



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



Apex

International Co., Ltd.
Environmental, Social and Governance Report 2021



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About this Report

This report is the sixth ESG (Environmental, Social and Governance) report issued by Apex International Co., Ltd. (hereinafter referred to as Apex), which will continue to be issued annually in both Chinese and English versions. The previous report was issued in June 2021. The next report (FY2022) will be issued in June 2023. To learn more about Apex's efforts and achievements in corporate sustainability, please visit the ESG page on our company's website.

Reporting Period

The period of information disclosure of this report is FY2021 (January 1, 2021 to December 31, 2021), the content includes our vision and strategies of sustainability, responses to material topics, and specific practices and performance data in the economic, environmental and social dimensions.

Reporting Standard and Information Reliability

The Report is compiled in accordance with core options of the GRI Sustainability Reporting Standards, published by the Global Sustainability Standards Board (GSSB) and in line with the Integrated Reporting framework from the International Integrated Reporting Council (IIRC).

This report is verified by a third-party verification agency, SGS Taiwan Limited, confirming that the content disclosed in this report complies with the GRI standard core options, and the second category of AA1000 (Account Ability 1000) Type II Moderate Level.

Note: 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.

Contact Information

Apex International Co., Ltd.

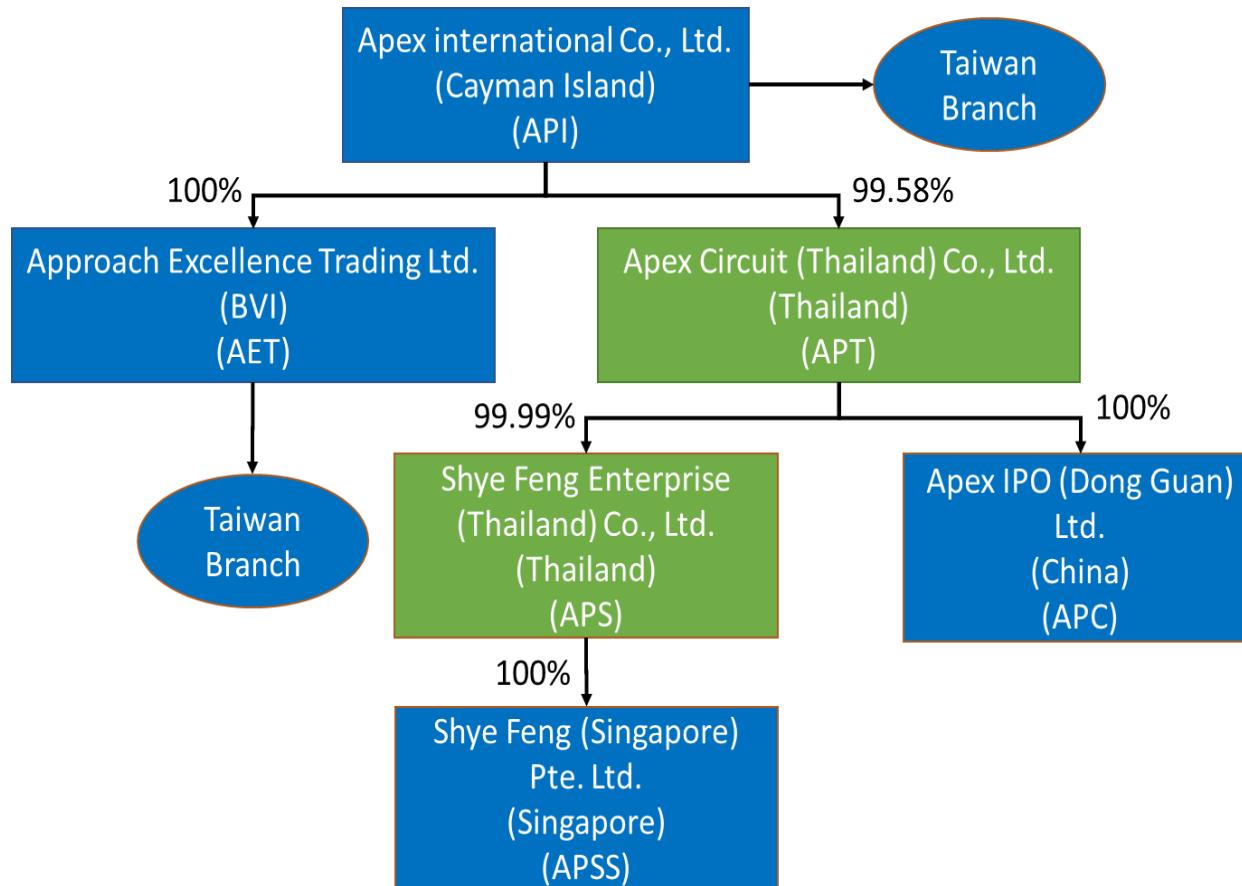
Executive Secretary Hsu Shou Hua

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Reporting Scope and Boundary

The report boundaries were defined in consideration of the nature of business, industry linkage and the right to control.

- **Financial Data**
The financial data is taken from the consolidated financial report of Apex, which has been verified by KPMG Taiwan. For the total of 6 companies of the consolidated statements, please refer to the diagram on the left or FY2021 consolidated financial report of Apex.
- **Environmental and Social information Statistics**
Six companies are covered, the scope is same as consolidated financial statements.
- **The GHG inventory**
The GHG inventory standard of the report is created based on Thailand Green House Gas Management Organization's (TGO) Carbon Footprint for Organization program (CFO program)¹, which is equivalent to ISO14064-1:2006. This standard includes the report of Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorinated Compounds (PFCs), Sulphur Hexafluoride (SF₆), Nitrogen Trifluoride (NF₃). Such data are verified by SGS Taiwan Limited and collected from Apex, APT, APS and APC.
- **The main subjects of such report include operational performance, corporate governance, environmental protection, and social participation, which is inconsistent with the current international trend toward corporate information disclosure. If the scope or quantitative data measurement is different from the previous version of the report, it will specifically indicate in the respective paragraph. The statistics provided in the report are derived from Apex's statistics and surveys and are present in a conventional data description manner.**

¹The greenhouse gas inventory defined in the TGO-CFO is the same as the greenhouse gas inventory protocol published by World Business Council for Sustainable Development. The link is as follows:

https://ghgprotocol.org/sites/default/files/standards/ghg_protocol_chinese.pdf



Letter from the Corporate Sustainability Committee Chairperson

Apex has always believed that a sustainable enterprise must not only excel in its core business and pursue the highest revenues, profits, and shareholder returns, it must also fulfill its responsibilities to the environment and society, and serve as an uplifting force in society.

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In 2015, Apex established its Corporate Social Responsibility Policy, aiming to build on a foundation of sustainable operations and carry out our three missions of “Corporate Governance”, “Sustainable Environment”, and “Social Care” in our daily operations. We gain understanding of the key issues of concern for our stakeholders through organizations in our company responsible for these material topics, and try our best to disclose the results of our actions through Company announcements.



Economic Dimension

The impact of Covid pandemic did not stop in 2021. In order to protect employees and shareholders’ equity, Apex has paid lots of efforts on employee health and safety and maintenance of productivity, hence Apex could be able to pass through this arduous period and successfully and smoothly made the third, new, factory to get into mass production. This contribution to revenue and profit was significant and remarkable and that was also precious outcome from whole employees paying great efforts under situations of Covid pandemic, obstructive travel between nations, roaringly rising-up material price and tight shipment etc.

As the major rigid PCB manufacturer in Thailand, Apex hopes to leverage its hard-won leadership position in the industry and move our supply chain towards sustainable operations. We were making labor and environmental standards a part of our audits and requiring suppliers to follow the RBA (Responsible Business Alliance) Code of Conduct.

Environmental Dimension

In 2021, in addition to achieving our targets in carbon saving, maintenance of water recycling and standard procedures of waste, Apex kept researching set-up of renewable energy supply devices, wastewater reuse and carbon footprint inventories and disclosures.

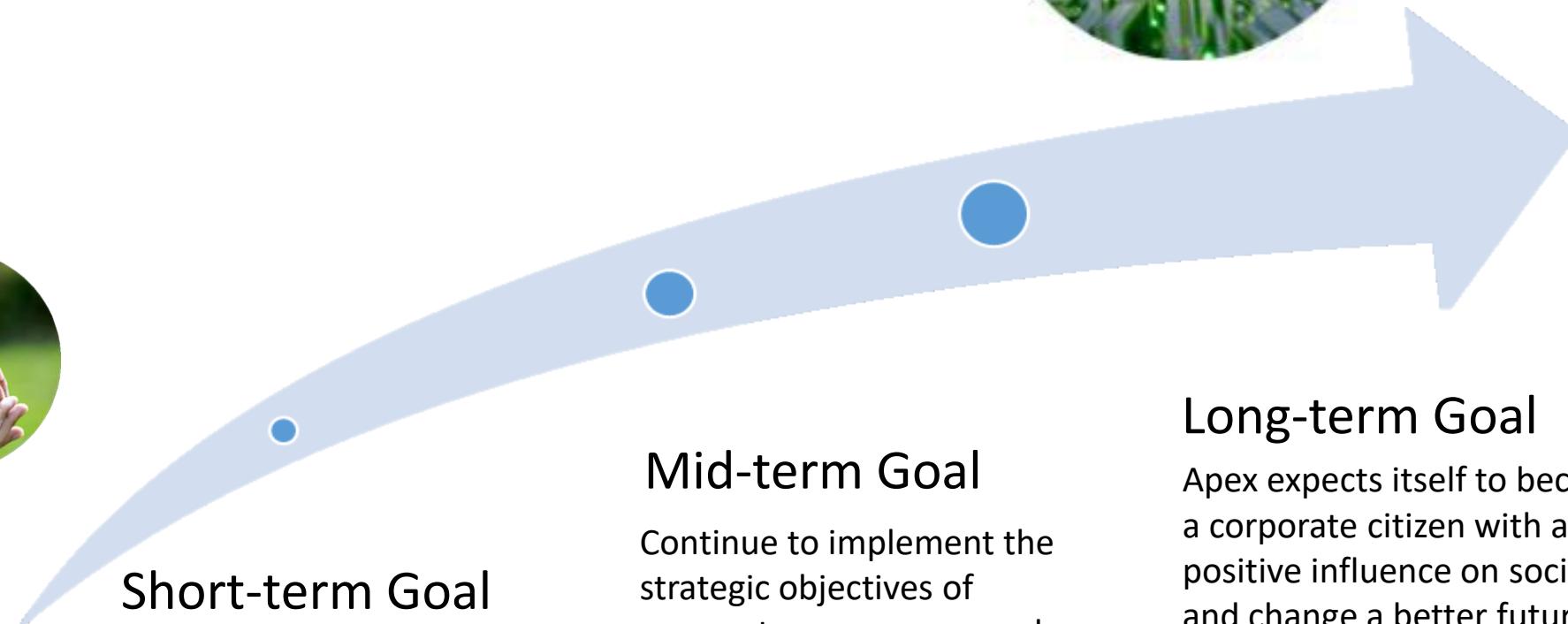
Social Dimension

We always focus on employees’ rights and social participation. Employees are Apex’s greatest asset and we pay high attention on their physical and mental health and their work environment as well. APT has passed ISO 14001 and ISO 45001 (OHSAS 18001) the certificate of occupational safety and hygiene management system; APS has passed ISO 14001. In 2021, we provided more than 8,500 job opportunities and retained talent with competitive compensation, diverse training courses, vacation time above regulatory requirements, and an array of work-life balance measures.

In 2021, socially feedback activities that Apex employees joined were to support afforestation to industrial area, to provide resource to children welfare, mobile cabin hospital, local hospital, labor welfare institution, local government, Thai Red Cross Society, to promote regulation and policy of traffic safety etc. totally counted as 13 activities. Among those activities, Apex’s donation amounted 1.46 million Baht. Besides, because Covid pandemic kept lasting in 2021, Apex also provided additional subsidy to all employees during August to December of 2021 which amounted 150 million Baht that Apex wished to support employees and their families to pass through this tough period together. In addition, Apex supported government policies to take care of highly potential diagnosed or diagnosed employees and their families, Apex set up quarantine and caring area which cost around 30 million Baht. Therefore, Apex proactively cares employees’ physical and psychological needs that makes employees be able to feedback society gladly and creates positive cycle in return.

Strategies and Goal

Corporate Sustainability encompasses the three dimensions of economy, society, and the environment. In such a volatile changing global economy and environment period, fulfilling corporate social responsibility supports the fundamentals of our operations, reduces or eliminates risk, and builds sustainable value for Apex and its stakeholders.



Short-term Goal

In addition to achieving the established environmental goals of energy conservation, water conservation and waste recycling, Apex keeps on setting up renewable energy, research on wastewater recovery programs, and GHG inventory disclosure of Thai factories.

Mid-term Goal

Continue to implement the strategic objectives of corporate governance and corporate sustainability. Although the revenue scale of Apex has not yet become the top 10 compared to PCB competitors, Apex ranked 6%-20% of all TWSE listing companies in TWSE corporate governance evaluation since 2015. It shows that our efforts have earned the affirmation on corporate sustainability responsibility.

Long-term Goal

Apex expects itself to become a corporate citizen with a positive influence on society and change a better future for the next generation.

Chief Executive Officer
Chou, Jui Hsiang

Organization Profile

The concept of Apex culture is “Oriental Thinking collaborating with Western Management” while working. “Oriental Thinking” means to treat others with sensibility. At the same time, the concept of “benevolence” is helpful for Apex and is the foundation to achieve harmony and tolerance among teams. Apex people have to keep empathy in mind all the time to understand the opposite side’s point of view. Then, we can reach effective communication and can further achieve operating goals. “Western Management” emphasizes the spirit of compliance with the regulation. Apex people need to comply with laws, regulations, and internal control systems precisely and carefully as a foundation for maintaining competitiveness.

Apex is a professional manufacturer of PCB and has about 8,500 employees which most of them are of Thai nationality. Apex has two subsidiaries and three factories in Samut Sakhon located southwest of Bangkok. After acquiring APS in 2021, Apex has focused on single to 12 layers of PCB’s products. In 2021, the consolidated paid-up capital of 1.89 billion. For the annual sales, please refer to the company’s 2021 annual report, Chapter 5 Overview of Operations, Section 2, Item 6 for detailed information; also, please refer to Y2021 consolidated financial statements. The table below is for the consolidated comprehensive income statement:

Year	FY2020	FY2021
Revenue	11,832,513	14,800,683
Operating cost	9,325,012	11,681,718
Gross profit	2,507,501	3,118,965
Operating expenses		
Marketing expenses	715,014	797,226
Administrative expenses	576,381	755,522
R&D expenses	35,150	45,440
Anticipated impairment loss of credit	(13,155)	43,369
Total operating expenses	1,313,390	1,641,557
Net profit	1,194,111	1,477,408
Total non-operating income and expenses	44,566	(41,380)
Profit before tax	1,238,677	1,436,028
Less: Tax expense	34,922	52,146
Profit	1,203,755	1,383,882
Basic earnings per share	6.31	7.25
Diluted earnings per share	6.31	7.25

Business of Apex and its Subsidiaries

The business operations of Apex Group are the production and sales of single-sided double-sided and multi-layer rigid printed circuit boards (PCBs). The products are sold locally in Thailand and exported to approximately 23 countries, including north America, middle and south America, east Asia, south and eastern Asia, middle Asia and north Africa etc.

Consumer electronics makers that are clients of the group include Samsung, Arris, Technicolor, Hewlett-Packard (HP), Canon, Toshiba and Western digital. The PCBs produced by the group are mainly applied in LCD TVs, set-top boxes (STBs), hard disks, printers, wireless transmitters, TF panels, and multimedia products for automobiles.

New Product and Service Items to be Developed

Consumer products like LCD TV, STBs, and the home entertainment market continue their moderate growth. Almost all Japanese brand manufacturers are facing such decreasing market share. We have already started to develop new products for automotive parts, mini WI-FI, RF application products, PCB transformer products, etc. These products let us have advantage of our new facility and upgraded manufacturing capabilities, and based on the existing orders of Korean customers for LCD TVs and set-top boxes, to develop new orders of their home appliances, and hope to see more improvements in the future. On the other hand, we will build a manufacturing retrospective system to improve quality and risk control and develop automated processes to enhance quality stability.

Supply Chain

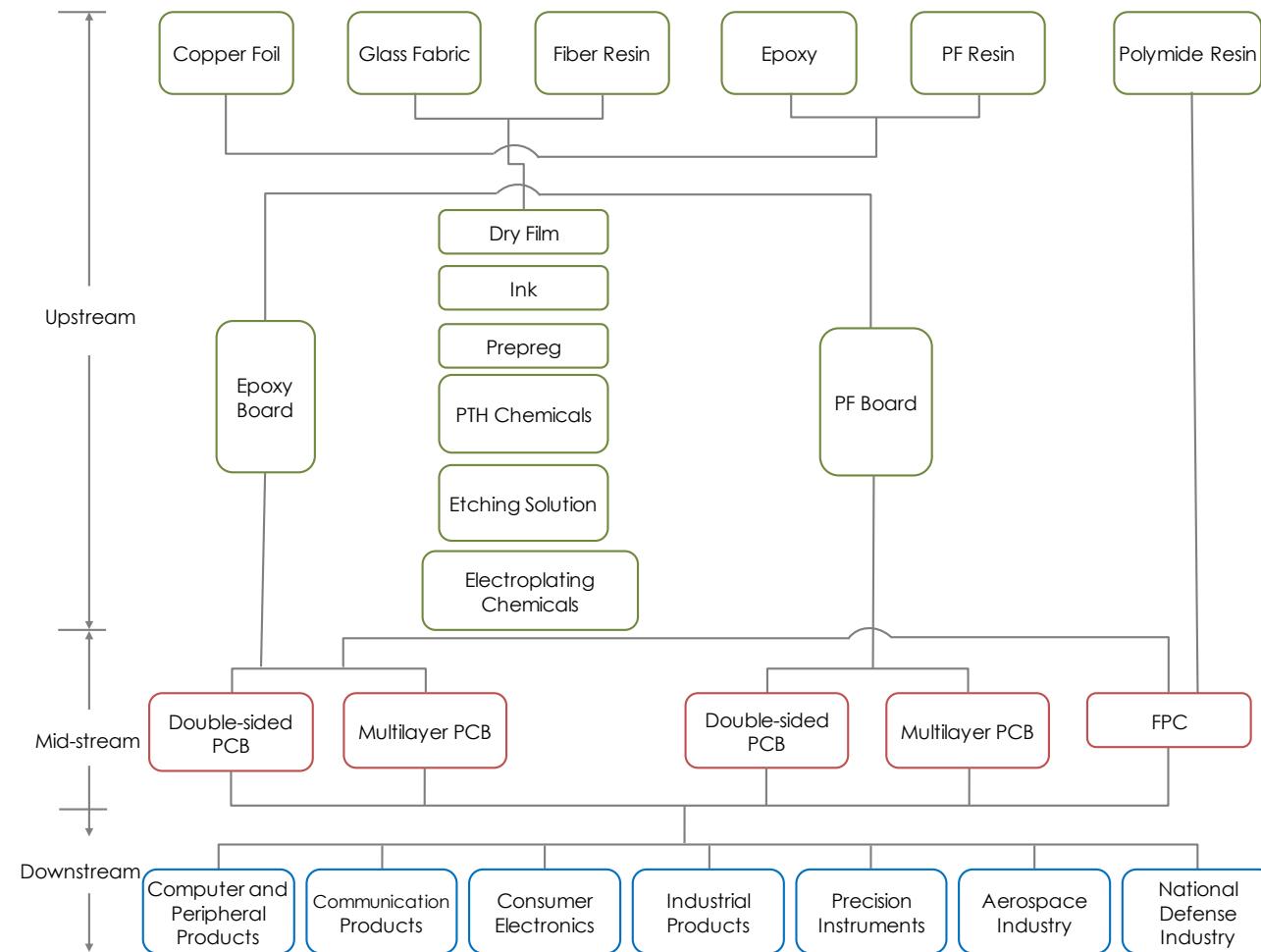
PCB is an indispensable key component in electronic products. It is used extensively in information equipment, communications equipment, consumer products, national defense and industry. The chief functions are to transmit power and signals and to serve as a device carrier. Other electronic components, such as ICs and passive components are integrated on the PCB to allow an electronic product to function. For this reason, it is referred to as the "mother of electronic products". Facing pressure from cost competition and new IC designs appearing one after another, production of PCBs obviously needs improvement. The number of layers is decreased instead of increased. It is compressed to maintain cost competitiveness, such as 8-layer boards being compressed to 6-layer boards and 6-layer boards to 4-layer boards. Under such circumstances, Apex has made use of the advantages it has developed from working on conventional boards to continue to improve the production process and capacity to obtain orders.

PCB industry is the industry with the largest output value in the global electronic component industry, and it is also the basic product of electronic information manufacturing industry. According to the statistic of Prismark at end of 2021, the whole PCB market in 2020 only grew 6.4% up due to impact of Covid pandemic. Among of that, commodity and multi-layer products only slightly grew 0.4% up. However, in 2021, along with QE stimulation from many countries and demand of work-from-home that made macroeconomic demand recovered strongly with anticipated growth of 22.6% in 2021. Rigid PCB was anticipated to grow up 23.3%. Pandemic also stimulated opportunities for industries of 5G, cloud network and AI such as increasing demand of far-distant education, intellectual medical care, AI application on risk management etc. It was anticipated that whole PCB output scale could be around 79.9 billion USD in 2021. During 2020~2025, it is anticipated that global PCB productivity may grow at compound annual growth rate 8.1% and amounted around 96.2 billion USD.

Apex focuses on production of single-sided, double-sided and multi-layer PCBs and belongs to the midstream of the industry. The upstream is the suppliers of related components and materials, such as various substrates, copper foil and prepreg. At the downstream are information equipment, communications equipment, consumer electronic product, semiconductor product, industrial control equipment, automobile, medical equipment, aerospace and national defense industries. There is no overconcentration at the upstream and the suppliers have worked with Apex for a long time. Sources of materials are stable and plentiful. The ranges of application are extensive in downstream businesses that are making solid progress.

In recent years, the shipments of electronic terminal products including smart phones, computers, and televisions have not grown significantly, actually with a recession, while the overall PCB output value maintain its growth. 5G infrastructure in the early stage is a key 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 multilayer boards, HDI boards, flexible boards, and package substrates have gradually taken over market dominance.

Apex's major products, multi-layer board, 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 requirements of the market for products and enhance process capability, there is considerable room for growth. The main competitors of such conventional hardboards are manufacturers located 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 will lead to an increase in the cost of environmental protection.



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

Company Profile and Operation Base

Company Overview

Apex was established on October 28, 2009 and is registered in the Cayman Islands. The company's main business projects are the manufacture and sale of single-sided, double-sided, multi-layer, printed circuit boards (PCBs). Applications include LCD TVs, video converter boxes, Set -Top Box, STB, hard disk, printer, satellite communication equipment and multimedia equipment for vehicles. The following are the headquarters location, operation base and investment structure of Apex and the main business items of each base:



Type	Country	Company Name	Acronym	Address
Headquarter	Taiwan	Apex International Co., Ltd.	API	Rm. 503, 5F., No. 205, Dunhua N. Rd., Songshan Dist., Taipei City 105, Taiwan
Subsidiary	Taiwan	Approach Excellence Trading Ltd.	AET	1F., No. 21, Ln. 1314, Chunri Rd., Taoyuan Dist., Taoyuan City 330, Taiwan
Operating Headquarter and Plants	Thailand	Apex Circuit (Thailand) Co., Ltd.	APT	Apex 1 : 39/234-236 Moo2, Rama 2 Rd., Bangkrachao, Amphur Muang, Samutsakhon 74000, Thailand Apex 2 : 30/101,102 Moo 1, Sinsakhon Industrial Estate Chetsadawithi Rd., Khok Kham, Muang, Samutsakhon 74000, Thailand
Subsidiary	China	Apex IPO (Dong Guan) Ltd.	APC	Room 103, Building 6, No. 5, Er Road, Shuixinwei Industry District, Hanxi, Chashan Town, Dongwan City, Guangdong Province
Subsidiary	Thailand	Shye Feng Enterprise (Thailand) Co., Ltd.	APS	88/1 MOO 2, Watphanthuwong Sethakij1 Rd, Nadee, Amphur Muang, Samutsakhon, 74000, Thailand
Subsidiary	Singapore	Shye Feng (Singapore) PTE. LTD.	APSS	18 MANDAI ESTATE #05-07 MULTI-WIDE INDUSTRIAL BUILDING SINGAPORE (729910)

Main Business Operations of Each Subsidiary

1. Apex is a publicly listed in Taiwan Stock Exchange Market and her main function is holding company and conducts no actual business activities.
2. AET is a wholly-owned subsidiary of Apex. A Taiwan branch was set up to be in charge of procurement of machine equipment and raw materials and shipment in the Taiwan area.
3. APT is 99.58% owned by Apex. Founded in September 2001, APT is the production and operating center of the group with two factories. APT's first factory is referred to as Apex 1 and the second one as Apex 2. The PCBs APT produces are mostly exported to Japan, Korea and China to be used principally in consumer electronic products and office equipment and then in STBs, communications equipment, computer equipment and auto parts.
4. APC is held by APT with 100% of shares, main operation object is procurement of supplies.
5. APS is held by APT with 99.99% of shares, main operation objective is to produce and trade PCB. APS has a subsidiary Shye Feng (Singapore) Pte. Ltd. which was set up in Singapore and her main operation objective is to explore PCB business.

Numbers of Employees

All workforces are under contractual agreement with Apex and there is no temporary or dispatched worker. The table below shows number of employees' average seniority, average age and educational level etc. in Apex based on the date of 2021.12.31.

Year		FY2020	FY2021
Number of Employees	Manager and above	103	94
	Production Departments	4,666	5,722
	General Employees	2,606	2,850
	Total	7,375	8,666
Position	Manager and above	103 ²	94 ³
	General Employees	7,272	8,572
Gender	Male	3,255	3,703
	Female	4,120	4,963
Regional	Taiwan	9	8
	China	3	4
	Thailand	7,363 ⁴	8,654
Employee structure	Over 50 years old	98	98
	30-50 years old	3,005	3,437
	Under 30 years old	4,272	5,131
Average Age		29.93	29.80
Average Seniority		3.97	3.60
Education Level	Master and above	42	14
	University	435	544
	Senior High School	6,826	7,899
	Below Senior High School	72	209

²63 persons are with Thailand nationality which is 61.17% of Manager and above.

³63 persons are with Thailand nationality which is 63.83% of Manager and above.

Gender/ People (%)	Y2021								
	Male				Female				Sum
	Thai	Chinese	Korean	Others	Thai	Chinese	Korean	Others	
Manager and above	0.51	0.37	0.02	0.06	0.30	0.08	-	-	1.34
Engineer	0.39	-	-	-	0.16	-	-	-	0.55
R&D	0.16	-	-	-	0.08	-	-	-	0.24
IT	0.29	-	-	-	0.08	-	-	-	0.37
Others	40.57	0.32	0.03	0.01	56.37	0.17	-	0.01	97.50
Sum	41.92	0.69	0.06	0.07	56.99	0.25	-	0.01	100.00
Gender/ People (%)	Y2020								
	Male				Female				Sum
	Thai	Chinese	Korean	Others	Thai	Chinese	Korean	Others	
Manager and above	0.54	0.42	0.03	0.07	0.30	0.09	-	-	1.45
Engineer	0.57	0.01	-	-	0.24	-	-	-	0.83
R&D	0.19	0.03	-	-	0.08	-	-	-	0.30
IT	0.27	-	-	-	0.08	-	-	-	0.35
Others	41.56	0.39	0.04	0.01	54.85	0.20	-	0.01	97.07
Sum	43.13	0.85	0.07	0.08	55.55	0.30	-	0.01	100.00

Stakeholder Engagement

Apex has established a working group called “RBA committee” to perform stakeholder engagement process and to identify the stakeholders including society, customer, employee, government, shareholder and supplier. By applying internal panel approach i.e. Brainstorming the issues to form response departments to collect needs and expectations from stakeholders and then align issues in term of GRI standard’s aspects.

All of the data are kept at relevant departments included but not limited to customer survey, minutes of meeting with stakeholders, questionnaire on the subject of concern of stakeholders on the company website and all kinds of feedback and information received this year.

Because the sale operations in Taiwan and China are under the control of the Thailand management team, the engagement processed with the above-mentioned International customers and all information gathering from overseas offices is then consolidated at Thailand Office. These initial information are reviewed and endorsed by RBA committee as Apex’s reference for the ESG report of year 2021. The result of the summary of Apex’s discussion with our stakeholders is as below table:

Stakeholder	Concerned Topics	Response Department	Way of Communicating and Interacting	Frequency	Response Content
Society	<ul style="list-style-type: none"> Compliance with laws Environmental protection Waste water management Eliminate the gap between urban and rural education Volunteer service Donation activity 	RBA committee, ADM	<ul style="list-style-type: none"> Local wastewater treatment plant inspection Community activity 	Irregular	Please refer to the chapter on Corporate Governance, Environmental Protection and Social Investment
Customer	<ul style="list-style-type: none"> Product quality Product delivery Good service Reasonable pricing Green products Non-conflict mineral resources audit 	Sales, CQM, ADM, R&D	<ul style="list-style-type: none"> Telephone, Email Meeting, Bilateral visit Internal and external audits Customer satisfaction survey 	<ul style="list-style-type: none"> Frequent on weekdays Irregular More than twice a year More than once a year 	Please refer to the chapter on Corporate Governance, Customer Service and Supplier Management
Employee	<ul style="list-style-type: none"> Employee welfare Occupational safety and health 	Employee welfare committee, ADM	<ul style="list-style-type: none"> Telephone, Email Facebook fan page Internal website and announcement Welfare Committee CEO/ BROTHER BOX Regular and irregular meetings 	<ul style="list-style-type: none"> Frequent on weekdays Frequent on weekdays Irregular More than once a month Irregular Irregular 	Please refer to the chapter on Corporate Governance and Happy and Safe Workplace

Stakeholder	Concerned Topics	Response Department	Way of Communicating and Interacting	Frequency	Response Content
Government	<ul style="list-style-type: none"> Green products Greenhouse gas reduction Waste water management Energy and electricity reduction Regulations compliance 	Taiwan branch, Accounting, ADM	<ul style="list-style-type: none"> Official letters Social media Official Website Email Market Observation Post System (MOPS) 	<ul style="list-style-type: none"> Irregular Irregular Irregular Irregular In accordance with relevant regulations 	Please refer to the chapter on Corporate Governance, Environmental Protection and Social Investment
Shareholder	<ul style="list-style-type: none"> Competitive advantages Growth potential Dividend policy 	Taiwan branch, Accounting	<ul style="list-style-type: none"> Shareholders' meeting Investor Conference Contact with the spokesman MOPS Official website 	<ul style="list-style-type: none"> Once a year Irregular Frequent on weekdays In accordance with relevant regulations Irregular 	Please refer to the chapter on Corporate Governance and Competitive Advantage
Supplier	<ul style="list-style-type: none"> Supply Chain Management Corporate Governance 	Procurement, ADM, Production	<ul style="list-style-type: none"> Field review Telephone, Email Meeting 	<ul style="list-style-type: none"> At least once a year Frequent on weekdays Irregular 	Please refer to the chapter on Corporate Governance and Supply Chain Management

Identified Material Aspects and Boundaries

Apex has established its corporate social responsibility best practice principles; they have been approved by the Board of Directors and the results of implementation are reviewed by BOD meeting regularly. The RBA committee then review the issue raised by stakeholder engagement process, mapping to GRI aspect as below.

Through stakeholder inclusiveness, sustainability context, materiality, and completeness, Apex recognizes the GRI Standard principle that is applicable for Apex to define the core content of the Report. Apex demonstrated these principles by means of stakeholder engagement processes which is done by various departments who made directed contacted with those parties.

Apex has engaged with stakeholders to capture current issues regarding their interest and concern with Apex and evaluation of materiality issues concerned in PCB industry. Apex’s ESG report includes Regulation Compliance, Environmental Protection, Wastewater Treatment, Green Product, Employees’ Welfare, Occupational Safety and Health, Competitive Advantage, Supply Chain Management and Corporate Governance.

This Report context provides sustainable action taken i.e., reduction in waste generated and improvement in GHG emission. Top management as well as RBA committee also review and endorse the materiality topics to ensure the significance to company and stakeholders.

Major Identified Issues and Boundaries Corresponding to the UN's 17 Sustainable Development Goals (SDGs)

17 Sustainable Development Goals (SDGs) was set up by the UN. Apex can combines 8 target requirements based on its core competencies.

3 GOOD HEALTH AND WELL-BEING
GRI403-1 GRI403-2 GRI403-3
GRI403-4 GRI403-5 GRI403-6
GRI403-7

Topic: Regulation Compliance, Employees' Welfare and Occupational Safety and Health

Apex: Apex provides employees with free health check and get related verification

Results:

- The health check taking rate is 100%
- Obtained ISO 45001 Occupational Safety and Health Management System and ISO 14001 Environmental Management System by external audit verification.

Please refer to the chapter on Corporate Governance and Happy and Safe Workplace

6 CLEAN WATER AND SANITATION
GRI303-1 GRI303-2 GRI303-3
GRI303-4 GRI303-5

Topic: Waste Treatment

Apex: Continue to do wastewater recycling, and discharge wastewater by a discharge standard, which is higher than the local standards, to local wastewater treatment plants.

Results:

- Water utilization rate before RO recycle: 84%, after recycle: 95%
- Wastewater in 2021 is reduced in output ratio.

Please refer to the chapter on Corporate Governance and Environmental Protection

13 CLIMATE ACTION
GRI305-1 GRI305-2 GRI305-3
GRI305-4 GRI305-5

Topic: Environmental Protection

Apex: Continue to promote power-saving programs every year to save annual electricity consumption

Results: Adjustment of air conditioners helped Apex save CO2 emission of 452 tons; improvement of converters on equipment helped Apex save CO2 emission of 1,708 tons.

Please refer to the chapter on Environmental Protection and Social Investment

17 PARTNERSHIPS FOR THE GOALS
GRI102-2 GRI102-6

Topic: Regulation Compliance, Customer Service, Green Product, Competitive Advantage, Supply Chain Management, Corporate Governance

Apex: The main axis of Apex Culture is the "Oriental Thinking and Western Management Cooperation" at work. "Oriental thinking" refers to treating others with sensibility. At the same time, the concept of "Benevolence" is undoubtedly helpful to Apex and the basis for achieving team harmony and tolerance. "Western management" emphasizes the spirit of standard compliance. Apex people must strictly and cautiously abide by laws, regulations and internal control systems as the basis for maintaining competitiveness. And uphold the five business philosophy: 1. The best quality 2. The best price 3. On-time delivery 4. Excellent service 5. Satisfied service to strengthen the global partnership.

Results:

- Received Canon Supplier Environmental Evaluation and Sony Green Partner Certification in December 2020.
- Performance of Taiwan Corporate Governance Evaluation was in the range of top 6~20%.

Please refer to the chapter on Corporate Governance, Competitive Advantage, Customer Service and Supply Chain Management



4 QUALITY EDUCATION
GRI403-4 GRI403-5
GRI403-6 GRI403-7

Topic: Regulation Compliance, Occupational Safety and Health

Apex: Continuous improvement and implementation of employee education and training system.

Results: In this year, the training completion rate of Thai factories is 98.7%.

Please refer to the chapter on Corporate Governance and Happy and Safe Workplace

8 DECENT WORK AND ECONOMIC GROWTH
GRI202-1

Topic: Regulation Compliance, Employees' Welfare

Apex: Apex has been cultivating in Thailand for many years and is constantly adjusting salary every year.

Results:

- The salary policy of the company is regardless of gender. Average salary of employees under assistant manager are: male around 13 thousand Baht, female around 14 thousand Baht and which are both higher than minimum wage of Thailand.
- Besides the stable salary, additional rewards were paid also. Apex also subsidized employees during Covid period.

Please refer to the chapter on Corporate Governance and Happy and Safe Workplace

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
GRI102-2
GRI102-6

Topic: Customer Service, Green Product, Supply Chain Management

Apex: PCB boards as a mother of electronic system products, Apex can provide it for downstream electronics industry.

Results:

- Thai factories passed the Canon Supplier Environmental Evaluation and Sony Green Partner Certification in 2020.
- Established a precision physics laboratory, through internal control to grasp the problem in the first time and effectively solve the problem

Please refer to the chapter on Corporate Governance, Customer Service and Supply Chain Management

16 PEACE, JUSTICE AND STRONG INSTITUTIONS
GRI403-4

Topic: Regulation Compliance, Corporate Governance, Employees' Welfare, Occupational Safety and Health

Apex: If the company's personnel violate the company's ethical code of conduct, you can contact Apex through the ethics reporting window information on Apex website. Employees can use the internally set CEO BOX and BROTHER BOX to report suggestion and problem to the management team. Other stakeholders can contact Apex through the contact information on Apex website.

Results: Apex has a harmonious labor-management relationship in the reported year. No significant labor disputes have occurred and no significant complaint from stakeholders.

Please refer to the chapter on Corporate Governance and Happy and Safe Workplace

Note: The median of salary and local minimum wage for 2020 and 2021 (unit: Thai baht) are as below:

		FY2020		FY2021	
		Male	Female	Male	Female
Assistant Manager Level or above	Median	62,500	49,000	64,000	46,000
Others	Median	12,200	13,000	12,500	13,500
Local Minimum Wage		331/day		331/day	

Note: ratio of basic salary of fundamental employee and local minimum wage is 1:1, regardless of gender.

Initially Identified Risks and Opportunities of Climate Change and Apex's Response GRI201-2

Global warming is an important environmental issue that we face. As temperature rises, the abnormal climate pattern will keep on deteriorate over time. More powerful cyclones, irregular rainfall, severe droughts and floods will become more and more frequent. Bangkok used to be a marshland about 1.5 meters from the sea level, and is expected to become one of the most severely affected urban areas in the world, making the Thai government pay more attention to environmental issues in recent years.

Thailand has 3 seasons throughout the year, which is the rainy season, the cool season and the hot season. The annual rainfall is concentrated in the rainy season, so it often meets flood disasters during the rainy season, and is easily to have water shortage during the cool season and the hot season. According to World Bank report, due to extreme rainfall and changes in weather patterns, "nearly 40%" of Bangkok is likely to be inundated by 2030. Greenpeace's Tara Buakamsri also said that Bangkok is sinking slowly now, while the sea level of the adjacent Gulf of Thailand is rising slowly and is above Global average. Large-scale flooding may occur in the near future.

Apex has set up factories in Thailand for more than ten years, and has experienced the worst flood disaster in Thailand in decade in 2011. Apex deeply understands the risks and opportunities brought about by climate change and has begun to pay attention to environmental issues. Apex has made the identification of climate change risk and opportunity lists according to the Climate-Related Financial Disclosure Recommendation (TCFD)⁵ and the reference to the manufacturing climate change adaptation guideline⁶, and adopt the corresponding measures, as shown in the following table:

Apex Climate Change Risk Lists and Corresponding Measures

Risk Type	Disclosure	Identify the Risk	Corresponding Measures
Transitional Risk	Policy and Regulation Risks	Thai government pay more attention on environmental issues and regulations become stricter	Apex's water discharge standards are higher than the regulations, and regular sampling before discharging to ensure compliance.
	Technical Risk	Low-carbon equipment cost	Apex evaluated plans of set-up of self-maintained solar electricity system and waste water recycle equipment in 2021. We planned to implement step by step .
Physical Risk	Immediate Risk	Flooding in the rainy season	The foundation of newly built factory is raised and drainage system was strengthened in response to the strong rainfall.
		Water shortage in cool and hot seasons	Apex has established Business Continuity Plan to make a SOP for water shortages to reduce operational risks.
	Long-term Risk	Sea-level rise	The foundation of newly built factory is raised and drainage system was strengthened in response to the strong rainfall.

Apex Climate Change Opportunity Lists and Current Measure/Future Goal

Type	Opportunity Identification	Current Measure/Future Goal
Resource Efficiency	Resource recycling	Expanded waste water cleaning system. We invested 280 million Baht in 2021 and will increase relative equipment gradually in near future.
	Use energy-saving equipment	Evaluated set-up of solar electricity system. We preliminarily set up on roof of Covid quarantine cabins (sandbox) as trial run by small phase with investment of 2 million Baht. We planned to increase scale of solar system gradually in the future.
	Pursue a paperless office environment	Increase the server and storage equipment to reduce Apex's document printing rate.
Toughness	Cultivate ability to adapt to climate change	The company has established a Business Continuity Plan procedure, hope to be able to properly respond to disasters.

⁵Task Force on Climate-related Financial Disclosures (TCFD) is officially published by Financial Stability Board (FSB) on June, 2017.

⁶Manufacturing climate change adaptation guideline is established by the Taiwan Green Productivity Foundation, and directed by the Industrial Development Bureau, Ministry of Economic Affairs.



Corporate Governance

Apex already built the following ESG related internal regulation:

1. Principle of Corporate Governance
2. Principle of Corporate Social Responsibility
3. Ethical Corporate Management Best Practice Principles / and its Guidelines for Conduct
4. Rules for Election of Directors / Rules of Procedure for Board of Directors Meetings / BOD Performance Evaluation Procedure
5. Rules for Control Audit Committee / Compensation Committee
6. Regulation of the Scope of Duties of Independent Director

In Apex, Internal audit office is in charge of the ESG managing issues and reporting to BOD meetings. APT already set up RBA Committee and Energy Conservation Committee. We also planned to formally set up, in 2022, Sustainable Development Committee and full-time Corporate Governance Managerial Personnel to promote sustainable and governance work. Although the revenue scale of Apex has not yet become the top 10 comparing to PCB competitors, Apex ranked 6%-20% of all TWSE listing company in TWSE corporate governance evaluation since 2015. It shows that our efforts have been affirmed in ESG. As for detail of Corporate Governance, please refer to 2021 Annual Report, Chapter 3: <http://www.apex-intl.com.tw/investor-2.php>



Ethics & Integrity

The “Ethical Corporate Management Best Practice Principles” and its guidance policy of Apex stipulate the types of unethical conduct, improper benefits and the whistleblower channel for both insiders and outsiders. All Apex workers are requested to act in accordance with business ethics and their responsibility to the public and stakeholders. At the same time, the members of the Board of Directors and the management all carry out their duties with integrity and fulfill their obligations as good managers. They also abide by the code of conduct for directors and managers and adopt strict self-discipline and cautious attitudes when exercising their duties.

The company policy already included the whistleblower system to have independent directors and internal audit manager to take the responsibility of ethical issue and inspection. The channel was as below:

1. Internal: CEO BOX, BROTHER BOX
2. External: Company official website to disclose the contact method of internal audit manager.

There was no case of ethical issues through the whistleblower system in 2020, and no abnormal issue through regular internal audit report related to any of the topics below:

- Benefit provided by outsider
- Commitment to outsider
- Political contributions
- Large donation
- Business secrets or intellectual property
- Private transactions
- International regulation compliance
- Stock insider trading
- Customer/Supplier ethical issue

Regulation Compliance

1. Apex has established its Corporate Governance Best Practice Principles. The Principles have been disclosed on the Corporate Governance page on the company’s official website after being approved by the Board of Directors.
2. Apex has established Principle of Corporate Governance as the guidelines in the internal control system for processing shareholder inquiries and matters in relations to shareholders’ rights and interests. At the same time, there is a spokesperson and two deputy spokespersons to provide prompt replies to questions from shareholders.
3. The insider lists of Apex is compliant and files the shareholding status of the principal shareholders each month as regulated.
4. The division of management authority, contact and transactions between Apex and its subsidiaries and affiliates are all conducted according to the regulations of the internal control system and relevant operating procedures.
5. Apex has established regulations on prevention of insider trading and also regularly reminds company personnel such conduct is prohibited.
6. The composition of the Board of Directors has taken professional background, gender, age and education into consideration and also diversified for the purpose of complementation to increase the overall capacity of the board.
7. In addition to the Remuneration Committee and the Audit Committee, committees of other functions has been created in accordance with the company’s business development and related regulations.
8. Apex has established regulations on evaluation of the performance of the Board of Directors. The approaches of evaluation and performance evaluation will be conducted accordingly. Please refer to the company’s official website for the evaluation results.
9. Apex evaluates the independence of CPAs annually, ensuring that they are not Board member, Remuneration member, shareholder or stakeholders of the Company. The 2021 Assessment of performance and independence of CPA were approved by Audit Committee and Board of Directors on March 3, 2021. Please refer to Section 5 “To review the independence of the CPA periodically and the items of evaluation”, in Chapter VIII Supplementary Information of Apex FY2021 annual report for details.
10. Apex has already set up the Corporate Government Team under BOD meeting who is in charge of corporate government, corporate social responsibility and ethical affairs. Every December, the team will directly report to the BOD meeting about the implementation and the plan of next year.
11. Apex has set up a stakeholder section on our company’s official website, and the information about various financial operations and corporate governance are also revealed on the website. Apex also set up the contact window for stakeholders and has disclosed the contact information on the website.
12. Apex has commissioned a professional shareholder services agency to handle the affairs of the shareholders’ meeting.
13. Apex has already set up an English website. Questions in relation to Apex are replied by the spokesperson or the deputy spokesperson. The related departments and the spokesperson or deputy spokesperson are in charge of collecting and disclosing company information. If there are any institutional investors’ conferences, the information will be posted on the company’s website and the MOPS.

Employee Rights and Employee care

1. Employment equality: Job seekers and employees are treated equally, regardless of their gender, ethnic background, religion, political affiliation or marital status. Employment of child labor is forbidden. Pregnant employees are given provisions and longer breaks.
2. Besides conducting physical checkups for employees regularly, Apex values the health and safety conditions in the work environment for employees and has passed the Occupational Health & Safety Adversary Services certification ISO 45001 and the External Audit Certification of the Environment Management System ISO14001.
3. The Employee Welfare Committee organizes at least one activity for full-time employees each year and a welcoming party for new employees each month. The head of each department is invited to participate in interactive games to upgrade employees' sense of belonging and engagement.
4. Recruiting blind people to the factory to provide massage service for Apex employee each month, which provides job to blind people and relaxes the working pressure of Apex employee as well.



Perspective of Apex SS2 Ep.03 (K.Sudjai) | 29.10.20 | Apex 1



Apex (Special) | 16.10.20 | Apex 1



Apex (Special) | 09.05.20 | Apex 1



We are all family 3 Party | 09.10.20 | Central Place Hotel

We are all family 3 Party | 09.10.20 | Central Place Hotel

Investor Relations

In order to assure the rights of Apex's shareholders, Apex has set up specific personnel to deal with the issues raised by shareholders. Apex also set up the Chinese/ English website to provide the following information:

1. The information of the Articles of incorporation and corporate governance.
2. Documents related to shareholder's meeting. (At least the latest annual report, meeting notice, meeting agenda and meeting minutes of the Annual General Meeting.)
3. Company profile, including company history, product, service provided, company organization, and management team.
4. Major shareholder information (Including names of shareholders in possession of more than 5% of total shares or ranking among the top ten shareholders, the amounts of shares held and shareholding ratios) Besides, Apex also set up a stakeholder section on our website, in order to understand the key ESG issues which our stakeholders care.

Relations with Suppliers

The main operating entity of Apex has built up close relationships with suppliers and both sides reciprocate based on mutual trust to achieve the win-win policy.

Stakeholders' Rights

Apex maintains smooth communication channels with correspondent banks, employees, customers and suppliers and also respects and sustains their rights and interests.

Directors and Managers Training

Please refer to Section 5 "Continuing Education for Directors and Managerial Personnel" in Chapter VIII Supplementary Information of Apex FY2021 annual report for details.

Implementation of Risk Management Policy and Risk Assessment Criteria

Please refer to Section 6 "Risks" in Chapter VII Review and Analysis of Financial Status and Performance and Risks of Apex FY2021 annual report for details.

Customer Service

Apex has set up a customer service department and a permanent customer service contact person to process customer complaints and communicate and understand the needs of customers in order to make improvements. Also, customer satisfaction surveys are administered through regular visits and irregular contact. Adjustments are then made according to the survey results so that the company can continue to provide the best service to customers.

Enrollment of Liability Insurance for Directors

Since 2012, Apex has taken directors' and officers' liability insurance. The insured amount in 2021 was US \$10 million.

Personnel associated with Financial Information have Acquired Required Certificates

Two certified public accountants in Thailand.

According to the categories and requirements of the Corporate Governance Evaluation held by TWSE each year, Apex proceeds self-assessment and report the performance to BOD meeting. In year 2021, Apex perform 92.67 score of the evaluation, which means Apex was ranked within 6%~20% of all companies listed in TWSE.



พิธีมอบถ้วยรางวัล "พนักงานยอดเยี่ยม" ประจำปี 2562 | 16.01.20 | Apex 2



BCP : Business Continuity Planning Of Covid-19 | 10.04.20 | Apex II

Competitive Advantages

Excellent Corporate Management

Apex's management team is dedicated to the company, maintains business stability and growth, endeavors in sustenance of internal communication channels, and also adheres to five major management concepts: 1. Best Quality 2. Best Prices 3. Punctual Deliveries 4. Excellent Service and 5. Fulfillment of Promises.

Diversity of Client Source and Product Applications

Apex's client spread around Japan, Korea, Europe, America and China and major international manufacturers are among the end-customers. Diversification of client sources reduces the influence of the economic situation of a single country or region on Apex. In the meantime, diversification of product applications, including electronic products, computer-related, communications and automotive products, enables Apex to stand out as a company capable of meeting the various needs of clients and its product development can also create complementary effects.

Cost Control and Product Price

Complicated production processes and production according to orders are the characteristics in PCB's manufacturing. Hence, precise and effective management are the foundation for maintenance of competitiveness and creation of profit. Whole production processes of PCB are in-house, so Apex can control the scrap rate of each work-station and thus decrease producing cost. At the same time, Apex has centralized sale and procurement so as to reduce time lag. Finally, good cost control has resulted in competitive product price.



อบรมพนักงานใหม่ | 23.03.21 | Apex 5

Advantages and Disadvantages Factors of the Development Vision and Responding Countermeasures

Advantage Factors

Geography and People of Thailand

Thailand is a transportation hub in Southeast Asia with abundant resources. Being an ASEAN member state, it has regional economic advantages that attract foreign investors. With the integration of AEC in 2015, Thailand will continue to enjoy advantage of exporting into ASEAN countries and doing cross border trade with zero tariffs. In addition, Thailand's people are friendly and loyal, which enables the company to maintain a low turnover rate to maintain production efficiency and quality.



Labor Cost and Labor Consciousness

Despite the Thai government's announcement in recent years raised the minimum wage, Apex has been able to keep management costs at a lower level through cost control. Fully aware that the lower labor cost in Thailand is a major contribution to its gross profit, Apex has therefore continued to increase investment in automation to reduce its dependence on labor in the future. We have also invested in automated equipment to reduce the cost of intensive labor.

Market Share and Demand

Apex understands very well that cost competitiveness, decent service and responsibilities are necessary abilities for the company to survive in the electronics industry, keep customers and develop new sources of clients. We have continued to expand our market share through current customers and seek new ones to fill the production capacity of the new plants. Besides continuous acquisition of machine equipment for the new plants, Apex also makes persistent efforts in development of new products and technologies to bring up production to meet market demand as well as win opportunities to serve more customers and increase business. Apex has price advantages to compete in the market and continues to maintain close relationships with customers and develop new sources of clients.



Competitive Edges of PCB Manufacturers in Asia

In recent years, production costs have kept rising in China as a consequence of growing labor costs which are subject to the policy of the Chinese government. Plus the increasingly strict environmental protection policy, PCB businesses along the eastern coast have begun to relocate to the inland. Although production costs in the Chinese inland are relatively lower, the hardware facilities and logistic services are not as progressive as those in the eastern region. This has created certain pressure on our competitors. Being based in Thailand gives Apex certain relative advantages.



Logistic Advantages in Thailand

Today, the land transportation systems in Thailand have been greatly improved. Moving goods from Thailand to anywhere in China takes only 7-10 days. Delivery time is shortened, costs are reduced, and competitiveness is boosted. For raw materials, there are four suppliers able to provide board materials. Apex also purchases services needed for production from Thailand suppliers to cut down on waiting time.

Disadvantageous Factors

Awakening of Environmental Protection Awareness

Apex continues to improve production processes to reduce contamination, adopt environmental strategies and bring in contamination prevention equipment to meet environmental protection regulations, and also commission qualified environmental protection businesses to dispose of contaminated waste to reduce environmental contamination and environmental protection expenses.

Countermeasures

Apex continues to improve production processes to reduce contamination, adopt environmental strategies and bring in contamination prevention equipment to meet environmental protection regulations, and also commission qualified environmental protection businesses to dispose of contaminated waste to reduce environmental contamination and environmental protection expenses.



Fierce Market Competition

The PCB industry is the mother of the electronics industry. Price reduction pressure from customers never stops and this is the fate of this industry.

Countermeasures

Apex continues to improve sales tactics to maintain plant utilization rates at over 90% and is therefore able to offer competitive prices and ensure reasonable profit. Increased customer demand for multi-layer boards will boost our average sales price and profitability. Production of double-sided boards continues to decrease while that of multi-layer boards is on the rise. This enables us to cope with competition from other regions.

Impact on Profitability from Exchange Rate Fluctuations

Exchange gains/losses will have an impact on the final profit of the company. By adopting natural hedging strategies and cautious operation of certain derivatives, Apex has reduced the likely impact from exchange rate fluctuations by a large margin.

Countermeasures

The finance department tries to cover the purchase and related expenses with the sales income of the same currency to achieve the natural hedging effect. Over time and changes in the foreign exchange market, collect information on the exchange rate market and future trends, exchange in a timely manner to reduce exchange rate risk, and assess the status of foreign exchange contracts and options at any time.



International Raw Material Price Fluctuations

Apex takes active measures to negotiate prices with suppliers of important raw materials, such as CCL, Prepreg, copper foil, solutions and dry film.

Countermeasures

Apex keeps a close watch on price change tendencies and purchases needed quantities in advance when prices are at low points in order to maintain low material costs. We also keep good relationships with suppliers to ensure all material costs achieve our expectations. Apex also conducts cost control through quarterly plans to comply with budget arrangements.

Environment Protection

Apex products produce waste, such as greenhouse gases, wastewater and waste chemicals, which includes waste liquid and PCB substrate waste.

GHG Emission

Apex is aware of global concerns on climate change and Green House Gases (GHG) emissions and materiality for all organizational departments to take action on GHG emission reduction. Apex has established the first GHG inventory as initial review for materiality in this issue since 2016. Took 2019 as the base year, it is planned to reduce the unit GHG emission per million revenue by 5% within next five years (emission means GHG emission in the list of GHG scope 1 and scope 2). Apex operations mainly consumed electrical energy for manufacturing and power supply, working on energy conservation program led to gradual decrease in both energy consumption and GHG emission.

2021 annual energy saving implementation:

1. Adjustment of air conditioners helped Apex save CO2 emission of 452 tons; improvement of converters on equipment helped Apex save CO2 emission of 1,708 tons. Those effects of emission belonged to scope 2.
2. We executed trail run of phase 1 of solar electricity system, the plan was separated by 4 phases. We expected that Apex could reduce electricity purchased volume and carbon emission in next 3 years.

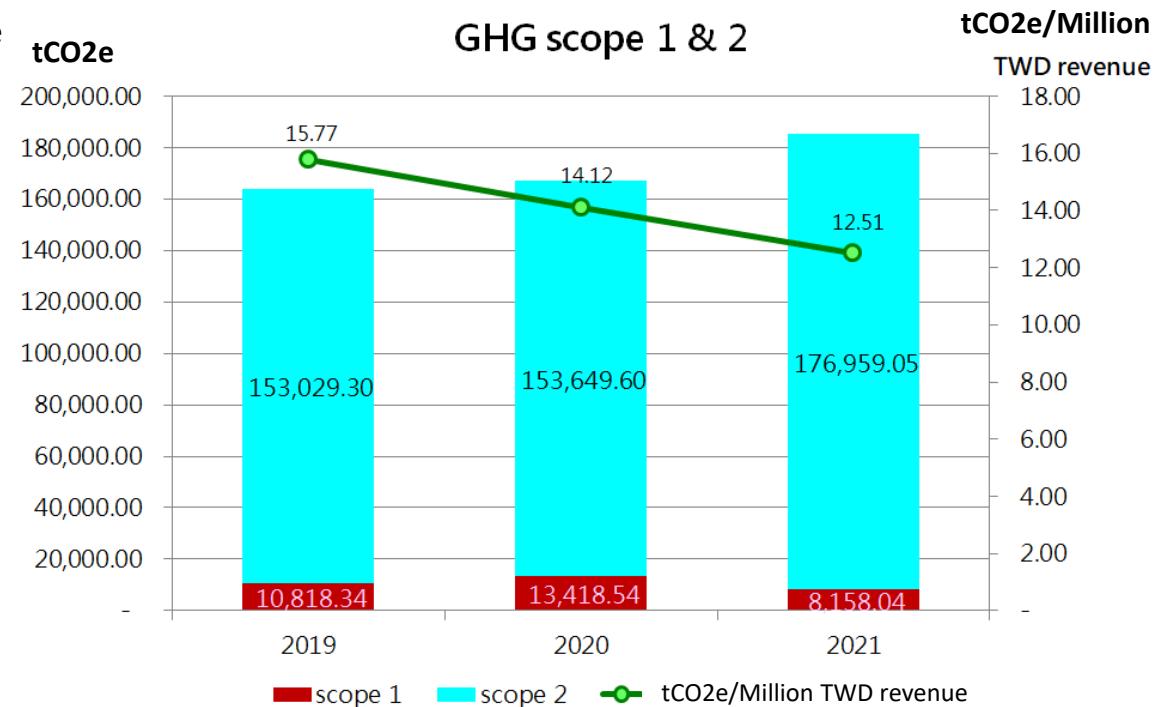
Apex has applied TGO-CFO (Thailand Green House Gases Management Organization - Carbon Footprint for Organization) scheme (as equivalent to ISO14064-1:2006) as reporting standard and formulated the GHG inventory list. This standard covers the report of Carbon dioxide (CO2), Methane (CH4), Nitrous oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorinated Compounds (PFCs), Sulphur Hexafluoride (SF6), Nitrogen Trifluoride (NF3) as applicable to consolidation of Apex’s operational control approaches. The information in this report is collected by region. If the group does not have a factory in the area but has a company established, only the electricity consumed by the local office will be collected. In calculation of carbon emission, Taiwan office adopts the 2020 Electricity Carbon Emission Factor published by the Bureau of Energy, Ministry of Economic Affairs of Taiwan; China office adopts the baseline emissions of the Southern Regional Grid Baseline Emission Factors 2019 published by the Ministry of Ecology and Environment of China; Thailand entities adopt the Emission Factor published by the TGO-CFO organization. The value we adopted for Global warming potential (GWP) was from IPCC AR4.

The following is the GHG inventory (report in tCO2e) of Apex during 2019 to 2021:

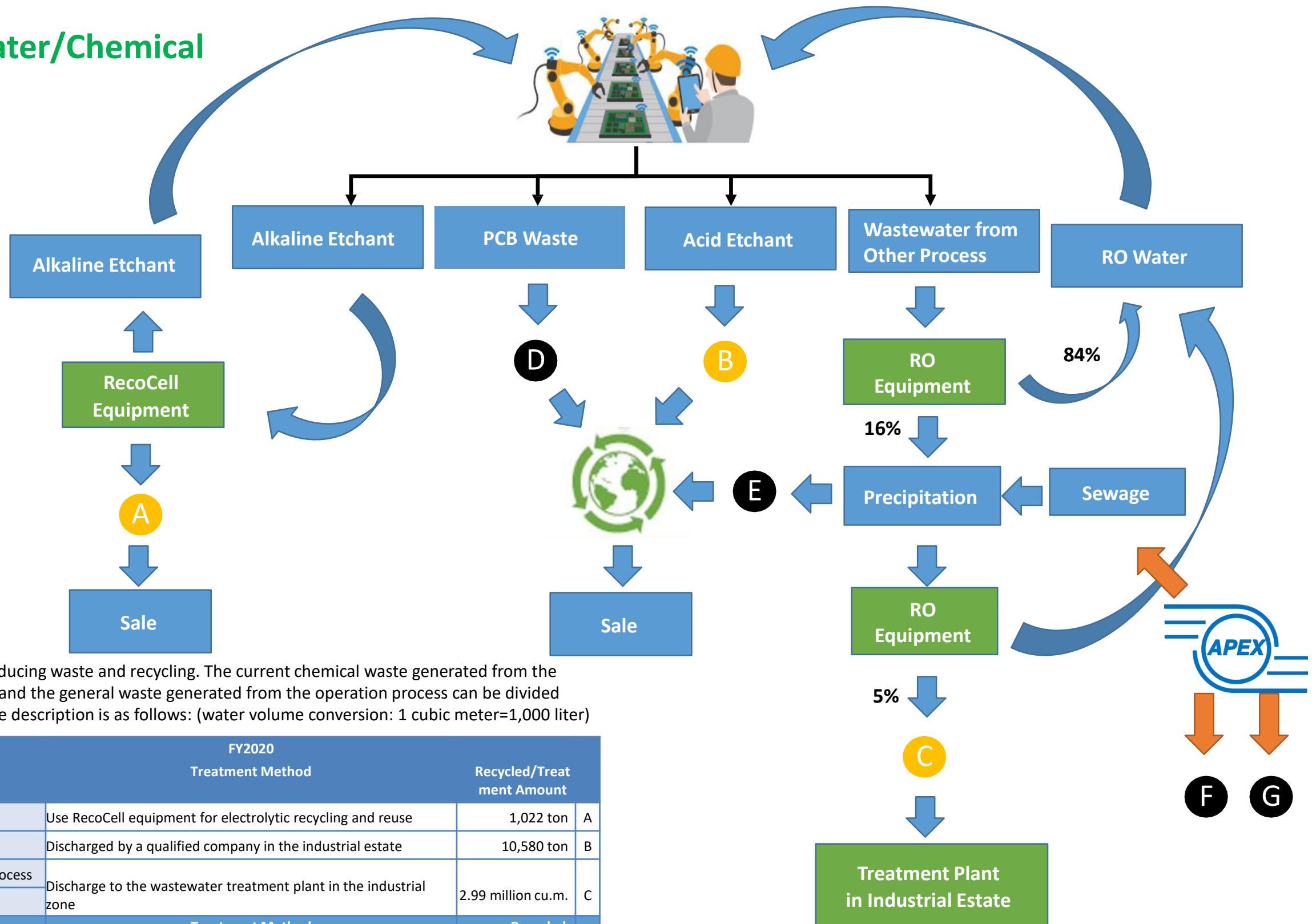
Unit: tCO2e

Category	2019		2020		2021	
	GHG	Scope ratio	GHG	Scope ratio	GHG	Scope ratio
Scope 1	10,818.34	6.34%	13,418.54	7.41%	8,158.04	3.95%
Scope 2	153,029.30	89.69%	153,649.60	84.89%	176,959.05	85.73%
Scope 3	6,781.14	3.97%	13,932.89	7.70%	21,288.93	10.32%
Biomass Fuel	-	-	5.89	0.00%	4.75	0.00%
Total	170,628.78	100.00%	181,006.92	100.00%	206,410.76	100.00%

When only takes GHG intensity of Scope 1 and Scope 2 into account, GHG emission of Apex demonstrated 15.77, 14.12 and 12.96 tCO2e/Million NT\$ revenue for the year 2019, 2020 and 2021.



Waste Water/Chemical



Apex has focused on reducing waste and recycling. The current chemical waste generated from the manufacturing process and the general waste generated from the operation process can be divided into liquid and solid. The description is as follows: (water volume conversion: 1 cubic meter=1,000 liter)

FY2020		
Liquid	Treatment Method	Recycled/Treatment Amount
Alkaline Etchant	Use RecoCell equipment for electrolytic recycling and reuse	1,022 ton A
Acid Etchant	Discharged by a qualified company in the industrial estate	10,580 ton B
Wastewater from Other Process	Discharge to the wastewater treatment plant in the industrial zone	2.99 million cu.m. C
Sewage		
Solid	Treatment Method	Recycled Amount
PCB Waste	Discharged by a qualified company in the industrial estate	155 ton D
Precipitation	Discharged by a qualified company in the industrial estate	5,224 ton E
Rubbish (note)	Garbage cleaning by government	5,316 ton F
Food Scraps (note)	Waste clearance agency	536 ton G

note: scale and quantity of APS were relatively small therefore it was not included in this table. We plans to complete this table in next year.

- Liquid Waste
- Solid Waste
- ➡ Treatment of Manufacturing Process Waste
- ➡ Treatment of Non-hazardous Waste

Apex obtains water totally from third party as source. They are from the local water company and the treatment plant in the industrial estate. After being used in each process, the alkaline etching solution, acid etching solution and other process wastewater are discharged to the temporary storage tank according to different processes.

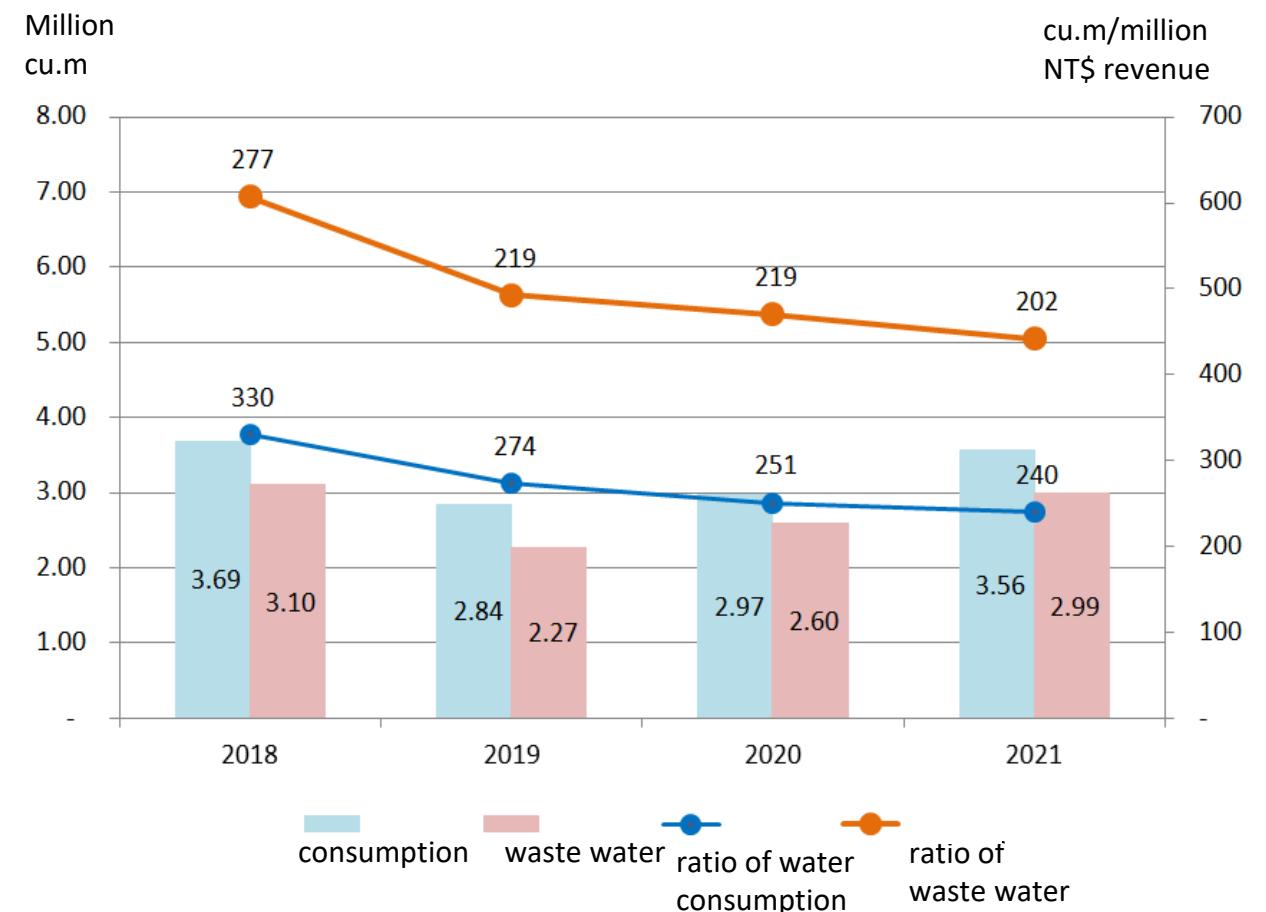
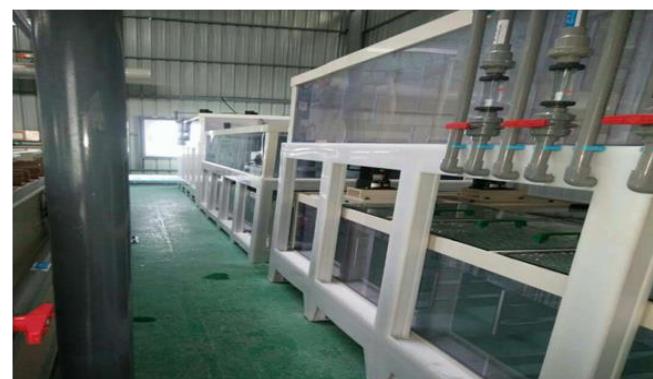
- After the alkaline etchant electrolyzed by the RecoCell equipment, the copper in the waste solution is recovered, and the treated alkaline etchant will return to the process for use.
- The acid etchant is processed by qualified company in the industrial estate. The company uses electrolysis to recover copper in the waste solution, and then sells the acid etchant to customers in need.
- After filtered by the RO system, about 84% of the wastewater from other processes can be recycled to the original process for reuse. The remaining 16% of the wastewater will be mixed with domestic sewage, and then precipitated and filtered out of the sludge. Finally, it enters the RO system for filtration. The wastewater discharged after filtration accounts for about 5% of the wastewater generated in the original process.

According to Sinsakorn Industrial Estate, Apex is obligated to control waste water in accordance to standard parameter prior discharge waste water to the wastewater treatment system of Industrial Estate. The standard parameters and the water samples sent by Apex to the Industrial Estate Administration Bureau are shown in the attached table.

In 2021, Apex obtained around 3.56 million cu.m of water; consumption of water was around 0.57 million cu.m and volume of waste water discharge was around 2.99 million cu.m. Apex Thai factory has projected to recycle water utilization rate before recycle: 84%; after recycle:95 %. We planned to set up target of water recycling gradually during 2022~2023.

Emission path was designed by following industrial zone’s instruction and regulation. We, of course, follow Thai industrial relative regulation and law to obtain and emit water and fit standards from government in order to protect environment. Risk of lack of water of production area was not high based on past experience. By considering impact of lack of water and shut-down impact to customers, Apex has prepared source of vendors providing water in order to reduce potential impact.

Parameter	Unit	Standard	Result	Detection Method
pH		5.5-9.0	Compliant	Electrometric Method
Total Dissolved Solids (TDS)	Mg/l	3,000	Compliant	Dried at 103-105°C
Suspended Solids (SS)	Mg/l	200	Compliant	Dried at 103-105°C
BOD	Mg/l	500	Compliant	5-Day BOD test, Azide Modification
COD	Mg/l	750	Compliant	Closed Reflux, Colorimetric Method
Copper (Cu)	Mg/l	2.0	Compliant	Nitric Acid Digestion and Direct Air Acetylene Flame : AAS
Oil & Grease	Mg/l	10	Compliant	Soxhlet Extraction Method



Social Investment

Apex will move forward from philanthropy to social investment approach as the management recognized the late King Rama 9's "Self-sufficiency philosophy" where education and essential infra-structure will enhance community to create social value by their own.

Care for Vulnerable Groups

1. Establish scholarships and awards, and present the ceremony to Apex's outstanding but economically disadvantaged employee's children.
2. Provide job opportunities for the blind, come to the factory to provide massage services and pay them remuneration.
3. Held a charity fair and set up an emergency fund for employees from the revenue of charity sale.
4. Donate food to vulnerable patients and prisoners.

Community Activities

1. Donate money to maintain local traditional culture and enhance regional identity.
2. Donate medical supplies to the community, vendors, motorbike taxi around the Thai factory.
3. Donate scholarships to neighboring primary schools.
4. Cooperate with local hospitals every season to hold employee blood donation activities.
5. Cooperate with university to provide internship for students.

Environmental Protection

1. Adopt the greening project around the factory.
2. Donate money to mangrove conservation organization.

In 2021, socially feedback activities that Apex employees joined were to support afforestation to industrial area, to provide resource to children welfare, mobile cabin hospital, local hospital, labor welfare institution, local government, Thai Red Cross Society, to promote regulation and policy of traffic safety etc. totally counted as 13 activities. Among those activities, Apex's donation amounted 1.46 million Baht. Besides, because Covid pandemic kept lasting in 2021, Apex also provided additional subsidy to all employees during August to December of 2021 which amounted 150 million Baht that Apex wished to support employees and their families to pass through this tough period together. In addition, Apex supported government policies to take care of highly potential diagnosed or diagnosed employees and their families, Apex set up quarantine and caring area which cost around 30 million Baht. Therefore, Apex proactively cares employees' physical and psychological needs that makes employees be able to feedback society gladly and creates positive cycle in return.



Happy and Safe Workplace

Apex's top management put Safety, Occupation & Health issues as top priority for all employees and third parties working on Apex's operations. The 7,300 employees in Apex are an important resource for successfully maintaining Apex operations. Thus, Apex's operational target aims at Zero accidents.

Apex's working rule and regulation follow the spirit of International Bill of Human Rights, The ILO Declaration on Fundamental Principles and Rights at Work and The Ten Principles of The UN Global Compact with the following major concerned items:

- A. Elected Welfare Committee;
- B. Caring for vulnerable group and hold occasional donations;
- C. Prohibiting the use of child labor;
- D. Human resource policies do not contain differential treatments based on gender, race, socioeconomic status, age, or marital and family status;
- E. Achieve equality and fairness in employment, hiring conditions, remuneration, benefits, training, evaluation, and promotion opportunities

Employees can offer suggestions and point out problems to the management team through channels as the CEO BOX and BROTHER BOX. In the year 2021, no significant⁷ employees' complaints occurred. The labor-management relationship in Apex is harmonious; no significant labor-management disputes have ever occurred. Apex has established a reasonable salary and remuneration policy and performance evaluation systems; achievement of corporate sustainability work targets is included in performance evaluation. Apex has set up Safety & Occupational committee which regularly inspects whether the work environments comply with safety regulations to minimize workplace safety hazards. Apex also regularly provides employees with physical checkups, hoping that they can be aware of their health condition and employees' physical and mental health can be improved. Apex's subsidiary APT has also passed the ISO 45001 certification because of the fine healthy and safe work environment it created.

During Covid pandemic, Apex in order to take care of health and safety of employees, we proactively contacted with hospitals to acquire vaccines as possible as we could and we provided vaccines to all employees without any charge. In the same time, we cooperated with government to set up well quarantine area and provide living and medical necessities to potentially risky or diagnosed employees. Besides, we also provide subsidy to support them pass through this tough period.



Labor-management Relationship

Apex is in the electronic industry, which is labor intensive. Thus labor-management relationship is very important and our stakeholders and operators in the supply chains shared the same expectation on this issue. To address and respond to this issue, Apex has declared and disclose information related to labors regulation and practice in line with international practice and the requirements of working conditions e.g. TLS, Responsible Business Alliance (RBA) aims to have zero complaints on labor issues. Apex has fair and equal treatment to all employees and the application for working overtime is on voluntary basis. The Human Resource Department assists the head of each department to set up annual training programs in accordance with each department's work targets and function requirements. It has also established the promotion evaluation standard for each level to ensure the company can achieve the goal of cultivating talents, retaining talents and using talents.

Employees' Welfare System

1. Multiple shuttle bus routes providing transportation for employees to go to work and go home
2. Employee uniforms
3. Employee cafeterias providing three meals a day
4. Full attendance rewards
5. Sickness and funeral subsidies
6. Employee loans
7. Annual employee athletic events and parties
8. Senior employee citations and awards
9. Special treatment to pregnant employees



⁷ Significant refers to litigation or letter from the competent authority

Continuing Education and Training

Good employee continuing education programs can not only enhance employees' work capacity but also help the company attract talents. From the first day employees entering the company, Apex provides complete training courses and continuing education programs to cultivate their sense of belonging and teamwork culture. Apex also encourages employees to participate in special project planning to stimulate their self-expectations and thus enhance the company's competitiveness.

Apex employee training achievements in 2021 are as follows :

Project		Hours	Cost of Training	Number of Trainees
New Employee Training	Male	52,422	635 thousand Baht	19,416
	Female	74,185		27,380
Professional Training	Male	30,970	49 thousand Baht	8,671
	Female	37,072		11,134
Director and Manager Training	Male	96	49 thousand Baht	11
	Female	0		0
Total	Male	83,488	684 thousand Baht	28,098
	Female	113,161		38,514

- New employee training is internal training, and the weekly accomplishment rates reached over 95%.
- Professional Training including internal training and external training. According to type of program, it could be divided into Law/Regulation, Quality System, Quality and Efficiency, Attitude Adjustment, Leadership, ESG and courses regulated by competent authority. The achievement rate is above 95%.
- The training of directors and managers shall be conducted in accordance with the provisions of the Taiwan Decree, with a completion rate of 100%.
- Retirement system and implementation. The employee retirement system is conducted in accordance with local regulations.
 - Thailand area: The Company provides defined benefit retirement welfare to employees by following Section 118, Chapter 11 of the Thai Labor Protection Act. Employees who are qualified for retirement could get reasonable retirement fund corresponding to service years and salary level. The Company has booked related liability according to actuarial report issued by Thai certificated actuary.
 - Taiwan area: Employees in Taiwan all adapt to Taiwan Labor Pension Act. The Company allocates 6% of each employee's salary to personal retirement fund under custody of Taiwan Bureau of Labor Insurance.
 - China area: follow basic old-age insurance regulations to pay relative expense.

- Protective measures for employees' rights and interests: Harmonious and pleasant workplace ambiance is an important condition for effective teamwork. To ensure smooth exchanges of ideas between the management team and employees and achievement of consensus, Apex has always regarded reasonable pay scales, decent work environments and effective communication channels as priority tasks. Apex Group adopts the following measures to communicate with employees:
 - CEO BOX and BROTHER BOX: Employees can make their suggestions and problems known to the management team by using the CEO BOX and the BROTHER BOX.
 - Weekly meetings: Apex round up all the employees once a week to convey company policies to employees to make sure consensus is achieved and all employees move toward the same goal.
 - Regular convention of inter-division meetings: Apex's Employee Welfare Committee helps to protect employees' rights and interests to ensure the win-win target of mutual trust and mutual benefit between labor and management can be achieved.

The labor-management relations in Apex are harmonious. No significant labor-management dispute has ever happened. Apex highly values employees' welfare, pays attention to changes in the subjective and objective of environments and establishes various welfare measures accordingly to satisfy the needs of employees. While we have no Trade Union in Apex operations, Apex established 2 main working committees as joined management-worker groups namely ISO 45001 (former OHSAS 18001) Committee and Safety & Occupational committee (as per Thai regulation) which total a number of 371 employees joined these committees to represent 4.3% of total employees. The ISO 45001 committee and Safety & Occupational committee are also responsible for establishing, implementing and maintain all Occupational Health and Safety regulation and practices related to Apex operations.

Safety & Occupational committee:

	APT	APS
Assistant Manager Level or above	76	6
Others	85	8
Total	161	14

ISO 45001 committee:

	APT	APS
Assistant Manager Level or above	186	-
Others	10	-
Total	196	-

Protective Measures for Work Environments and Employees' Safety

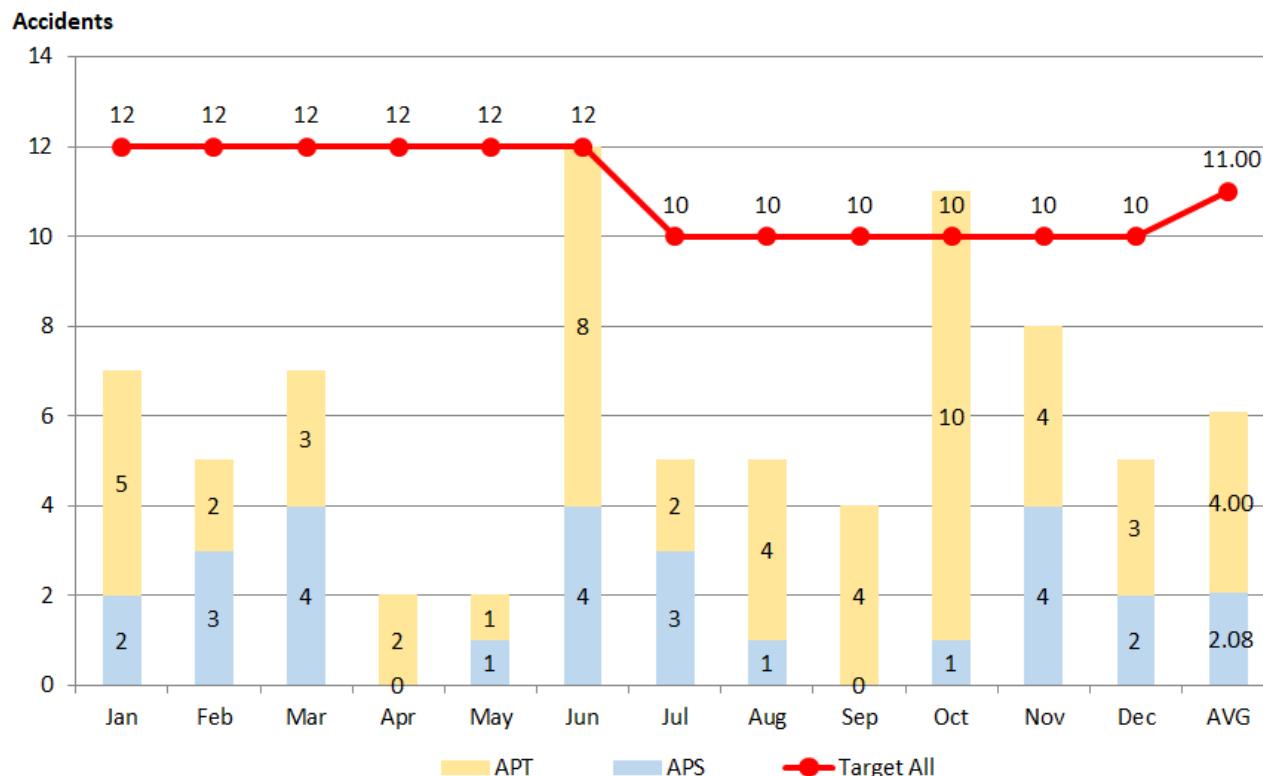
Apex has an OHSAS 18001 committee and a safety and professional committee which regularly inspects whether the work environments comply with safety regulations to minimize workplace safety hazards. In accordance with the ISO 45001 standard, the hazard identification is carried out according to the severity, frequency and scope of influence, which identified all hazard sources and determined all classification. After inspection, if the operation process is likely to cause serious harm, Apex will provide work instructions to employees and carry out continuous daily advocacy, in order to reduce the probability of occupational accident. Apex also regularly provides employees with physical checkups, hoping that they can be aware of their health condition and employees' physical and mental health can be improved.

Apex's occupational accidents mainly include chemical splashing, cutting injuries caused by board edges or operating equipment, as well as crushing and pinching injuries. The occurrences of this year did not fall into the scope of serious injuries identified by the company.

All persons, including employees or external visitors, are controlled of in-out the companies. Employees need to in and out with employee ID card, visitors need to registered by gate guards or registered department with HR and Apex has right to pass or reject depends on pandemic situation. There were no work injuries, accidents or deaths in the company's suppliers this year.

The 2020 and 2019 safety and health indicator statistics in the table on the right exclude all non-employees whose jobs and/or workplaces are under the control of Apex, such as plant-based suppliers or general equipment repairers. They are mainly under the jurisdiction of the hired company, so relevant statistical data cannot be clearly obtained.

Number of Accident



The Statistical Indicators of Safety and Health in FY2020 and FY2021

Statistical Indicators	Gender	200,000 hours		Unit
		FY2020	FY2021	
Working Injury	Male	66	41	case
	Female	34	32	case
	Sum	100	73	case
Occupational Hazard	Male	0	0	case
	Female	0	0	case
Total Working Injury Leave	Male	283	451	day
	Female	226	295	day
Total Absence Days	Male	13,235	27,820	day
	Female	15,935	36,927	day
Total Working Hours	Male	6,858,657	6,407,868	hour
	Female	9,169,497	8,490,752	hour
Total Working Days	Male	623,514	582,533	man day
	Female	833,591	771,887	man day
Death Toll	Male	0	0	person
	Female	0	0	person

Statistical Indicators	Gender	200,000 hours	
		FY2020	FY2021
Injury Rate	Male	1.92	1.28
	Female	0.70	0.68
Occupational Disease Rate	Male	-	-
	Female	-	-
Lost Day Rate	Male	66.02	112.61
	Female	39.44	55.59
Absentee Rate	Male	1.54%	3.47%
	Female	1.39%	3.48%

Glossary and Calculation Formula

- Working Injury: Injured by working, including car accidents.
- Occupational hazard: The worker has suffered from diseases by the working.
- Total Working Injury leave: The worker take the sick leave because injured by working.
- Total Absence Days: Total Absence Days is the sum of sick leave, working injury leave, personal leave, excluding annual leave, official leave, marriage leave, funeral leave, maternity leave and paternity leave.
- Total Working Hours: Sum of working hours in each year. For daily workers is the total working hours per month, for monthly workers is the total working days*8hrs* the number of monthly workers in-service.
- Total Working Man Days: total working hours/ 11 hours
- Injury Rate: total work injury (cases) / total working hours *200,000 hours
- Occupational Disease Rate: total number of occupational diseases (cases) / total working hours *200,000 hours
- Lost Day Rate: Working Injury leave days * 8 hours / total working hours *200,000 hours
- Absentee Rate: total absence days * 8 hours / total hours worked
- The coefficient of 200,000 is calculated from each 100 employees works 50 weeks a year and 40 hours a week.
- Data Source: Apex Administration Department

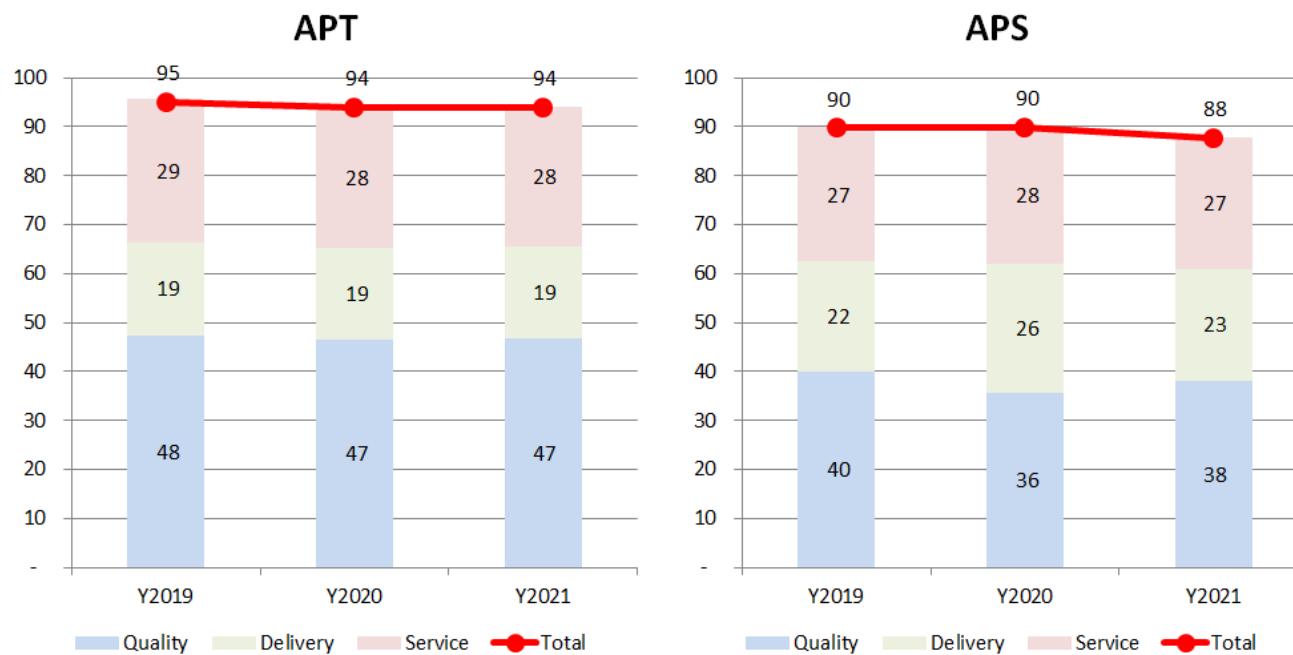
Customer Service

Apex valued customers' needs and expectation and continue to improve their satisfaction. Through customer's feedback, Apex improves internal process and has passed ISO 9001. All of these effort keeps Apex in the top supplier list - in view of customer, relationship management and business growth.

Apex has engaged with customers through the day to day operations as well as implemented customer satisfaction survey on a 6-month basis. This survey, which covers top 10 customers of Apex's PCB products, considers feedback in 3 dimensions including quality, fast delivery of products as well as services. The results of surveys were then analyzed, and reported directly to top management for Apex responsiveness to customer inquiry, and established the next year targets and improved internal and external processes.

Apex has set up a service window to handle all kinds of customer satisfaction at the earliest time and also provides customers with complete product information.

Apex's product labeling is conducted in accordance with related regulations and international standards i.e., RoHS and HF. No significant illegal incidents occurred in 2021.



Note:
 APT's score allocation is: quality 50%, satisfaction 30%, delivery 20%.
 APS's score allocation is:
 2019 H1: quality 50%, satisfaction 30%, delivery 20%.
 2019 H2~2021H1: quality 40%, satisfaction 30%, delivery 30%.
 2021 H2: quality 50%, satisfaction 30%, delivery 20%.

Supplier Co-operation

Apex has "Ethical Corporate Management Best Practice Principles / and its Guidelines for Conduct, which stipulates the types of unethical behaviors and improper interests and reporting channels. All of Apex's employees are required to abide by business ethics and responsibilities to the public and stakeholders. At the same time, the members of the Board of Directors and management all perform their duties in good faith and abide by the codes of conduct of directors and managers. They exercise strict self-discipline with caution when performing their duties.

Apex's suppliers are mainly suppliers of upstream of the PCB industry providing raw materials such as copper foil, substrates and chemicals, which mainly located in Taiwan and China. Apex's procurement department annually conducts to main suppliers of evaluation and audits regularly and insists that all products must comply with the RBA or ISO 14001 standards so that both sides can jointly fulfill the social responsibility of achieving quality, environmental protection and actions to eliminate any type of forced or compulsory labor etc.

Top 10 of Apex's suppliers have already signed the Commitment Letter to comply with the company's quality policy and integrity policy.



GRI Standard Disclosures

GRI Standard	Disclosure Item	Page Number /Link	Note
1. Organizational Profile			
102-1	Name of the organization	Page 1	
102-2	Activities, brands, products, and services	Page 5	
102-3	Location of headquarters	Page 7	
102-4	Location of operations	Page 7	
102-5	Ownership and legal form	Page 7	
102-6	Markets served	Page 5	
102-7	Scale of the organization	Page 5	
102-8	Information on employees and other workers	Page 8	
102-9	Supply chain	Page 6	No major changes compared to the previous year
102-10	Significant changes to the organization and its supply chain	Page 5,6	No significant change
102-11	Precautionary principle or approach	Page 11, 15	
102-12	External initiatives	No Disclosure	No participation in external initiatives
102-13	Membership of associations	No Disclosure	Participate only in the Taiwan Circuit Board Association (TPCA)
2. Strategy			
102-14	Statement from senior decision-maker	Page 3-4	
3. Ethics and integrity			
102-16	Values, principles, standards, and norms of behavior	Page 12-13	
4. Governance			
102-18	Governance structure	Page 12	

GRI Standard	Disclosure Item	Page Number /Link	Note
5. Stakeholder Engagement			
102-40	List of stakeholder groups	Page 8-9	
102-41	Collective bargaining agreements	Page 13, 19	No labor union and relative group negotiation or contracts
102-42	Identifying and selecting stakeholders	Page 8-9	
102-43	Approach to stakeholder engagement	Page 8-9	
102-44	Key topics and concerns raised	Page 8-9	
6. Reporting Practice			
102-45	Entities included in the consolidated financial statements	Page 2, 7	
102-46	Defining report content and topic Boundaries	Page 1-2	
102-47	List of material topics	Page 9-11	
102-48	Restatements of information	No Disclosure	No restatement issues
102-49	Changes in reporting	No Disclosure	No changes in reporting issues
102-50	Reporting period	Page 1	
102-51	Date of most recent report	Page 1	
102-52	Reporting cycle	Page 1	
102-53	Contact point for questions regarding the report	Page 1	
102-54	Claims of reporting in accordance with the GRI Standards	Page 1	
102-55	GRI content index	Page 24-25	
102-56	External assurance	Page 26	

GRI Standard	Disclosure Item Material Topic	Page Number /Link	Note
1. Economic Topics			
1.1 Corporate Governance			
103-1	Explanation of the material topic and its boundary	Page 9-11	
103-2	The management approach and its components	Page 9-11	
103-3	Evaluation of the management approach	Page 9-11	
201-1	Direct economic value generated and distributed	Page 5	
201-2	Financial implications and other risks and opportunities due to climate change	Page 11, 15	
201-3	Defined benefit plan obligations and other retirement plans	No Disclosure	Please refer to the Apex Consolidated report footnote 6(15) "Employee benefit" in Chapter IX, Appendix of Apex 2021 Annual Report for details.
201-4	Financial assistance received from government	No Disclosure	Please refer to the Apex Consolidated report footnote 6(16) "Income Tax" in Chapter IX Appendix of Apex 2021 Annual Report for details.
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Page 10	

GRI Standard	Disclosure Item Material Topic	Page Number /Link	Note
2. Environmental Topics			
2.1 Water and Effluents			
303-1	Interactions with water as a shared resource	Page 17-18	
303-2	Management of water discharge-related impacts	Page 17-18	
303-3	Water withdrawal	Page 17-18	
303-4	Water discharge	Page 17-18	
303-5	Water consumption	Page 17-18	
2.2 Emissions			
305-1	Direct (Scope 1) GHG emissions	Page 16	
305-2	Energy indirect (Scope 2) GHG emissions	Page 16	
305-3	Other indirect (Scope 3) GHG emissions	Page 16	
305-4	GHG emissions intensity	Page 16	
305-5	Reduction of GHG emissions	Page 16	
2.3 Waste			
306-1	Water discharge by quality and destination	Page 17-18	
306-2	Waste by type and disposal method	Page 17-18	
3. Social Topics			
3.1 Occupational Health and Safety			
403-1	Occupational health and safety management system	Page 21-22	
403-2	Hazard identification, risk assessment, and incident investigation	Page 21-22	
403-3	Occupational health services	Page 21-22	
403-4	Worker participation, consultation, and communication on occupational health and safety	Page 21-22	
403-5	Worker training on occupational health and safety	Page 21-22	
403-6	Promotion of worker health	Page 21-22	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Page 21-22	
403-9	Work-related injuries	Page 22	

SASB Standards

Accounting Metric		
TC-HW-230a.1	Description of approach to identifying and addressing data security risks in products	Apex produces PCB as our products, PCB is one of components of electronic products therefore there is no yet risk related to information of evaluation of design of electronic product, pattern of use and production process of PCB.
TC-HW-330a.1	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	Refer to page 8 of description of number of employee
TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	At present, customers take RoHS as management standard for controlled and prohibited materials. Percentage of revenues which meet this standard was 100%.
TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	Our product does not fit specification of EPEAT.
TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR@ criteria	Our product does not fit specification of ENERGY STAR@ criteria.
TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	Our business model is B2B, so product-waste recycle policy is not necessary.
TC-HW-430a.1	Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP) or equivalent, by (a) all facilities and (b) high-risk facilities	We have plan of sustainable audit of suppliers in order to upgrade our social responsibility in near future.
TC-HW-430a.2	Tier 1 suppliers' (1) non-conformance rate with the RBA Validated Audit Process (VAP) or equivalent, and (2) associated corrective action rate for (a) priority non-conformances and (b) other non-conformances	We have plan of sustainable audit of suppliers in order to upgrade our social responsibility in near future.
TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	We have policy and procedures of management of conflict minerals and hazardous materials to eliminate relative hazardous risk from purchase sources. At present, we use questionnaire to suppliers for confirmation.
Activity Metric		
TC-HW-000.A	Number of units produced by product category	In 2021, we produce single-side PCB 1.18 million sqm, double-side PCB 3.42 million sqm and multi-layer PCB 4.07 million sqm. (please refer to 2021 Annual Report, Chapter 5 Operating Situation, Paragraph 2 Market, production and Sales).
TC-HW-000.B	Area of manufacturing facilities	Facilities of APT in Samutsakhon industrial zone is around 35 thousand sqm, in Sinsakhon industrila zone is around 105 thousand sqm. Facility of APS, single-side PCB, is around 8.5 thousand sqm.
TC-HW-000.C	Percentage of production from owned facilities	We produce PCB by all process from owned facilities, there is no outsourced capacity. Self-own productivity is 100%.

AA1000 Verification Statement



ASSURANCE STATEMENT

SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE APEX INTERNATIONAL CO., LTD.'S ESG REPORT FOR 2021

NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS Taiwan Ltd. (hereinafter referred to as SGS) was commissioned by Apex International Co., Ltd. (hereinafter referred to as Apex) to conduct an independent assurance of the ESG Report for 2021 (hereinafter referred to as the Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented during verification (2022/04/23~2022/06/14). SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all Apex's Stakeholders.

RESPONSIBILITIES

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

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all Apex's stakeholders.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

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

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

Assurance Standard Options and Level of Assurance	
A.	SGS ESG & SRA Assurance Protocols (based on GRI Principles and guidance in AA1000)
B.	AA1000ASv3 Type 2 Moderate Level (AA1000AP Evaluation plus evaluation of Specified Performance Information)

SCOPE OF ASSURANCE AND REPORTING CRITERIA

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

Reporting Criteria Options

1.	GRI Standards (Core)
2.	AA1000 Accountability Principles (2018)
3.	ISO14064-1

- evaluation of content veracity of the sustainability performance information based on the materiality determination at a moderate level of scrutiny for Apex and moderate level of scrutiny for subsidiaries, joint ventures, and applicable aspect boundaries outside of the organization covered by this report;
- AA1000 Assurance Standard v3 Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018); and
- evaluation of the report against the requirements of Global Reporting Initiative Sustainability Reporting Standards (100, 200, 300 and 400 series) claimed in the GRI content index as material and in accordance with.

ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, interviews with relevant employees and superintendents in Taiwan and Thailand; documentation and record review and validation with external bodies and/or stakeholders where relevant. In response to COVID-19 pandemic situation the assurance process was conducted via Teams.

LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts, Task Force on Climate-related Financial Disclosures (TCFD) and SASB related disclosures has not been checked back to source as part of this assurance process.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from Apex, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with ISO 26000, ISO 20121, ISO 50001, SA8000, RBA, QMS, EMS, SMS, GPMS, CFP, WFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

VERIFICATION/ ASSURANCE OPINION

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

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

AA1000 ACCOUNTABILITY PRINCIPLES (2018) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

Inclusivity

Apex has demonstrated commitment to stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, investors, suppliers, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns. For future reporting, Apex may proactively consider having more direct two-ways involvement of stakeholders during future engagement.

Materiality

Apex has established processes for determining issues that are material to the business. Formal review has identified stakeholders and those issues that are material to each group and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders.

Responsiveness

The report includes coverage given to stakeholder engagement and channels for stakeholder feedback.

Impact

Apex has demonstrated a process on identify and fairly represented impacts that encompass a range of environmental, social and governance topics. Measurement and evaluation of its impacts related to material topic were in place at target setting with combination of qualitative and quantitative measurements.

GLOBAL REPORTING INITIATIVE REPORTING STANDARDS CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

The report is adequately in line with the GRI Standards in accordance with Core Option. The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics and boundaries, and stakeholder engagement, GRI 102-40 to GRI 102-47, are correctly located in content index and report. For future reporting, it is recommended to have more descriptions of material topic identification process and more discussion and disclosure in management approach. For material topics such as governance, supply chain management, or water resource, comprehensive strategy and detailed management process are expected.

GHG EMISSION CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

SGS has been contracted by Apex for the verification of direct and energy indirect Greenhouse Gas emissions arising from PCB manufacturing activities with reference to the requirements of ISO14064-1:2006. The disclosing emissions of the direct and energy indirect Greenhouse Gas emissions of 185,117.0889 metric tonnes of CO2 equivalent and 4.7451 metric tonnes of direct CO2 emissions from the combustion of biomass within Apex's ESG Report of 2021 were assessed for its accuracy and completeness a moderate level of scrutiny as part of the SGS ESG & Sustainability Report Assurance process. Information has been gathered, recorded, compiled, analyzed, and disclosed in a way that both allows external examination of the quality and materiality of the information, and for intended stakeholders to have a general understanding of the GHG performances related to Apex's business activities.

Signed:

For and on behalf of SGS Taiwan Ltd.



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



AA1000
Licensed Report
000-8/V3-5B015