotlines and email, are disclosed to foster a friendly work environment.	CEO BOX BROTHER BOX

5.2 Workplace Health and Safety

Apex has established the ISO 45001 Committee and the Safety and Occupational Committee to inspect whether the work environment complies with safety regulations regularly. Following the ISO 45001 standard, hazards are identified based on severity, frequency of occurrence, and scope of impact. All sources of hazards are identified and classified according to their severity. If a process or operation poses a significant risk, appropriate guidelines are provided to employees, along with continuous daily awareness campaigns to reduce the likelihood of workplace accidents. Additionally, Apex has set up an Emergency Response Center to standardise response procedures. Quarterly disaster drills are conducted to enhance the training of emergency response personnel. Regular health check-ups are also provided to employees to promote awareness of their health status and improve their physical and mental well-being.

In addition to controlling high-risk operations and managing subcontractor access and construction safety, Apex has implemented chemical safety management and safety audit systems. Damage prevention and disaster emergency response procedures are meticulously planned and rehearsed regularly to minimise damage and impact on company assets, personnel, society, and the environment during emergencies. The Safety and Occupational Committee convenes regular meetings to discuss environmental protection, safety, and health-related matters. Occupational accident statistics are analysed, and units with higher accident rates or severe types of accidents are prioritised for education, training, and management focus to establish a safety culture and provide a safe and comfortable working environment.

⁷ Number of work-related injury: All occupational injuries, including traffic accidents, are included in the calculation.

⁸ Number of occupational disease: Ill on health arising from exposure to hazards at work.

⁹ Lost workdays: The number of days employees apply for work-related injury leave.

¹⁰ Total absenteeism days: The total number of days absent due to sick leave, personal leave, and work-related injury leave, excluding annual leave, public holidays, marriage, bereavement, maternity, and paternity leave.

Safety and Health Indicators Statistics

Statistical Indicators	Gender	2021	2022	2023	Unit
Number of Work-Related Injuries ⁷	Male	41	37	35	Case
	Female	32	22	10	Case
	Sum	73	59	45	Case
Number of Work-Related Occupational Diseases ⁸	Male	0	0	0	Case
	Female	0	0	0	Case
Lost Workdays ⁹	Male	451	450	393	Day
	Female	295	188	117	Day
Total Absenteeism Days ¹⁰	Male	42,029	42,930	38,908	Day
	Female	52,929	54,065	44,680	Day
Total Working Hours ¹¹	Male	7,488,338.0	7,317,353.5	7,608,503.2	Hours
	Female	9,496,770.5	9,707,517.0	10,101,046.5	Hours
Death Toll	Male	0	0	0	People
	Female	0	0	0	People



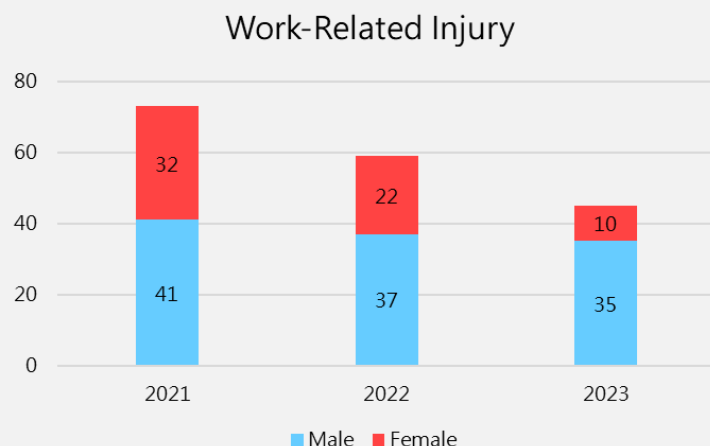
¹¹ Total working hours: The total hours of work expected for each year are calculated as follows:

For daily wage employees: The sum of total working hours per month.

For monthly salary employees: The total number of working days in the month *8 hours *the number of employees on duty at the end of the month.

Statistical Indicators	Gender	200,000 hours ¹²		
		2021	2022	2023
Injury Rate (IR) ¹³	Male	12.05	12.30	10.33
	Female	6.21	3.87	3.72
Occupational Disease Rate (ODR) ¹⁴	Male	0.04	0.05	0.04
	Female	0.04	0.04	0.04
Lost Day Rate (LDR) ¹⁵	Male	12.05	12.30	10.33
	Female	6.21	3.87	3.72
Absentee Rate (AR) ¹⁶	Male	0.04	0.05	0.04
	Female	0.04	0.04	0.04

Resource: Data Source: Apex Administration Department



¹² The coefficient of 200,000 is derived from each group of 100 employees working 50 weeks per year, with 40 hours weekly.

¹³ Injury Rate (IR) : The cases of work-related injuries / the total working hours *200,000 hours.

5.3 Social Participation

In the culture of Apex, there is an emphasis on Eastern values, stressing the importance of having empathy towards others and remembering one's roots, which represents the Eastern virtues that Apex strives to uphold and is part of our soft power. Rooted in a people-centric approach, Apex spares no effort in social activities. Besides internal employee welfare, which enhances employees' emotional and participatory sense, Apex actively gives back to society. Apex's presence is felt across various fields, such as education, healthcare, charity, and social welfare.

Since the onset of the COVID-19 pandemic, Apex has continuously allocated resources to provide masks, vaccines, and livelihood resources and established a sandbox program for the health and well-being of employees and their families. In 2023, as the pandemic improves, we will channel more resources into the surrounding communities, providing medical equipment to local hospitals and encouraging employees to donate blood.

Education is recognised as a crucial driver of social progress and personal development. Apex has invested in education for many years, providing scholarships and assisting in school construction and development. Through scholarships and resource sponsorship, we alleviate the unequal distribution of educational opportunities and urban-rural disparities, helping students from impoverished families or disadvantaged groups realise their dreams, thereby achieving social equity and justice. Additionally, Apex provides vocational training for electronic technicians to attract talented individuals, contributing to the cultivation of future talent reserves and providing strong support for the sustainable development of the enterprise.

Corporate social responsibility is one of the core principles of modern corporate sustainable development. Against the backdrop of increasingly severe global social and environmental issues, enterprises need not only to pursue short-term economic benefits but also bear responsibility for society and the environment. By actively participating in community development, promoting environmental protection, and facilitating fair employment, enterprises fulfil their corporate social responsibility activities, achieving the goal of sustainable development and winning the trust and support of society. Through practical actions, we exert social influence and create positive societal ripples.

¹⁴ Occupational Disease Rate (ODR) : The cases of occupational disease / the total working hours *200,000 hours.

¹⁵ Lost Day Rate (LDR): The total lost workdays / the total working hours *200,000 hours.

¹⁶ Absentee Rate (AR): The total absenteeism days / the total working hours *200,000 hours.

Program	Resource		Remark
Scholarship Program	Total ฿	65,000	To support the National Children's Day activities, we provide scholarships and living resources to support student education.
Employee Children Scholarship	Total ฿	315,000	The Company offers scholarships to employees' children, with 105 scholarship slots supplied in 2023.
Composting Bin Donation	100 composting bins		Donate composting bins to assist with food waste disposal, burying them under trees in the community to serve as fertiliser.
Supporting Human Rights Activities	Total ฿	3,000	On Labor Day, we support anti-human trafficking activities and anti-drug campaigns through donations and parades.
Planting Saplings for Forest Restoration and Conservation	Total ฿	5,000	Support tree-planting activities at the Samut Sakhon Coast Research Center.
Installation of River Guardrails	Total ฿	30,794	Donate and assist in installing riverbank fences to prevent residents from falling into the water.
Planting Projects for a Sustainable Future	-		Participate in planting projects to reduce global warming for a sustainable future, showcasing our commitment to social responsibility.
Improving Disaster Response Efficiency	-		Implement disaster prevention and relief projects to enhance effectiveness.
Participation in the 2023 WREM International Conference	-		Apex participated in The 6th International Symposium on Water Resource and Environmental Management (WREM), with Po-Hsuan Wu presenting.
Providing Additional Income for Schools	-		Donation of Recyclables: 100kg of cardboard, 200kg of kraft paper, 47kg of plastic bottles, 100kg of glass bottles, and 8kg of aluminium cans. These donations are intended to provide additional income for schools for development and construction purposes.
Donation of Relief Funds	Total ฿	5,000	Provide support to disaster relief teams and welfare and assistance for vulnerable groups.
Ensuring Labor Welfare Activities	Total ฿	10,000	Support the activities of the Red Cross organised by the Department of Labor Welfare Protection Bureau in 2023.
Support for Disabled Individuals' Living	Total ฿	3,000	Provide monetary and material support to people with disabilities, enhance the social awareness of this group, and create opportunities for their participation in social activities.
Provide material support to rescue organisations.	Total ฿	3,000	Provide support materials for organisations committed to preventing and reducing road and water accidents.
Donation of Medical Equipment	Total ฿	507,502	Donate medical equipment to the Samut Sakhon Hospital in Samut Sakhon Province, Thailand.
Blood Donation Promotion	Total 302 people		A total of 302 employees successfully donated blood, each donating 450 cc. The blood was used to treat 302 patients at the Siriraj Royal Hospital.
Supporting the Construction of Children's Playgrounds	Total ฿	10,000	Support the construction of children's playgrounds at the local children's development centre.
Improving Student Living Environments	Total ฿	3,000	Assist in improving bathrooms for students in remote areas.
Vocational Training for Electronics Technicians			Provide professional training for graduates in related fields, focusing on the "Printed Circuit Board Production Process."
Supporting Local Religious Beliefs	Total ฿	35,000	As most Thai people adhere to Buddhism, Apex actively supports Buddhist beliefs, contributing to positive social energy.

6. Appendix

6.1 GRI Standards Table

Statement of Use	Apex International Co., Ltd. has reported the information cited in this GRI content index regarding the GRI Standards for the period from 1 January 2023 to 31 December 2023.
GRI 1 Used	GRI 1: Foundation 2021
Applicable GRI Sector Standard	N/A

GRI Standards	Disclosure Item	Chapter	Page
GRI 2: General Disclosure 2021	2-1 Organisational detail	1.1 About this Report 1.4 Company Overview	2 6
	2-2 Entities included in the organisation's sustainability reporting	1.4 Company Overview	6
	2-3 Reporting period, frequency and contact point	1.1 About this Report	2
	2-4 Restatements of information	This report contains no restatements of the information.	
	2-5 External assurance	6.5 Verification Statement	57
	2-6 Activities, value chain and other business relationships	3.3 Products and Services 3.4 Industry Supply Chain	21 24-25
	2-7 Employees	5.1 Happy Workplace	41
	2-8 Workers who are not employees	5.1 Happy Workplace	41
	2-9 Governance structure and composition	3.1 Board Governance	15
	2-10 Nomination and selection of the highest governance body	3.1 Board Governance	15
	2-11 Chair of the highest governance body	3.1 Board Governance	15
	2-12 Role of the highest governance body in overseeing the management of impacts	3.1 Board Governance	16
	2-13 Delegation of responsibility for managing impacts	1.3 Promoting and Managing Sustainability	4
	2-14 Role of the highest governance body in sustainability reporting	1.3 Promoting and Managing Sustainability	4
	2-15 Conflicts of interest	3.7 Ethics and Integrity	28
	2-16 Communication of critical concerns	2.5 Stakeholder Engagement	12-13
	2-17 The collective knowledge of the highest governance body	3.1 Board Governance	15

GRI Standards	Disclosure Item		Chapter	Page
GRI 2: General Disclosure 2021	2-18	Evaluation of the performance of the highest governance body	3.1 Board Governance	16
	2-19	Remuneration policies	3.1 Board Governance	16
	2-20	Process to determine remuneration	3.1 Board Governance	16
	2-21	Annual total compensation ratio	Total remuneration is confidential information.	
	2-22	Statement on sustainable development strategy	1.2 Letter from The Sustainable Development Committee Chairperson	3
	2-23	Policy commitments	3.7 Ethics and Integrity	28-29
			5.1 Happy Workplace	44-45
	2-24	Embedding policy commitments	3.7 Ethics and Integrity	28-29
			5.1 Happy Workplace	44-45
	2-25	Processes to remediate negative impacts	2 Material Analysis and Stakeholder Engagement	7-13
	2-26	Mechanisms for seeking advice and raising concerns	3.7 Ethics and Integrity	28-29
	2-27	Compliance with laws and regulations	3.7 Ethics and Integrity	28-29
			4-5 Compliance with Environmental Regulations	39
			5.1 Happy Workplace	40
GRI 3: Material Topics 2021	2-28	Membership associations	Members of TPCA (Taiwan Printed Circuit Association).	
	2-29	Approach to stakeholder engagement	2.5 Stakeholder Engagement	12-13
	2-30	Collective bargaining agreements	5.1 Happy Workplace	40
	3-1	Process to determine material topics	2.1 Material Analysis Process	7
	3-2	List of material topics	2.4 Impact Identification and Value Chain	10-11
	3-3	Management of material topics- Effectiveness of Board and Corporate Governance	3 Corporate Governance	14
		Management of material topics- Capital management	3.2 Financial Performance	18
		Management of material topics- Credit management	3.2 Financial Performance	18
		Management of material topics- Product quality management	3.3 Products and Services	20
		Management of material topics- Research development and innovation	3.3 Products and Services	20
		Management of material topics- Supply chain disruption and cost fluctuation	3.4 Industry Supply Chain	23

GRI Standards		Disclosure Item	Chapter	Page
GRI 3: Material Topics 2021	3-3	Management of material topics- Uncertainty of market information	3.4 Industry Supply Chain	23
		Management of material topics- Customer relationship management	3.6 Customer Service	27
		Management of material topics- Sustainability risk	3.7 Ethics and Integrity	28
		Management of material topics- Energy management	4 Sustainable Environment	32
		Management of material topics- Rising price of GHG emission	4 Sustainable Environment	32
		Management of material topics- Change of political and social environment	5 Social Prosperity	40
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	3.2 Financial Performance	19
	201-2	Financial implications and other risks and opportunities due to climate change	4.1 Climate Change Risks and Opportunities	32-34
GRI 202: Market Presence 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	5.1 Happy Workplace	42
	202-2	Proportion of senior management hired from the local community	5.1 Happy Workplace	41
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	3.5 Supplier Management Policy	25-26
GRI 205: Anti-corruption 2016	205-3	Confirmed incidents of corruption and actions taken	3.7 Ethics and Integrity	28-29
GRI 206: Anti-competitive behaviour 2016	206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	3.7 Ethics and Integrity	28-29
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	4.3 Energy Efficiency and Policy	37
	302-2	Energy consumption outside of the organisation	4.3 Energy Efficiency and Policy	37
	302-3	Energy intensity	4.3 Energy Efficiency and Policy	37
	302-4	Reduction of energy consumption	4.3 Energy Efficiency and Policy	37
	302-5	Reductions in energy requirements of products and services	4.3 Energy Efficiency and Policy	37
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	4.2 Management of Water Resources and Wastes	35-36
	303-2	Management of water discharge-related impacts	4.2 Management of Water Resources and Wastes	35-36
	303-3	Water withdrawal	4.2 Management of Water Resources and Wastes	35-36
	303-4	Water discharge	4.2 Management of Water Resources and Wastes	35-36
	303-5	Water consumption	4.2 Management of Water Resources and Wastes	35-36
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	4.4 Mitigating Global Warming	38
	305-2	Energy indirect (Scope 2) GHG emissions	4.4 Mitigating Global Warming	38

GRI Standards	Disclosure Item		Chapter	Page
GRI 305: Emissions 2016	305-3	Other indirect (Scope 3) GHG emissions	4.4 Mitigating Global Warming	38
	305-4	GHG emissions intensity	4.4 Mitigating Global Warming	38
	305-5	Reduction of GHG emissions	4.4 Mitigating Global Warming	38
GRI 306: Waste 2021	306-1	Waste generation and significant waste-related impacts	4.2 Management of Water Resources and Wastes	35-36
	306-2	Management of significant waste-related impacts	4.2 Management of Water Resources and Wastes	35-36
	306-3	Waste generated	4.2 Management of Water Resources and Wastes	35-36
	306-4	Waste diverted from disposal	4.2 Management of Water Resources and Wastes	35-36
	306-5	Waste directed to disposal	4.2 Management of Water Resources and Wastes	35-36
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	5.1 Happy Workplace	42
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	5.1 Happy Workplace	43
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	5.1 Happy Workplace	44
	403-2	Hazard identification, risk assessment, and incident investigation	5.2 Workplace Health and Safety	46-47
	403-3	Occupational health services	5.2 Workplace Health and Safety	46-47
	403-4	Worker participation, consultation, and communication on occupational health and safety	5.1 Happy Workplace	44
	403-5	Worker training on occupational health and safety	5.1 Happy Workplace	43
	403-6	Promotion of worker health	5.2 Workplace Health and Safety	46-47
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5.2 Workplace Health and Safety	46-47
	403-9	Work-related injuries	5.2 Workplace Health and Safety	46-47
	403-10	Work-related ill health	5.2 Workplace Health and Safety	46-47
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	5.1 Happy Workplace	43-44
	404-2	Programs for upgrading employee skills and transition assistance programs	5.1 Happy Workplace	43-44
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	5.1 Happy Workplace 3.1 Board Governance	41 15
	405-2	Ratio of basic salary and remuneration of women to men	5.1 Happy Workplace	42

GRI Standards	Disclosure Item		Chapter	Page
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	3.7 Ethics and Integrity	28-29
			5.1 Happy Workplace	44-45
GRI 408: Child Labour 2016	408-1	Operations and suppliers at significant risk for incidents of child labour	3.7 Ethics and Integrity	28-29
			5.1 Happy Workplace	44-45
GRI 409: Forced or Compulsory Labour 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	3.7 Ethics and Integrity	28-29
			5.1 Happy Workplace	44-45
GRI 410: Security Practices 2016	410-1	Security personnel trained in human rights policies or procedures	3.7 Ethics and Integrity	28-29
			5.1 Happy Workplace	44-45
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	5.3 Social Participation	48
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	5.1 Happy Workplace	41
GRI 416: Customer Health and Safety 2016	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	3.3 Products and Services	21
			3.7 Ethics and Integrity	28-29
GRI 417: Marketing and Labeling 2016	417-1	Requirements for product and service information and labeling	3.3 Products and Services	21
			3.7 Ethics and Integrity	28-29
	417-2	Incidents of non-compliance concerning product and service information and labeling	3.3 Products and Services	21
			3.7 Ethics and Integrity	28-29
GRI 418: Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	3.7 Ethics and Integrity	28-29

6.2 Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies

Item	Chapter	Page
1. Description of the monitoring and governance of climate-related risks and opportunities by the Board of Directors and management.	<u>1.3 Promoting and Managing Sustainability</u>	4
2. Description of how the identified climate risks and opportunities affect the operations, strategies, and finances of companies (short term, medium term, and long term).	<u>4.1 Climate Change Risks and Opportunities</u>	32-34
3. Description of the financial impacts of extreme climate events and transitional actions.	<u>4.1 Climate Change Risks and Opportunities</u>	32-34
4. Description of how the identification, evaluation, and management of climate risks are integrated in the overall risk management system.	<u>2.1 Material Analysis Process</u>	7
5. If scenario analysis is used to assess resilience against climate change risks, the scenario, parameters, assumptions, analysis factors, and major financial impacts should be described.	<u>4.1 Climate Change Risks and Opportunities</u>	32-34
6. If there is a transitional plan for responding to climate-related risks, the content of the plan and the indicators and targets for identifying and managing physical risks and transition risks should be described.	<u>4 Sustainable Environment</u>	31-38
7. If the internal carbon pricing is used as a planning tool, the basis of the pricing should be stated.	The system is still under planning.	
8. If climate-related goals are set, information on the covered activities, scope of GHG emissions, planning timeline, and progress achieved annually should be stated. If carbon offsets or Renewable Energy Certificates (RECs) are used to achieve the goals, the source and quantity of carbon offsets or the number of RECs used for carbon reduction should be stated.	<u>4 Sustainable Environment</u>	31-38
9. GHG inventory and assurance.	<u>4.4 Mitigating Global Warming</u>	38

6.3 Sustainability Disclosure Indicator - Electronics Components

Indicators	Category	Chapter	Page	Unit
1. Total energy consumption, percentage of externally purchased electricity, and usage rate of renewable energy	Quantitative	4.3 Energy Efficiency and Policy	37	Billion joules (GJ) Percentage (%)
2. Total water intake and total water consumption	Quantitative	4.2 Management of Water Resources and Wastes	35	Thousand cubic meters (m ³)
3. Weight and recycling percentage of generated hazardous waste	Quantitative	4.2 Management of Water Resources and Wastes	36	ton %
4. Describe the types, number of affected people, and percentage of occupational disasters	Quantitative	5.2 Workplace Health and Safety	46-47	Percentage (%) Quantity
5. Disclosure of product lifecycle management: Including the weight of end-of-life products and electronic waste and the percentage of recycling ^{Note}	Quantitative	Our company operates under a B-to-B business model and does not have a related product waste recycling process. For handling other types of waste, please refer to "4.2 Management of Water Resources and Wastes"		ton Percentage (%)
6. Description of the risk management related to using key materials	Discussion and Analysis	Risks and Mitigation Measures for Purchasing Centralization: Our company specializes in manufacturing double-layer and multi-layer PCBs, with critical raw materials including copper foil substrate, film, and copper foil. We have maintained long-standing relationships with our primary raw material suppliers. In addition to fostering good cooperation, we ensure the procurement of critical raw materials from at least two suppliers. Therefore, our supply sources remain stable, and we have not encountered any shortages or disruptions in supply that could affect production.		N/A
7. Total amount of monetary loss resulting from legal actions related to anti-competitive behaviours	Quantitative	N/A		Report Currency
8. Production capacities of main products according to product type	Quantitative	3.2 Financial Performance	19	m ²

Note: This includes the sale of scraps and other recycling processes. Related information should be provided

6.4 SASB Content Index

Indicators	No.	Descriptions of Indicators	Chapter	Page
Industry activities	TC-HW-000.A	Production capacities of different product types	<u>3.2 Financial Performance</u>	19
	TC-HW-000.B	Plant area	The APT facilities in the Samutsakhon industrial zone are around 35 thousand sqm, and in the Sinsakhon industrial zone, they are around 105 thousand sqm. The APS facility, a single-side PCB, is around 8.5 thousand sqm.	
	TC-HW-000.C	Production percentage of selfowned facilities	100%	
Product safety	TC-HW-230a.1	Description of approach to identifying and addressing product data security risks	<u>3.3 Products and Services</u>	22
Employee diversity and inclusion	TC-HW-330a.1	Gender and racial/ethnic group ratios of management, technical staff, and all other employees	<u>5.1 Happy Workplace</u>	41
Product life cycle	TC-HW-410a.1	Percentage of revenue from products comply with IEC 62474, RoHS and other applicable regulation and laws	Currently, customers consider RoHS a management standard for controlled and prohibited materials. The percentage of revenues that meet this standard was 100%.	
	TC-HW-410a.2	Percentage of revenue from products that comply with EPEAT registration or equivalent standards	0%, our product does not fit the specifications of EPEAT.	
	TC-HW-410a.3	Percentage of revenue from products that comply with ENERGY STAR® criteria	0%, our product does not fit the specifications of ENERGY STAR® criteria.	
	TC-HW-410a.4	Weight and percentage of recycled end-of-life products and e-waste	0%, our Company operates under a B-to-B business model. For handling other types of waste, please refer to “4.2. Management of Water Resources and Wastes”	
Supply chain management and sources of raw materials	TC-HW-430a.1	The percentage of first-tier supplier facilities that have undergone the RBA Verification Assessment Process (VAP) or equivalent process for (a) all facilities and (b) high-risk facilities	0%, we have a plan for the sustainable audit of suppliers to upgrade our social responsibility shortly.	
	TC-HW-430a.2	(1) The non-compliance rate of first-tier suppliers with the RBA Verification Assessment Process (VAP) or equivalent procedure, and (2) the rate of corrective measures taken for (a) priority non-compliances and (b) other non-compliances.	0%, we have a plan for the sustainable audit of suppliers to upgrade our social responsibility shortly.	
Material procurement	TC-HW-440a.1	Description of the risk management for key materials	We have policies and procedures for managing conflict minerals and hazardous materials to eliminate relative hazardous risks from purchase sources. At present, we use questionnaires to suppliers for confirmation.	

Note: Using the SASB Indicators for the Hardware Standard of the Technology and Communication Industry, version 2018-10.

6.5 Verification Statement



Independent Assurance Statement

APEX INTERNATIONAL CO., LTD.'s 2023 SUSTAINABILITY REPORT

AFNOR GROUP was established in 1926. We are the National Standardization Body of France, a permanent council member in ISO and one of the leading certification bodies in the world. This verification work was carried out by AFNOR ASIA LTD., a subsidiary of AFNOR GROUP. All the members of the verification team have professional backgrounds and have accepted AA1000 AS, AFAQ 26000, ISO 9001, ISO 14001, ISO 14064, ISO 45001, ISO 50001, and other sustainability-related international standard trainings. All assigned verifiers have been approved as the lead auditors or verifiers. AFNOR GROUP hereby provides a summary of APEX INTERNATIONAL CO., LTD.'s Sustainability Report of 2023 (hereinafter referred to as "the Report") but was not involved in any way in its preparation.

AFNOR GROUP and APEX INTERNATIONAL CO., LTD. (hereinafter referred to as "Apex") are independent entities. AFNOR ASIA LTD., was commissioned by Apex to conduct the assessment and assure the Sustainability Report of 2023 was in accordance with AA1000 Assurance Standard (v3) and the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards).

SCOPE

APEX INTERNATIONAL CO., LTD. is responsible for reporting fairly on the economic, environmental and social aspects of operating activities and performance of Taiwan and overseas operating sites in sustainability reports in accordance with the declared sustainability reporting standards.

AFNOR ASIA LTD. is responsible for:

1. Evaluating the accordance of the Report with the Type 2 of AA1000 Assurance Standard (v3) based on the AA1000 Accountability Principles (2018) and verify the reliability and quality of the specific sustainability performance information and data disclosed in the Report. The verification scopes include sustainability issues, response mechanism, performance information, management systems of information, and the processes of materiality evaluation and stakeholder participation.
2. In accordance with the GRI Standards, we verified the statement options and material topics disclosed in the report compiled by Apex.

REFERENCES

The scope of the assurance includes an assessment of the source adequacy of specific performance information and an assessment of adherence to the following reporting criteria:



- AA1000 Accountability Principles (2018)
- GRI Standards

METHODOLOGY

- The inclusivity, materiality, responsiveness, and impact in the Report were assessed according to the principles of management process against AA1000 Assurance Standard (v3).
- The report is reported in reference with the GRI Standards, and the content of the report is reviewed for general disclosures and specific topic disclosures that comply with the GRI Standards.
- The mechanism of communication and response to the interest of stakeholders was verified through discussion and interview with the management team, however, the assessment team did not make any direct contact with external stakeholders.
- The qualitative and quantitative information produced, collected, and disclosed by the Report was reviewed through a validated sampling plan.
- The documents, materials and information related to the report were examined and reviewed by interviewing the responsible persons of each group of Apex.
- Interviews with members of the organization related to sustainable development management and report writing, including representatives of all levels and departments.
- All documents, data and information related to the preparation of this report were checked by the verification team through interviews with relevant personnel.
- Check the sufficiency and completeness of supporting materials and evidence for the content of the report.

CONCLUSION

◆ AA1000 Accountability Principles

Inclusivity

Apex has paid attention to the corporate sustainable development strategy, effectively integrated the internal and external resources of the enterprise, the management and control of risks and opportunities, and the evaluation and control of strategic objectives, and clearly demonstrated the sustainability-related performance that stakeholders are concerned about.

Materiality

Apex has fully considered the needs, concerns and expectations of the organization and its stakeholders, continues to collect, compile and disclose sustainable development information of great significance, and fully discloses sustainable development information of great significance.



ASSURANCE LEVEL

In accordance with the AA1000 Assurance Standard (v3), we verified this assurance statement corresponding to a moderate level. The scope and methods are as described in this statement.

LIABILITY

This assurance statement is intended for the use of APEX INTERNATIONAL CO., LTD. only. AFNOR is not responsible for any other uses. Our responsibility is only based on the scope and methodology described, and to provide stakeholders an independent assurance statement.

For and on behalf of AFNOR :

Patrick Ni

Patrick Ni

The Director for Certification and Assessment

Jun.26.2024

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6.6 GHG Verification

Statement TH24/00000312GG

SGS

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2023 of
APEX CIRCUIT (THAILAND) CO., LTD.
 39/234-236 Moo 2, RAMA 2 Road, Bangkrachao, Amphur
 Muangsamutsakhon, Samutsakhon 74000, Thailand

has been verified in accordance with ISO 14064-3:2019 as
 meeting the requirements of
ISO 14064-1:2018

Direct GHG Emissions (Category 1) = **11,937.01** tonnes of CO₂e
 Indirect GHG Emissions (Category 2) = **144,389.45** tonnes of CO₂e
 Indirect GHG Emissions (Category 3-6) = **17,199.44** tonnes of CO₂e

Authorized by

 Montree Tangtermsirikul
 General Manager
 Date: 14 May 2024

SGS 14064-1
 SGS (Thailand) Ltd.
 100 Nanglinchee Road, Chongnonsee, Yannawa,
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This Statement is not valid without the full verification scope, objectives, criteria and findings available on pages 2 to 7 this Statement.

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