# CSR Report 2018

Corporate Social Responsibility

Nan Ya Printed Circuit Board Corporation Corporate Social Responsibilities Report





# Nan Ya Printed Circuit Board Corporation (NYPCB)

2018 Corporate Social Responsibilities Report







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#### Overview

This report is the seventh corporate social responsibility report that Nan Ya Printed Circuit Board Corporation (hereinafter referred to as the Company or NYPCB) has published. The report was published in June 2019, which includes the company's profile, governance, environmental sustainable development, employee wellness programs, and charity work that took place at or involved NYPCB Plant No.1, 2, 5, and 6 (Address: No.338, Sec. 1, Nankan Rd., Luchu Distict, Taoyuan City) from January 1st 2018 to December 31st 2018. Therefore, the previous corporate social responsibility report was published in June 2018.

All data and statistics divulged in this report have come from the statistical analysis and investigation of the Nan Ya Printed Circuit Board Corporation. Financial data were specifically countersigned by an accountant and transmitted in accordance with relevant laws. Some data have been taken from government websites and stated in a more colloquial way for description purposes. Exceptions are otherwise noted throughout the report.

We will publish the CSR report regularly and the next report will be published in June 2020.

#### Report Guideline

The report content structure adopts the Global Reporting Initiative (GRI Standards 2016) sustainability reporting guidelines and is written pursuant to the guidelines and framework outlined in the "Core Option."

In order to reinforce the performance comparability and report sustainability, all the information published in this report are checked by the well-established British Standard Institution (BSI), and conform to AA1000 and GRI Standards. The "GRI Standards Check Independent Opinion Statement" of British Standard Institution (BSI) can be found as an attachment. The statement presented its findings with the International General Index, and any estimation will be mentioned in the respective chapters.

- Global Reporting Initiative ,GRI Standards 2016
- The materiality, inclusivity, responsiveness, and impact of AA1000 Accountability Principles (2008) and the 2018 Addendum

#### CSR Organization chart

#### President

#### Management Representative

Coordinate auditing and supervise department performance

# Executive Representatives - Director of Human Resource Department

Assist management representatives to carry out CSR on labor, human rights, and social responsibility aspects, etc.

Audit and supervise department performance

# Executive Representatives - Director of Environment, Hygiene, and Safety Department

Assist management representatives to set up CSR environmental performance indicators

Audit and supervise department performance

#### Department in charge :

Human Resource Department

Responsibilities - GRI Specific Topic

of Labor/ Human Rights/Society

#### Department in charge :

IPR Department

Responsibilities - GRI Specific

Topic of Anti-rivalry actions

#### Department in charae :

Management Analysis Department
Responsibilities - GRI Specific Topic
of Company Profile/Governance/
Commitments/Stakeholders'
Communication Channels

#### Department in charge :

Investor Relations Department
Responsibilities - GRI Specific Topic
of Maintain external communication
Release and maintain corporate
information. Update Company's
website

#### Department in charge :

Sales Department

Responsibilities - GRI Specific Topic
of Marketing and Communication/
Customer Privacy/Customer
Service and Satisfaction

# Department in charge: Accounting Department

Responsibilities GRI Specific Topic of Financial

Performance

#### Department in charge:

Information Technology Department Responsibilities - GRI Specific Topic of Information Security of Undividuals

#### Department in charge:

Research and Development
Department
Responsibilities - GRI Specific Topic
of Product Research and
Development

#### Department in charge :

Quality Assurance Department

Responsibilities - GRI Specific Topic
of Customer Health and Safety/
Product and Service Labeling

#### Department in charge:

Environment, Hygiene, and Safety Department Responsibilities -

Environmental GRI Specific Topicc



#### Department in charge: Material Procurement and Management Department Responsibilities - GRI Specific Tor

Responsibilities - GRI Specific Topic of Supplier Management/Raw Material Management/Package Recycling/Green Procurement

# Department in charge :

Administration Department

Responsibilities - GRI Specific Topic
of Factory Environment Management/
Greening/Biodiversity/Eco Protection/
Neighborly Relations/Communication/

#### Methods

To integrate and promote corporate social responsibility, NYPCB has established a "corporate social responsibility team," (hereinafter referred to as the CSR team) led by General Manager Tang, Ann-De in 2012. General Manager Tang Ann-De and Deputy General Manager Lyu, Lian-ruei, who is the Company's Management Representative, have been responsible for the strategic planning, monitoring, and evaluation of the Company's performance in terms of corporate social responsibility. The organizational chart is presented as above.

#### **Contact Information**

Please contact us through the following channels if you have any suggestions or questions. Investor Relations Unit of the President's Office, Nan Ya Printed Circuit Board Corporation

Tel: +886-3-3223751 ext.1014 E-Mail: jameshan@nanyapcb.com.tw Website: http://www.nanyapcb.com.tw



The Corporate Social Responsibility (CSR) policy of Nan Ya Printed Circuit Board includes the areas of corporate governance, environmental protection, and social welfare. We have continuously strived to meet the responsibilities of our long-term commitments to our shareholders, customers, employees, suppliers, nearby communities, government units, media organizations, and non-profit organizations. As a subsidiary of the Formosa Plastics Group, NYPCB has followed the Group's CSR policies and focused on five different strategies, which are corporate governance, environmental protection, procurement policy, labor and ethics, and social welfare.

#### 1. Corporate Governance

- Abide by all laws and business ethics, and establish a comprehensive corporate system to maintain positive corporate governance.
- Adopt international standards and practices, continuously improve and enhance competitiveness to benefit our shareholders.
- Steadily supply high quality products at a low price and help our downstream customers to develop new products and increase their competitiveness.
- Provide employees with a safe and healthy working environment, quality training programs and systems, and clear targets that they can follow so they can reach their full potential.

#### 2. Environmental Protection

- · Continuously improve production processes to reduce energy consumption and carbon emissions.
- Introduce lead-free technology and comply with the RoHS Derivative (Restriction of Hazardous Substances Derivative) of EU, pertaining electrical and electronic products.
- Financial impact and risk opportunity of climate change to organization

  The climate change would much more likely cause the extreme climate, including the average atmosphere temperature rising and drought time extension, to cause the risk of electricity and water supply shortage, therefore, the Company continuously promotes the energy saving improvement to reduce the resource and energy consumption, to improve the industrial competitiveness while enhancing the friendly environment, and achieve the multiple benefits.

#### 3. Procurement Policies

- Procure green materials and reduce resources consumption in order to increase rate of recycling and reusing of resources.
- Enforce strict inspection on raw material supplies to prevent conflict minerals from entering production processes.

#### 4. Labor and Ethics

- Provide employees with a safe and healthy working environment, and have high quality training programs and systems, and clear targets that they can follow so they can reach their full potential.
- Abide by laws and business ethics, establish and improve the enterprise system to maintain a sound corporate governance system.
- Strive to attain perfection and do good deeds. Make continuously improvements, enhance competitiveness and give back to the society.

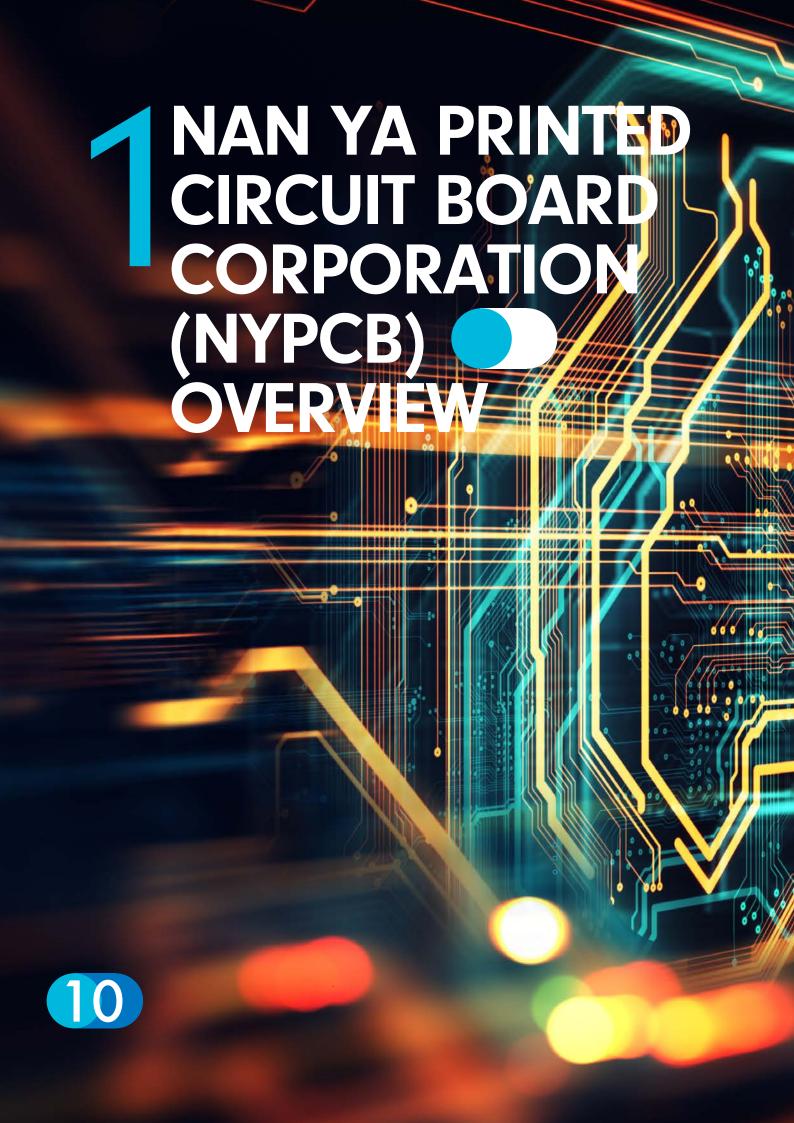
#### 5. Social Welfare

- Address various social issues, and participate in appropriate community and social welfare activities to foster a kind and compassionate society.
- Use our corporate spirit of striving for perfection to create efficiency and success in our social welfare endeavors.

To honor our commitments in corporate social responsibilities, Nan Ya Printed Circuit Board upholds a principle of giving back what we gain from society. The Company strongly believes that such responsibilities are part of our valuable assets, an everlasting brand, and a cultural beacon. The Company pledges to shoulder more social responsibilities, take part in more social welfare activities, help minority and disadvantaged groups, promote environmental protection and strive to achieve zero pollution, zero carbon emission, and zero accident target as well as establish a diverse and convenient communication with stakeholders to create the greatest benefit to the Company's investors, employees, society, and country.

Nan Ya Printed Circuit Board Corporation (NYPCB)

President Tang Ann-De in 2018



# **1-1 Company Profile**

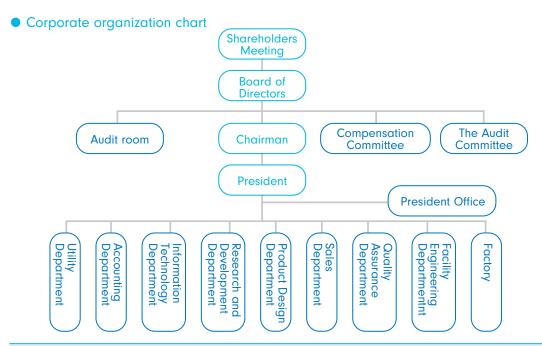
Nan Ya Printed Circuit Board Corporation began operation in 1985. It was a printed circuit board division of Nan Ya Plastics Corporation, belonging to the Formosa Plastics Group, before being separated from the Nan Ya Plastics Corporation. Nan Ya Printed Circuit Board Corporation became an independent company in 1997. The firm has specialized in researching, developing, manufacturing, and selling printed circuit boards and IC substrates (Wire Bond Substrates and Flip Chip Substrates).

In its business operation, NYPCB has focused on improving manufacturing processes and conducting research and development in order to meet customers' needs for high quality products. The Company has gone through a vertical integration in order to reduce production costs and enhance productivity. It also firmly believes that a company cannot meaningfully exist without generating reasonable profits and contributing to the society. Therefore, NYPCB has contributed to social welfare activities for minority and

disadvantaged groups while continuously expanding its scale to enhance quality and profits, and upholding corporate responsibilities.

NYPCB has built a factory in Taiwan. The Jing Hsin factory is located in the Luchu Township of Taoyuan County . As of December 31st 2018, the company had a total of 5,629 employees, of which included 300 managers and executives, 705 supervisors, 3,472 general staff, 162 service staff, and 990 foreign workers. Employees in management positions totaled 1,005, which made up 17.9% of all employees.

Nan Ya Printed Circuit Board Corporation is a member of the Formosa Plastics Group. It has stringently upheld its founder's ideas and protected shareholders' interests. The Company believes a stringent and effective governance mechanism ensures that its operations are lawful, financially transparent, and efficient. To achieve this mechanism, NYPCB's organization has been designed as follows:

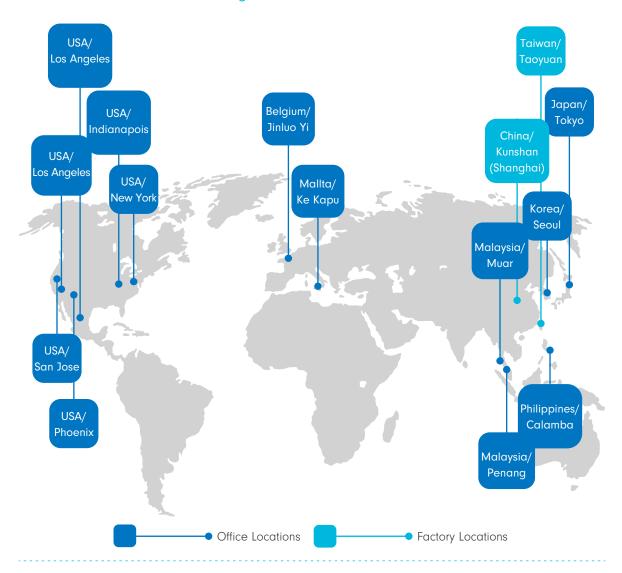


Name	Nan Ya Printed Circuit Board Corporation
Establishment	October 28,1997
Address	Headquarters: 3F., No.201-36, Dunhua N. Rd., Songshan Dist., Taipei City Tel:02-2712-2211 Jing Hsin factory: No.338, Sec. 1, Nankan Rd., Luchu Township, Taoyuan County Tel: 03-322-3751
Paid-in capital	NTD 6.462 billion
Number of common shares in the market	646,165,487 Shares
Employees	5,629 employees (as of December 31, 2018)
Products	Manufacturing and sales of Conventional PCB, High Density Interconnection (HDI), Rigid-Flex, ABF (Ajinomoto Build-up Film) Substrate, and PP (Prepreg) Substrate
Production bases in Taiwan	Jin Hsin factory

#### **1-2 Market Position**

Regarding the IC package substrate market, since the semiconductor industry is developing toward the multifunctional, high-density and small-size chip trend, this kind of product is in a higher technology field with fewer competing firms despite the fact that competitors continue to enter the IC package substrate market. Therefore, pricing is not overly competitive in the IC package substrate market compared to that of the printed circuit board market.

#### Global Service and Manufacturing Locations



NYPCB continues the research and development in the three main products, and gains much in the market. The Company has successfully mass-produced the high-end HDI, high-layer board and high-end substrate, and successfully entered the supply chain of world-class customers. Due to the rising 5G telecommunication, artificial intelligence, and automotive electronics, there is a high demand for 5G base station and network application substrate, server application circuit board, high-performance computing chip substrate, and vehicle control circuit board, the Company shall continue the research and development aiming at this trend, in the expectation of bringing the stable turnover for the Company. In addition, following the market trend for semiconductor packaging, the Company developed high-end systematic package substrates in order to increase the proportion of high-value products sales and further improve the Company's profitability.

# 1-3 Prospects, Opportunities and Challenges to The Industry

NYPCB business development plan can be divided into short term and long term plans. In the short-term business plan, due to the increasing demand for solid state disk, memory module, and network device application products, NYPCB must put more emphasis on developing technical capacity for high-density, thin circuit, IC substrate products as well as developing potential customers to meet market acceptance, adjust product combinations, expand production capacity of high value added products, and increase output values and business profits.

While according to the future market development trend, the long-term business development plan is still primarily the internet of things and vehicle used electronic application products. The Company adheres to the operation principle of improvement, innovation and sustainable operation, dedicates to the research and capacity expansion of environment-friendly products, and continues to develop the new customers, with the leading quality technology as the advantage, to be the principal axis of long-term business development.

1 Future Supply and Demand and Growth of the Market - Looking back on 2018, with the help of the growing global economy and boost in consumer confidence, advanced smartwatches have enjoyed high volume sales. This allowed the high-value products to have a higher contribution to the Corporation compared to last year. However, because major network and communications clients adjusted their inventory in the first half of the year, and the market growth for mid- and low-end smartphones slowed down, the Corporation's operation was affected. In the second half of the year, benefited from increased demand for the system-in-packae packaging product and improved yield of the high-end product, the Corporation's profit turned into a positive figure. Looking ahead into 2019, with the development of artificial intelligence and the prosperity of 5G telecommunication technology, high-performance computing products will proliferate rapidly. Combined with cloud computing continuously growing in demand and big data triggering sales from the network and telecommunication products and memories, the Corporation's operation is expected to improve continuously.

2 Competitive Advantages - As a member of the Formosa Plastics Group, NYPCB has undergone a vertical integration with the group, which has made the Company not only an upstream substrate supplier but also obtains the ability to supply other even higher-upstream PCB raw materials such as epoxy, copper foil, and glass fiber materials. They have become the foundation of support in NYPCB's growth in the printed circuit board industry. The Company has also completed its construction projects in Taiwan

and China. They will not only provide flexible capacity and balanced product development, but also meet customers' needs for a wide range of printed circuit boards. With its profound experiences and advanced technologies, NYPCB has increased its competitiveness through product price and technology advancement.

#### 3 NYPCB's Competitive Edge of the Future

NYPCB's three long term competitive edges include: A.Outstanding technologies, quality, and the ability for mass production: NYPCB is one of the first few companies to produce IC substrate and has accumulated significant experience in product development. Its capability in producing quality products and mass production has been recognized by major global manufacturers. As such, NYPCB has become one of few main global suppliers of comprehensive printed circuit boards.

B.NYPCB has built a large customer base: The Company's quality products have earned the trust of many multinational electronics producers. Thus, many of them have cooperated with NYPCB in new product development in order to help themselves meet the productivity targets and expand market share.

C.The stringent and sustainable management system from Formosa Plastics Group: NYPCB is a member of the Group and has inherited its superior management system, style, and philosophy. The Company has maintained stringent management and control on production and costs, and has achieved stable supply of raw materials through resources integration and workforce collaboration in with the Group as well as the ability to negotiate procurements with external parties.

① Disadvantages and Obstacles - NYPCB has continued to offer high quality products and technologies to its customers. However, since the printed circuit board industry has matured, competition has intensified and the electronics market is changing rapidly. The Company has implemented the following policies to generate reasonable profits and secure sustainable development:

A. Enhance yield rate and technologies, help customers to produce various niche products, and carry out improvement projects to reduce costs and increase margin. The Company also has increased its efforts in research and development to streamline manufacturing processes and increase capacities to maintain NYPCB's competitive edge in technologies and costs.

B. The future goals of the company should be continued investment in the development of advanced technologies, timely expansion of production capacity to compete for niche products, and an increase in new customers and opportunities in order to elevate capacity utilization.

# 1-4 Major Products and Research & Development

## • Identified Material Aspects and Management Approach

Corresponding Material Issues	Product innovation and research & development (R&D)						
Significance	R&D generally refers to the kind of continuous and systematic activity which has clear objectives for a company to acquire science and technology, creatively apply new knowledge of science and technology, or substantially improve technologies, products, and services.						
Policy and Commitment	To invest in product innovation and R&D by adhering to the operational principle of "improvement, innovation, and sustainable operation." To ensure competitive and high quality products are provided to customers.						
Responsibilities	R&D Department						
Resources	Manpower: R&D Department, the Engineering/YIP teams of production plants     Funding: R&D expenses						
Action	<ol> <li>To develop low CTE substrate</li> <li>To improve inner layer fine line capability</li> <li>To improve Cu thickness uniformity at build up layer.</li> <li>Apply dry film solder mask</li> <li>Improve bump yield for high bump count substrate.</li> </ol>						
Communication Channel	Periodic project meetings     Quarterly visits to clients						
Evaluation Method	Increase in the number of trial produ	uction that leads to mass production					
Target (Short/Medium/ Long Term)	<ol> <li>Short-term (within 3 years):</li> <li>To develop low CTE substrate</li> <li>To improve inner layer fine line capability</li> <li>Apply dry film solder mask</li> <li>Medium and long term (3~7 years):</li> <li>To increase the number of stack layer in the drilling process</li> <li>To develop high quality SR dry film mate for large-sized substrates</li> </ol>						
Overall	1.In 2018: (1) Low CTE core substrate went into mass production.						

Overall Performance

- (1) Low CTE core substrate went into mass production.
- (2) High layer count & large body size substrates went into mass production
- (3) Dry film solder mask went into mass production









NYPCB has conducted extensive research and development. The Company has achieved multiple patents but continue developing new products. The following are products successfully developed by NYPCB and their uses:

#### 1 Printed circuit boards

#### A. High Density Interconnect Substrate:

The product is mainly a substrate material used to develop the high-end blind & buried vias, high-stacking technology and corresponding applications. Product applications include wearable devices, 5G high-frequency products, high-end notebook computers, and LED displays, etc.

#### B. Multilayer PCB:

Technologies to pair multiple layers of PCB and perform high aspect ratio electroplating and impedance matching have been developed. These technologies can be used to produce servers and workstations.

#### 2 PIC Packaging substrate

By process form, the product can be classified into PP substrate and ABF substrate. Regardless of the packaging form, the design trend is going toward finer wire, more micro holes, thinner and more layers.

#### A. PP Substrate:

Wire bonding and FC packaging substrates have entered mass production. The coreless substrate and burying technology currently under development are to be applied in high-end Package on Package packaging, multi-core chips, and smart music box chips. In the meantime, ultra-thin substrate is also under development which can be applied to smart-phones, tablets, TV chips, and logic computing and power control chips. In addition, SIP package products have entered the stage of mature mass production, so can satisfy more diverse product requirement, including RF module chip for mobile phones, network telecommunication chips, wearable devices, and memory card control chips.

#### B. ABF Substrate:

The product design now tends to be more and more lightweight, thin, and small. This year, the development of high layer count and large body size substrate is the focus, in addition to the development of the high-stack precision alignment technology used in manufacturing high-end telecommunication substrates. Another goal is set for the development of high-speed I/O and 110µm pitch technology for solder balls. Based on the future challenges arising from technological products, short/medium/long term R&D projects for key production processes are established to safeguard our leading role in future technology. Moreover, introduction of new materials such as highly reliable substrates and ink, stability

substrates with low-roughness surface and of large dimension, and low insertion loss dielectric material are all being developed to meet the needs of high-speed communication products in the future.

# Major applications and production processes of primary products

#### A. Printed circuit board:

It is a key component used as a carrier in various electronic devices, and serves as the interconnection between different components to communicate message. Applications include: Notebook computers, workstations, servers, high-end memory modules, game consoles, TV sets, cars, LED displays, mobile phone peripherals, and wireless charging.

#### B. IC packaging substrate:

It is used as the carrier in the IC chip product. The internal and external pins on the substrate output/input signals from the chip in order to communicate with the system. It can also help with heat dissipation on the chip. The product is applied in a variety of electronic devices, including optical sensors, wireless communication modules and router chips, RF module for mobile phones, network communication chips, computer graphics chip substrate, computer accelerated processor substrate, wearable devices, digital TV and set-top box chipset, vehicle electronics substrate, vehicle sensor, smart speaker, AP/AI identification system and high-performance computing chip substrate for digital currency mining machine, etc.5G

#### Products

# Classification of Intelligent PCB Wire Bond Substrate Flip Chip Substrate FC-CSP

# 1-5 Awards and Recognitions

NYPCB has followed the Formosa Plastics Group's corporate spirit in conducting final analyses and improving continuously until accomplishing perfection. We face problems head on and resolves them using practical solutions, and believe in hardwork, sincerity and honesty, society contribution, and sustainable development. This is the reason that we have continuously made improvements in corporate governance, environmental protection, and public welfare, and upheld our commitments to make the society better. NYPCB's efforts have been recognized by the Taiwanese government as well as by non-governmental organizations. The following certifications and awards have encouraged the Company to keep streamlining its management and emphasizing environmental protection and reservation.

#### Recognitions

Items	Date	Certification
1	1993	ISO9001 Certification(Note1)
2	1996	ISO14001 Certification
3	1998	UL-QS-9000 Certification
4	2001	OHSAS-18001 Certification
5	2002	TL-9000 Certification
6	2003	Green Product/RoHS Certification
7	2004	TS-16949 Certification(Note2)
8	2009	CNS15506 Certification
9	2010	ISO-14064-1 Certification
10	2010	EICC Certification (Grade: yellow)
1	2011	A bronze medal from the Taiwan Training Quality System
12	2012	EICC Certification (Grade: green)
13	2013	ISO9001 Certification(Note3)
14	2013	TS-16949 Certification
<b>(</b>	2013	Awarded Authorizes Economic Oprrators(AEO) by Customers Administration, Ministry of Finance
16	2014	EICC Re-Certification (Grade: green)
1	2016	Awarded Authorized Economic Operators (AEO) by Customers Administration, Ministry of Finance
18	2017	Passed OHSAS-18001 reassessment certification.
19	2018	Passed ISO14001(2015) revision certification.

Note 1: In 1993, Product Type PCB/WB passed ISO 9000 certification and will be recertified once every 3 years.

Note 2: In 2004, Product Type PCB/WB passed TS-16949 certification and will be recertified once every 3 years.

Note 3: In 2013, Product Type ABFS passed ISO 9000 / TS-16949 certification and will be recertified once every 3 years.





#### Awards

Item	Date	Award
0	1998	Won an award from Intel for obtaining Secc certifications
2	1999	Honored by Xerox as one of its world-class certified suppliers
3	1999	Won a Preferred Quality Suppliers award from Intel
4	1999	Won the Supplier Continuous Quality award from Intel
6	1999	Won an award from Intel for obtaining Secc certifications
6	2000	Won the Strategic Supplier Award from Jabil
7	2000	Won a Preferred Quality Suppliers award from Intel
8	2005	Won AsusTek's Environmental-friendly Management System award
9	2005	Won Outstanding Substrate Supplier Certification from Intel
10	2003	Won as a Sony Green Partner
1	2003	Won an award from Intel for contributing to the development of Calexico
12	2004	Won an Outstanding Service and Support award from AMKOR
13	2004	Won a Preferred Quality Suppliers award from Intel
14	2005	Recognized as a Sony Green Partner
<b>1</b> 5	2008	Received the Taiwan Ministry of Economic Affairs award for achieving the fastest export growth in Malaysia, one of the key markets selected by the Ministry
16	2008	Received the Taiwan Ministry of Economic Affairs award for achieving the second fastest export growth to South Korea, one of the key markets selected by the Ministry
•	2008	Received the Taiwan Ministry of Economic Affairs award for rapid export growth in key markets
18	2010	Won a corporate social responsibilities award from Taiwan's Global Views magazine.
19	2010	Won the Taiwan Executive Yuan's Entrepreneurship Award in Q1 2010
20	2011	Won the Taiwan Executive Yuan's Entrepreneurship Award in Q4 2010.
21	2012	Ranked in the Top 100 Taiwanese Technologies in 2012 by BusinessNext Magazine
22	2012	Ranked among the Top 5000 for Taiwan's Large Enterprises in 2012 by China Credit Information Service
23	2012	Named Trader of Excellence by Taiwan External Trade Development Council
24	2014	Named an ASESH Continuous Improvement Supplier of Substrates in 2013
25	2014	Named ASECL's Best Supplier of Substrate in 2013 Through Taiwan Ratings Corporation's rating, enterprise long-term credit rating: twA+, enterprise short-term credit rating: twA-1, rating prospect: stable
26	2015	Through Taiwan Ratings Corporation's rating, enterprise long-term credit rating is A+, enterprise short-term credit rating is twA-1, and rating prospect is stable
<b>②</b>	2016	<ul> <li>* Won the 2015 GM Supplier Quality Excellence Award</li> <li>* Evaluation by Taiwan Ratings Corp., enterprise long-term credit rating: twA+; enterprise short-term credit rating: twA-1; rating outlooks: stable.</li> <li>* Received the Execution of CSR Award issued by the British Standards Institution.</li> </ul>
28	2017	* Received the 2016 Key Supplier Program Award issued by Translarity. * Received the Supplier Sustainability Award issued by ASE Group.

## 1-6 Participating Organization and Standard

To enhance its technologies and competitiveness, NYPCB has actively participated in various major industrial organizations in Taiwan such as the Taiwan Printed Circuit Association (in which NYPCB took posts as Executive Director and Director ever since 1998) and the Taiwan Electrical and Electronic Manufacturers' Association (TEEMA). The Company has also attended major seminars held both domestically and overseas in order to keep it updated with the latest global trends and to seek opportunities for further exchange and cooperation. The Company promises to follow the Responsible Business Alliance (RBA), to provide the safe working environment for the staff, and ensure to provide the respect and dignity, as well as assuring the environmental responsibility and abiding by the moral rule in the enterprise operation process.

# 1-7 Stakeholder Dialogue

Since globalization has significantly changed the society, environment, business, and economy, and has profoundly affected the lives of people across different sectors and from all pace of life such as agriculture, transportation, economy, trade, finance, safety, hygiene, and gender equality, NYPCB believes that establishing a friendly and convenient environment for communication is the responsibility of an outstanding corporation.

To create such an environment and show the Company's determination, we provide a variety of simple channels of communication and sets Stakeholders Engagement sector on NYPBCB's website for its stackholders in order to better understand their thoughts, demands, and issues of concern. Their voice provides not only an additional reference for this report, but also important suggestions regarding strategy and goal planning for the company's future development of social responsibilities. Based on attributes, the proposal of feedback sent to Stackholder Engagement will be assessed by the functional teams of President's Office and determined whether the issue causes significant impacts to our stakeholders. After the assessment, the case will be classified by the level of impact and delivered to the board meeting. Later chapters will provide the detailed responses to the issues of concern. The table sets forth the issues of concern and the channels of communication between the company and its stakeholders.

Stakeholder	Communication Channel	Meeting Frequency	Issue of Concern	
	1. Internal announcements	Irregularly, at least once a year	Harmonious	
	2. Representatives from the Human Resource Department		labor relations / compensation	
Employees	3. Regular meetings such as union core members seminars/education seminars/safety conferences / various training seminars/cafeteria quality review conferences	Once a month	and benefits / training and promotion / communication	
	4. Irregular meetings	Irregularly,	channels /	
00/00	5. The Administration Department has established communication channels such as suggestion boxes. Medical professionals stationed at the factory provide emergency medical assistance.	at least once a year	workplace safety management/ healthcare for better	
	6. Internal publications, online platforms and questionnaires (e.g. questionnaires on training satisfaction).		employment security	
	NYPCB has appointed a spokesperson and deputy spokesperson system, and a specialized unit for handling investors' affairs. The Company has also communicated with its shareholders and corporate shareholders by setting up the following communication channels:	_	Operating	
	1. Shareholders		conditions /	
	(1) Annual shareholders' meetings	Once a year	dividends / corporate	
Investors (Shareholders)	(2) Published annual financial reports as requested and provided them to shareholders during the annual shareholders' meetings	Office a year	governance / shareholder services / risk control and	
(ondictionals)	(3) Shareholders can make inquiries through phone calls and emails.	Irregularly		
0	2. Corporate shareholders	_	management / Industry Prospect	
<u>ڳ</u>	(1) Investment seminars in Taiwan and overseas	Irregularly		
B 20	(2) Investor forums held by securities companies (not held regularly)	megolariy		

Sta	keholder	Communication Channel	Meeting Frequency	Issue of Concern		
		1. Audited by customers				
Cueta	omoro	2. Meeting with customers and dealers				
Cusio	omers	3. Regular technological support	Irregularly, at least once a	Product quality / post-sale services / green products		
		4. Surveyed client satisfaction	year			
Ī	ílıl –	5. Provided educational training for customers				
		Established an information platform for suppliers		Supply chain		
Supr	diore	Held regular meetings and reviewed reports face to face	Irregularly,	management /		
Suppliers		3. Conducted supplier surveys through questionnaires, and provided audits and consulting services	at least once a year	safety and health management / partnerships		
		4. Reviewed material supply stability and quality		parmerships		
Non-	Profit	Established charity clubs and participated in community volunteering activities	Irregularly,	Social welfare contributions /		
Organizations		Held donation campaigns and provided assistances in light of major natural disasters in Taiwan	at least once a year	corporate volunteer services		
Media		1.Shareholders will visit after the annual shareholders meeting	once a year Operating status / dividend distribution			
		2. News interview	Irregularly, at least once a year	corporate governance, risk control / industry outlook		
Nearby Communities/Gc	Nearby Communities	Communicated and informed communities through NYPCB's website	Irregularly, at least once a year	Social welfare contributions / community involvement corporate volunteer services / environmental impact of transportation		
	<b>50</b>	1.Official documents	Irregularly, at least once a year	Environmental		
	Gove Units	2. Meetings introducing and explaining new laws	Irregularly	accounting /		
vernment Units	/ernment .s	3. NYPCB's financial statements	Once per quarter	compliance with laws and		
	ent	4. Provided reports and information as requested by the government, authorities, and regulations.	Irregularly, at least once	regulations / environmental		
nits		5. Communicated with government or authorities through industrial associations	a year	protection		



# 1-8 Identification of Major Issues

#### 1 Stackholder identification and communication

Stackholder identification and communication

Along with the social environment change and climatic environment change, the world changes variously, and influence our lives of all aspects, such as the agriculture, transportation, economy, trade, finance, safety, sanitation, and gender equality. How to construct a friendly environment is the duty of an enterprise to keep in mind at any time.

In order to provide a friendly environment, NYPCB starts from the practice of stakeholder relationships, including the connections with external supply chains, shareholders / investors, and customers as well as internal company staff. We expect that external partners could cooperate with NYPCB to contribute to the entire environment and society, while internal staff could be treated with respect and dignity. To ensure that all production process and product pose no harm to the environment, NYPCB established a working group to promote corporate social responsibility, closely working with the internal and external stakeholders and exchanging the opinions and thoughts on a timely basis. The working group shall identify the stakeholder according to the work feature of each unit, incorporate issues of concern into the routine work and annual plan, and cooperate with relevant unit depending on the issue of concern.

#### A. Stackholder identification

Based on global trend, industrial feature, experiences generated from daily interactions with stakeholders, and degree of impacts stakeholders pose on corporate operation, NYPCB CSR working group has identified a total of 7 stakeholder categories (investors / stakeholders, customers, employees, suppliers, nearby communities, government, media, and non-profit organizations) according to specific features such as responsibility, impact, intimacy, representativeness, and strategic intention.



#### B. Major Topic Identification Procedure

In addition to multiple daily communication channels, significant issues of 2018 were selected from the screened list based on the priority, confirmation, and review process of different significant issues. CSR working group is responsible for integrating the initial list of significant issues before distributing questionnaires to collect different voices from the stakeholders.

# Major Topic Identification Procedure



# Select topics and related parties

- Consider according to company policies
- List related parties
- GRI Standards disclosure item
- Nan Ya Pcb CSR related department's plan



# Make a prioritized list

- Essential analysis: addition-multiplication of impact degree and concern degree
- Impact degree investigation: Nan Ya Pcb's each department evaluation
- Concern degree investigation: related parties evaluation



#### Identify

 Evaluate the scopes, boundaries and time-histories of disclosure item



Verify

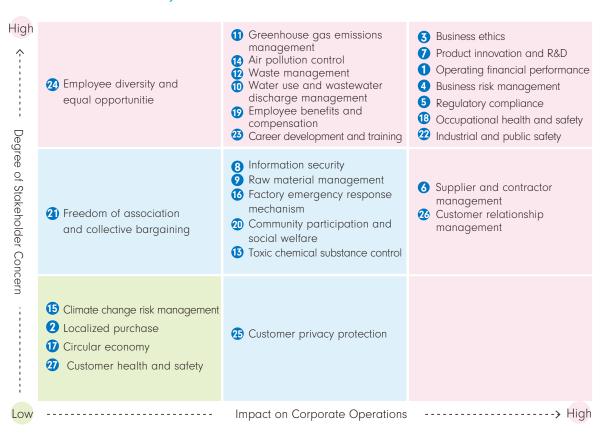
 Verify whether the report is complete and save it as the preparation reference for next annual report

#### C. Sustainable topic collection

To identify the critical issues that concern our stakeholders, we successfully issued questionnaires to a total of 182 stakeholders (with a questionnaire return rate of approximately 87%). Through intensive discussion from internal meetings, we can determine the impact that these issues have on our corporation. According to "Stakeholders' Level of Concern" and "Impact on the Company", each category is analyzed and classified according to its level of impact and arranged in sequential order. With a total of 16 items, the area on the upper right signifies topics with the greatest significance and on the lower left those with the least significance. We will discuss the significant issues and items that need improvement later in this report.

We will discuss the significant issues and items that need improvement later in this report. By making such improvement, we seek to maintain effective communication channels and partnerships with all of our respective stakeholders.

#### Results of Identified Major Issues



- Operating financial performance
- 2 Localized purchase
- Business ethics
- Business risk management
- 5 Regulatory compliance
- 6 Supplier and contractor management
- Product innovation and R&D
- 8 Information security
- 9 Raw material management

- Water use and wastewater discharge management
- Greenhouse gas emissions management
- Waste management
- 13 Toxic chemical substance control
- 4 Air pollution control
- 15 Climate change risk management
- Factory emergency response mechanism
- (17) Circular economy
- (R) Occupational health and safety

- 19 Employee benefits and compensation
- Community participation and social welfare
- 21 Freedom of association and collective bargaining
- 22 Industrial and public safety
- 23 Career development and training
- Employee diversity and equal opportunities
- 25 Customer privacy protection
- **26** Customer relationship management
- 27 Customer health and safety

#### • Identified Material Aspects and Boundaries

		Boundaries						Disclosure of		
Cate	- Issue / Aspects	Internal External							Manage-	
gory		NYPCB	Share- holders	Media	Suppli- ers	Communities /Gov- ernment	Cus- tomers	Non- profit organi- zations	ment Approach (DMA)	Chapter
	Operating financial performance	•	•						GRI 201-1	2.2 Financial performance
	Business ethics	•	•		•		•		GRI 102-14~15 GRI 102-1	Message from the President 1.3 Prospect, Opportunities, and Challenges to the Industry
Economy	Business risk management	•	•						GRI 102-11 GRI 201-1	Message from the President 2.1 Governance Overview 3.2 Environmental Accountability 3.3 Water and Energy Conservation and Greenhouse Gas Reduction 3.4 Protecting the Environment around Factories
	Product innovation and R&D	•					•		GRI 102-2	1.2 Market Position 1.4 Major Products and R&D
	Supplier and contractor management				•		•		GRI 102-9 GRI 308-1~2 GRI 414-1~2	2.6 Supplier and contractor management     4.7 Crisis management
	Regulatory compliance	•		•		•			GRI 419-1	2.1 Governance overview 2.3 Internal control
Environment	Water use and wastewater discharge management	•		•		•			GRI 303-1~3 GRI 306-1,5	3.3 Water and Energy Conservation and Greenhouse Gas Reduction 3.4 Protecting the Environment around Factories
	Air pollution control	•		•		•			GRI 305-1~2, 4, 5, 7	3.3 Water and Energy Conservation and Greenhouse Gas Reduction 3.4 Protecting the Environment around Factories
'nt	Waste management	•		•		•			GRI 306-2,3	3.4 Protecting the Environment around Factories
	Greenhouse gas emissions management	•		•		•			GRI 305-1~2, 4, 5	3.4 Protecting the Environment around Factories
	Employee diversity and equal opportunities	•							GRI 405-1	4.1 Employment
Society	Industrial and public safety	•			•				GRI 403-1~3	3.1 Commitments to Environmental Sustainability 4.5Employee Wellness Program
	Occupational health and safety	•			•				GRI 403-1~3	3.1 Commitments to Environmental Sustainability 4.5Employee Wellness Program
	Career development and training	•							GRI 404-1	4.3 Training System
	Employee benefits and compensation	•							GRI 401-2,3 GRI 405-2	4.2 Salaries and Welfare
	Customer relationship management	•					•		GRI 416-2	2.5 Customers

#### Notes:

- A total of 26 topics are included this time. Compared to 2017, the two topics," information security, and circular economy" are newly added.
- 2. After review, there is a total of 16 major topics established, an increase of 1 topic compared to 2017. Mainly, the topic, "employee diversity and equal opportunities, and career development & education training" is newly added, and the topic, "corporate community participation and feedback" is deleted.







# • Identified Material Aspects and Management Approach

Corresponding Material Issues	Business ethics, operational financial performance, business risk management, and regulatory compliance
Significance	The Corporation is a strict practitioner of regulations and business ethics. In addition to complying with the Company Act, the Securities and Exchange Act, and the Business Entity Accounting Act, the Corporation acts upon the corporate culture spirit of "Diligence and Simplicity." Based on the business philosophy of honesty and sincerity, fairness and transparency, self-discipline and accountability, the Corporation has formulated and implemented various ethic policies in order to create good corporate governance and risk control mechanism and seek for sustainable corporate development.
Policy and Commitment	<ol> <li>To implement fair trade.</li> <li>To abide by business ethics and pursue sustainable management.</li> </ol>
Responsibility	Board of Directors Meeting
Resource	<ol> <li>The board of directors is the highest governance unit</li> <li>Actions are taken by adhering to the "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies" and other related regulations.</li> </ol>
Action	Establish effective and comprehensive accounting system and internal control mechanism to fully promote computerization across all operational processes; the six major management functions — personnel, finance, business, production, materials, and engineering — should be interconnected by computers to enable trench auditing layer by layer as well as abnormality management.     Establish a professional and independent internal audit operation structure.
Communication Channel	<ol> <li>Report to independent directors should be conducted at least once a year jointly with the CPA about the financial status and the overall operation of the Corporation as well as its domestic and overseas subsidiaries, together with the internal control auditing status. The impact of the revision of laws should be fully communicated with independent directors; if necessary, a meeting shall be convened at any time.</li> <li>Various statements and reports are prepared by the board of directors for which is audited by, and based on which a review report is presented in accordance with regulations by, the CPA appointed by independent directors.</li> </ol>
Evaluation Method	<ol> <li>Implementation effect and improvement continuity is reviewed by the board of directors at any time to ensure corporate social responsibility policies are fulfilled.</li> <li>The board of directors authorizes senior management to handle issues regarding the economic, environmental, and social issues generated from the Corporation's business operations, and report the status back to the board.</li> </ol>
Target (Short/Medium/ Long Term)	<ol> <li>Short-term:</li> <li>To act upon relevant practices ruling the information declaration and major information filing of public listed companies. There should be no such situations to occur regarding corrections by competent authority or defaults recorded by the Stock Exchange.</li> <li>Medium and long term:         <ul> <li>There should be no such situation to occur regarding the violation of the good faith management principles, corporate social responsibilities, and the internal control system, or other situations not in compliance with the corporate governance principles.</li> </ul> </li> </ol>
Overall Performance	<ol> <li>From 2016 to 2018: The Corporation received no correction notice from the Stock Exchange.</li> <li>The Corporation has established a dedicated (adjunct) unit for promoting corporate social responsibilities and ethical corporate management. The operation and execution status of the established unit is also disclosed in the Corporation's annual reports and the corporate website, and be presented regularly to the board of directors.</li> </ol>

Corresponding Material Issues	Customer Relationship management
Significance	The Corporation should deliver supreme product quality which goes beyond customers' expectation. It should also provide instant response to customers' request through a comprehensive communication system. Furthermore, the Corporation should strictly fulfil the promise made to customers of delivering goods on time in order to maintain good customer relationships.
Policy and Commitment	To work hard to become customers' trustworthy partner for business growth.
Responsibility	Sales Department
Resource	Periodic visits to customers, as well as direct communication and opinion exchanges with customers.
Action	Review customer satisfaction on a regular basis.
Communication Channel	Customer visits, supplier conferences, and online platforms.
Evaluation Method	Annual customer satisfaction surveys (in the aspects of technology, quality, service, delivery time, and price)
Target (Short /Medium/Long Term)	<ol> <li>Short-term (within 3 years): Satisfaction level above 4 points.</li> <li>Medium and long term (3-7 years): Satisfaction level above 4.5 points.</li> </ol>
Overall Performance	Customer satisfaction level: 4.0 points in 2016; 4.1 points in 2017; 4.0 points in 2018.

Corresponding				
Material Issues	Supplier and contractor management			
Significance	<ol> <li>Through an effective evaluation mechanism, the Corporation can select the best partners sufor long-term cooperation.</li> <li>A safe construction environment free from concern should be provided and construction specified by completed on time to ensure the sustainable development of the Corporation.</li> </ol>			
Policy and Commitment	<ol> <li>The Corporation should see its suppliers as partners, and endeavor to provide guidance and make long-term cooperation to establish a sustainable supply chain with stable progression.</li> <li>Relevant occupational safety and environmental protection laws should be obeyed to ensure the safety of contractors in construction.</li> </ol>			
Responsibility	Materials Department & Engineering Department			
Resource	<ul> <li>Manpower:</li> <li>1. For suppliers: Formosa Technology E-Market Place, and online price inquiry (offer and negotiation), order and delivery procedures.</li> <li>2. For contractors:</li> <li>3. Education and training is carried out by the occupational safety personnel; safety protection is examined by supervisors and guards; factory entrance control is examined and controlled by</li> </ul>			
	supervisors and guards; punishment regarding occupational safety is executed by supervisors and the occupational safety personnel; and safety inspections are carried out by the first-level supervisors/deputy supervisors on rotated duties.			
Action	<ol> <li>Hold monthly supplier communication meetings.</li> <li>Hold project run-up coordination meetings, including the safety notice of construction signed daily, safety analysis of the construction site by the person in charge of the contractor before a construction starts, and safety promotion made for the construction personnel which shall be confirmed with signature.</li> </ol>			
Communication Channel	<ol> <li>Monthly supplier business review meeting</li> <li>Monthly security agreement organization meeting with contractors; Implementation of daily pre-construction toolbox meetings, monthly indoor toolbox meetings, and the promotion of safety, quality, and legal regulations.</li> </ol>			
Evaluation Method	<ol> <li>Supplier assessment procedure</li> <li>Supervision and management of the construction personnel of contractors</li> </ol>			
Target (Short/Medium/ Long Term)	<ol> <li>Short-term (within 3 years):</li> <li>To implement and develop competing suppliers to establish multiple supply pipelines</li> <li>To implement education and training for suppliers' occupational safety and health management personnel, for corporate safety and health, and for the update of environmental protection laws and regulations.</li> <li>Medium and long term (3~7 years):</li> <li>To make material procurement localized.</li> <li>To encourage suppliers' occupational safety and health management personnel to obtain environmental protection related licenses.</li> <li>To encourage contractors' construction personnel to obtain licenses through certification and be in line with corporate rules and policies.</li> </ol>			
Overall Performance	<ol> <li>The percentage of the amount of domestic material purchase on foreign material purchase: 43% in 2017 and 62% in 2018.</li> <li>Zero work injury incidence of contractors; the cases number about vendors' work-related injury, work suspended due to the violation of environmental regulations, or penalty imposed by government agencies: From 2014 to 2018: 0 cases.</li> </ol>			

#### 2-1 Governance overview

#### 1 Operation of board of directors

Under the corporate governance structure, the board of directors is the highest governance unit responsible for setting operational strategies. Entrusted by the shareholders, the board of directors is mainly responsible for ensuring legality and transparency in the business's operational information, designating business managers to integrate operational affairs, drafting profit distribution plans (so that shareholders can share in the business's operational results), and supervising and guiding daily business operations. The board of directors carries out its operations according to relevant regulations stipulated by the domestic "Company Act", "Articles of Association", and "Rules & Procedures of Board of Directors Meetings". The "Moral Standards for Members of the Board, and Managers" and "Business Integrity Guidelines" have also been stipulated to ensure that relevant personnel consider moral standards while performing their duties, which in turn prevents corporate and shareholders' benefits from being damaged.

The Nan Ya Printed Circuit Board Company's board member selection process shall follow Company Law, the Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies and the Nan Ya Printed Circuit Board Company's 'Board Member Selection Procedures' and other regulations.

Current term board members are appointed by shareholders at the shareholders meeting in June 2017, and consist of nine members (one board chairman, five directors and three independent directors) whose appointment periods are from June 2017 to June 2020. The present Board Chairman, Mr. Wu Ka-Chao, General Manager, Mr. Tang Ann-De.Our directors are all highly-specialized personnel with rich experiences in the industry. They provide the most professional guidance on the Company's strategic planning for future developments. Their average age is about 70 years old. To fortify the independence and diversity of its corporate governance, the Company currently has three independent directors; however, there are no female directors at the moment. The education and work experiences of the board members are listed below:

Title	Name	Education	Concurrent positions in NYPCB or other companies	
Chairman	NYPCB representative Wu Chia-Chau	National Chengchi University, Department of Business Administration	Chairman of Nanya Plastics Corporation and Nanya Technology Corporation	
Director	NYPCB representative Wong Wen-yuan	Industrial engineering, University of Huston	Chairman of Formosa Chemicals & Fibre Corporation, Formosa Taffeta and Formosa Advanced Technologie	
Director	NPC representative Tzou Ming-Ren	Taipei Tech Chemical Engineering Department	General Manager of Nanya Plastics Corporation	
Director	NPC representative Lin Fon-Ching	National Chengchi University, Department of Accounting	Deputy General Manager of NPC	
Director	Chang Chia-Fung	Automatic control engineering, Feng Chia University	Deputy General Manager of NPC	
Director	Tang Ann-De	Electrical engineering, National Taiwan University of Science and Technology	President of NYPCB	
Independent director	Wang Cheng-I	MA in Public Finance, National ChengChi University	None 0000	
Independent director	Jan De-Ho	Master of Public Administration, University of Southern California	None	
Independent director	Lin Ta-Sheng	M.S. of Chemistry, Texas Southern University in Houston, Texas, USA	None	

The Company's board of directors all possess professional backgrounds in business management, leadership and decision-making, industrial knowledge, international perspective, and financial and accounting analysis, and have an abundance of business management experience. The board has nine directors, among whom three are independent directors. Their educational background, gender, professional qualifications, and work experience are listed in the following chart:

			Business Management Background and Management and Decision-Making Ability				
Name Nationality	Nationality	Gender	Business Management	Leadership and Decision-Making	Industrial Knowledge	International Perspective	Financial and Accounting Analysis
Wu Chia-Chau	R.O.C	•			•	•	•
Wong Wen-yuar	n R.O.C	•	•	•	•	•	•
Tzou Ming-Ren	R.O.C	•			•	•	•
Lin Fon-Ching	R.O.C	•	•	•	•	•	•
Chang Chia-Fung	g R.O.C	•				•	•
Tang Ann-De	R.O.C	•	•	•	•	•	•
Wang Cheng-l	R.O.C	•	•	•		•	•
Jan De-Ho	R.O.C	•	•	•		•	•
Lin Ta-Sheng	R.O.C	•	•	•	•	•	•

There totally held 6 Board of Directors meetings in 2018, and the assessment to the target and execution condition of Board of Directors function is as below:

**A.**The operation of Board of Directors is according to the laws, and the provision of Articles of Association and resolution of shareholder meeting decide the executive authority, that all the directors shall create the maximum benefit for the shareholders in the principle of loyalty and good faith, except for the necessary professional knowledge to fulfill the duty.

**B.**For the selected and appointed independent directors, and in order to construct the good governance system of Board of Directors for the Company, it has formulated the discussion specification for Board of Directors depending on the provision of security authority, including the major discussion content, operation procedure, items to be stated in the minute, announcement and others to be followed, which shall all be handled according to this code.

**C.**Except the Company shall periodically handle the self-check for the operation of Board of Directors, to reinforce the function of Board of Directors, the internal auditing personnel shall make the audit report for the operation condition of Board of Directors, to meet the authority

requirement.

2 Shareholders/employees can provide suggestions for business operations to management teams through the following channels:

#### A. Shareholders

NYPCB has established a spokesperson system to facilitate communication between the Company and its shareholders. The system allows shareholders to communicate with the Company's legal representative face to face. Their suggestions and questions to the Company would receive a detailed response, and be handled by specialists who document and forward the issues to senior managers. The system makes the Company's operation and financial status more transparent to shareholders and increases communication between them and the Company.

#### **B. Employees**

NYPCB values harmonious employer-labor relations and respects the rights of employees to express their opinions. The Company has installed suggestions boxes in areas frequented by employees and set up online ones on the intranet. These boxes are managed by specialists who are responsible for facilitating a smooth communication channel. They would seek information to understand more about questions from employees before replying. Employees can submit their questions or suggestions on the Company's regulations or systems if they have any by filling out a Management System Suggestion Form. The form will be forwarded to their supervisors to the most senior management team, facilitating an effective communication channel between employees and the Company.

#### **3** Corporate Management Structure

NYPCB's governance is designed in accordance with its organization chart and their responsibilities are outlined as follows:

	epartments	Responsibilities
A	auditing Office	Review internal control systems and regulations to ensure the system has been effectively enforced.
	Human Resource Unit	Organize human resources, establish articles of association, handle employee transfers, and perform employee evaluation, recruitment, education, and training. Ensure fair management, access employees' needs, respond to employee opinions, and compile the corporate social responsibility report.
	Management Analysis Unit	Organize board meetings and annual general meetings. Plan and implement tax exemptions. Review and compile data. Evaluate performance and analyze costs.
τ.	Administrative Unit	Oversee production, sales, and operation.
President's	Equipment Unit	Establish and implement maintenance systems.
nt's O#ice	Procurement	Plan the usage of raw material. Purchase raw material and control inventory. Ensure the usage of raw material is reasonable and cost-effective. Manage inventory and warehouses.
	Project Unit	The construction and expansion of plants in China. Plan and arrange new production and install new equipment, conduct trials, and manage production.
	Production and Sale Unit	Oversee the expansion of the flip chip project, mass production, trial production, and delivery. Estimate the consumption of jigs and raw materials.
	Legal Affairs Unit	Manage the Intellectual Property Rights and legal affairs of NYPCB. Apply for patents.
	EHS Unit	Implement and manage measures to prevent pollution. Organize required training on workplace safety, environmental protection, and hygiene.

Departments	Responsibilities
Accounting Department	Establish, plan, supervise, and implement an auditing system. Review the legality and legitimacy of transactions. Handle daily accounting reports, file taxes, and analyze the profit and loss of products
Information Technology Department	Oversee the Management Information system, establish an intranet, and manage Company websites. Evaluate and develop information systems, manage the intranet, and develop applications.
Research and Development Department	Establish and review production regulations, new materials, and technologies. Establish and review new product production processes. Evaluate and execute plans to satisfy customer requirements for processing technologies and tests. Conduct trial production for new products before entering mass production.
Product Design Department	Design, produce, and improve jigs. Integrate and review production technologies. Manage and execute trial production of films and screen plates. Compile new customer data.
Sales Department	Carry out marketing initiatives and analyze the market. Plan and implement sales plans. Expand the customer base.Responsible for customer service. Analyze markets for new products.
Quality Assurance Department	Establish a quality control system, audit customers, obtain UL certification, conduct reliability tests, analyze quality, and make timely improvement. Make quality control plans and review resume.
Construction Department	Plan and analyze engineering projects. Manage parts and materials for construction. Supervise construction projects. Develop competitive products. Subcontract, examine, and verify expansion projects.
Utilities Department	The utilities, wastewater treatment equipment fault management, statistical analysis, betterplanning, power system operation execution, operation management.

#### 4 Follow Corporate Regulation

NYPCB has stipulated the "Directors and Managers Code of Ethics" and requires that its management abide by the code in operations and avoid unethical behaviors that may damage both the Company and the interests of its shareholders.

The Company has adopted an online platform for procurement, which increases efficiency as well as ensures a fair and reasonable procurement process that could avoid malpractice. The platform provides a win-win situation for both NYPCB and its suppliers. In addition, a comprehensive auditing system has been established to maintain financial transparency and legality. Audit reports are submitted to the board. The Formosa Plastics Group Head-quarters, formed by the subsidiaries of Formosa Plastics Group, is an independent auditor and thus increases the profession and efficacy of the auditing system. The independent auditing facilitates the effectiveness of supervision.

NYPCB firmly believes in honesty, accountability, and abiding laws, and as such, its management, operations and strategies have been made in accordance with domestic and foreign laws, regulations, and policies. The Company has held irregular law-related trainings and seminars for employees and has established a regulation to obey anti-trust laws. A list of summaries and prohibited conducts for each regulation has been produced, and Company requires employees to read and sign it which is the principle of all business activities. NYPCB strictly requests employees, management, and board members to obey all regulations.

Furthermore, NYPCB consults legal opinions from both Department of Legal Affairs of FPG Headquarters internally and Formosan Brothers Attorney-At-Law and Lee and Li Attorney-At-Law externally regarding to the Company's ethics and lawful behaviors along with organizational integrity. NYPCB has established a "Stakeholder Engagement" on its official website to provide a communication channel for stakeholders to propose opinions, raise questions, or give suggestions online. Designated personnel handle and pass those comments according to their characteristics to a specific person, who is in charge, replies and takes all necessary actions.

The Company also strives to ensure all commercial activities and sales strategies in compliance with the laws, trade conventions, and social norms to against any illegal, unfair and injustice affairs. The Company has never sold the products that had been prohibited or arguable and been punished for violating any regulations. NYPCB never involves in any political activities and maintains neutral and objective political stand.

#### **5** Commission of Salaries

To ensure corporate governance and build a healthy salary structure for the board members and managers, NYPCB established Commission of Salaries on December 27, 2011, and the commission consists of three independent directors. The appointment is in compliance with the regulations of the Securities and Futures Bureau of the Financial Supervisory Commission. The Commission has made suggestions for the salaries of the Company's chairman, and managers, and board directors. This approach prevents the chairman and managers from exposing the Company to risks from salary disputes. Discussion bills from Compensation Committee, such as salary adjustment and annual bonus related topics shall be all put forward to Compensation Committee for a second discussion after a consensus has been reached by the personnel department and labor union. The Commission of Salaries meetings were held twice in 2018, and the average actual attendance rate reached 100%.

#### 6 Independent Internal Audit Unit

To strengthen the supervising function of the Board, the Company has established an internal auditing unit consisting of the three independent directors. Four meetings were held in 2018 with a 100% attendance rate. The internal auditing unit is responsible for overseeing the Company's financial statements, choosing the accountants based on their level of independence and performances, ensuring the effective implementation of internal controls, making sure that the Company follows relevant laws and regulations, and assessing the existing and potential risks of the Company.

#### 1 Internal Audits

The Company has established an internal auditing unit, reporting exclusively to the board of directors, with the task of hiring professional internal auditors. Recruited staff members have to attend auditor training programs held by professional auditing institutions every year to continuously improve their auditing skills.

Internal audits are not the sole responsibility of the independent audit unit. Every department has to conduct audits for specific items and regularly audit their operations. The independent audit unit reviews their audits and conducts additional regular and irregular audits to ensure that the department has conducted the audit effectively.

2018 Annual Audit Plan items: 40. Completed: 40. Rate of Completion: 100%.

A. Normal item(s) →

**38** (95.0%)

B. Item(s) that required improvement →

2 (5.0%), improved.

# Employee Behaviors and Code of Ethical Conduct

NYPCB has defined employees' and employer's rights and obligations to maintain order in the workplace. Pursuant to the law, a code of conduct has been established and was published after having been reviewed by relevant authorities. The Code has acted as the guideline for employee management. It has specified clear regulations regarding employee transfers, working hours, salaries, regulations and punishments, dismissal, severance pay, retirement, training, performance appraisals, and compensation for occupational injury and disease, and social welfare.

In order to ensure staff members following the Code of conduct, NYPCB has required that engineers, managers, and the management team sign a statement that specifies the operational policies that NYPCB employees should follow. The policy summary is as follows:

#### A. Illegal competition is banned (Antitrust policy):

Employees must abide by all regulations of the Fair Trade law. They should always gain profit through honest means and ensure their conduct is in compliance under the law.

#### B. Conflict of interest policy:

Employees should avoid damaging the interests of the Company during operation. They should never directly or indirectly request or accept gifts, entertainment, or any form of personal gain from the customers or competitors of the Company.

#### C. Data security policy:

Employees handling the Company's data should not reveal confidential data or other information that has not been published without NYPCB's written permission. They should not use the information for personal gain or use it for any purpose that is not relevant to the Company's operation. Employees should hand over all technological information that they worked on leaving the Company.

#### D. Participation in political activities

Employees should not directly or indirectly donate money, provide services, or give valuable items to any candidates or political parties. They should not conduct any behavior forbidden by the law or give any ill-gotten gain to legislators, political figures, or government officials that may prevent them from performing their duties.

#### E. Integrity business code

The Company reached the solution to draft the "Corporate Good Faith Business Code" on the Board of Directors meeting on November 11, 2014, which modified a little according to the Company practice, but the stipulated code agrees with the spirit of "Listed Company Good Faith Business Code".

#### 9 Anti-corruption

The company upholds the spirit of diligence and sincerity synonymous with the Formosa Plastics Corporation and has established rigorous ethical standards. Employees are expected to be responsible in both their speech and behavior not only in their work but also in their daily lives by observing all common behavioral and ethical standards. The company has always employed rigorous standards to prevent employees from leaking trade secrets, misstating facts, starting rumors, sabotaging work or violating gender equality principles in the workplace. Specific actions that have been taken in the past include establishing labor and ethical management policies and advocating the company philosophy "Create Values, Honest Business, Teamwork and Shared Prosperity". Furthermore, the company has advocated for anti-corruption practices. Such advocacy will continue to be held annually during holidays. The company has also arranged annual staff ethics cross assessment. A number of members of every department are chosen to be interviewed according to the size of the department. These interviews will emphasize on-site management, staff leave management, work hour management, etc. for staff rights and anti-corruption practices.

Since 2016, the project (administration) has added a "rule of law promotion" course to enable employees to fully understand the relevant corporate regulations and legal responsibilities involved in the company's damage caused by bribery or illegitimate benefits during the period of employment. The personnel responsible for the contracting, procurement, import and export departments must not only understand the course, but also sign the "Procurement and Contracting Person Self-discipline Convention" to standardize the discipline and attitude of the position in charge, and to abide by the law.

#### 2-2 Financial Performance

NYPCB is a professional circuit board manufacturing company with 2018 revenues totaling NT\$ 28,833 million, operating costs totaling NT\$ 28,483 million, operating expenses totaling NT\$ 1,535 million, retained earnings totaling NT\$ 4,214 million, dividends totaling NT\$ 0.7 per share, business income tax paid totaling NT\$ 430,000 , and donations and community investments totaling NT\$910,000. Additionally, in 2018, the liability / total asset rate was 22%, demonstrating a stable financial situation. NYPCB staff salaries in 2018 are presented on Page 181 of the 2018 annual report.

To maintain a stable operation, NYPCB has appointed supervisors to oversee its operations and conduct financial audits. Professional external auditors have been brought in to conduct financial auditing to ensure the financial status remains transparent. In addition, NYPCB's monthly revenue report is published by the 10th of each month on the Market Observation Post System as required by law. The information is also updated onto NYPCB's website at the same time. The Company holds an annual general meeting in Q2 every year to inform shareholders of its operational and financial status, and show the Company's commitment to safeguard the interests of its shareholders.

#### 2-3 Internal Control

#### 1 Prevent insider trading

NYPCB's board of directors, managers, employees, and consultants, have upheld their obligations and ethics as prudent administrators. They have signed non-disclosure agreements to keep crucial internal information in confidence prior to official Company announcements. If any leak of information is discovered, the abovementioned personnel should immediately report it to internal auditing department. Upon receiving such reports or after personally discovering a leak, the audit department would prepare a response policy under legal advisement and help from the finance department. The incident would be documented for future reference.

In order to avoid leaked information affecting stock prices and to ensure all employees follow the regulations against insider trading, NYPCB has followed Article 8 of the Regulations Governing Establishment of Internal Control Systems by Public Companies to establish an anti-insider trading regulation, and has included it in its internal control system to ensure it is effectively enforced.

# **2** Establish a Complete and Effective Accounting System and Internal Control Mechanisms

NYPCB's management can be categorized into the following six management mechanisms: human resources, finance, operations, production, materials, and engineering. After on-site personnel inputs basic data into their computers, the data is then delivered and repeatedly applied. Respective mechanisms mutually retrieve and connect to each other's data, with a checkpoint arranged between any two pieces of data. Through computer logic, data can be automatically articulated and debugged.

NYPCB has also established an internal auditing structure, which can be separated into three major aspects, with the first aspect executed by the Auditing Office under the Board of Directors, the second aspect routinely and professionally audited by FPG Headquarters, and the third aspect voluntarily and routinely audited by the Company's respective department.



#### 2-4 Shareholders

NYPCB has established a spokesperson and deputy spokesperson system, and a unit specializing in handling investor affairs. The following communication channels have also been established for shareholders and institutional shareholders.

#### 1 Shareholders

- A. Annual general meeting
- B. Compile annual financial report and distribute it to shareholders during the annual general meeting
- C. Shareholders can make inquiries through phone calls and emails.

#### 2 Corporate shareholders

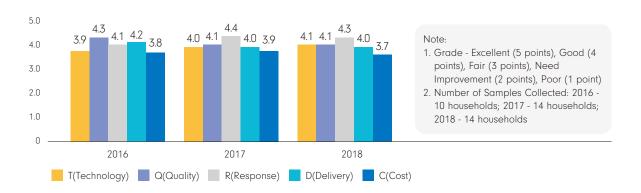
- A. AnParticipate in investment seminars in Taiwan and overseas.
- **B.** Participate in investor forums held by securities companies (not held regularly).

### 2-5 Customers

#### 1 Customer satisfaction surveys

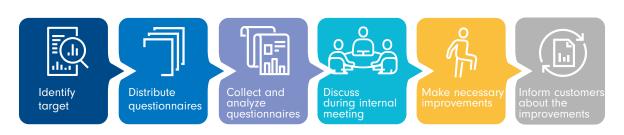
NYPCB regularly conducts customer satisfaction surveys to investigate aspects such as technology, quality, response, delivery, and cost. Each individual department would communicate with customers regarding items that scored poorly and propose improvement plans to customers based on the analysis results in order to raise customer satisfaction. Please refer to the questionnaire results over the past three years, in which the average score of 2018 reached more than 4 points, which indicates that our customers are satisfied with the performance of our company.

#### Customer Satisfaction Questionnaire



We dedicate the improvements of internal production process and operations as well as customer satisfaction with PDCA ( Plan,Do, Check and Action ) management model in all activities to ensure all departments have a common principle to follow.

#### **Customer Satisfaction Process**



#### Customer Service

NYPCB has always been a trustworthy business partner who has grown side by side with its business partners. To enhance customer service, we are not only providing products with quality that exceeds customer expectation, but also establishing an outstanding communication system to provide timely responses to customer requests, and to ensure on time delivery of shipments.

Furthermore, in the aspect of understanding customers' valuable evaluation, the sales visit customers regularly to communicate and exchange opinions to obtain information about the latest product in the market. Such communications with customers are valuable information which will be taken into consideration of the company's operation.

NYPCB has strived to maintain good relations with its customers with the aim to increase its competitiveness along with the customers, raising customers' loyalty, developing potential customers, and achieving final goal- enlarge the company's profit.

#### 3 Fair and reciprocal principles

Based on our business values of integrity and reciproc-

ity, our company is personally led by the senior management. From contract establishment, qualification, manufacturing, marketing, customer service to customer complaint handling, we apply this principle to all our customers. At the same time, we also strictly follow the international quality standards to provide our customers with fast service and good quality. Actual measures taken are provided below:

- **A.** Provide educational training to staff regularly to ensure understanding customer needs and related regulations. Before selling any product, our staff should communicate with our customers on product content and relevant risk to provide the most suitable products.
- **B.** Business and customer service units are required to collect information related to customer satisfaction on TQRDC (technology, quality, response, delivery, and cost). These units are also asked to discuss such issues and improvement measures with the relevant manager. Through a dedicated counseling window, the Company's official website and multiple complaint channels, our customer's rights are fully secured.
- **C.** Internal and external supervision and operations are regularly carried out to ensure the implementation of company policy as well as fair and reciprocal principles.

#### 2-6 Supplier and Contractor Management

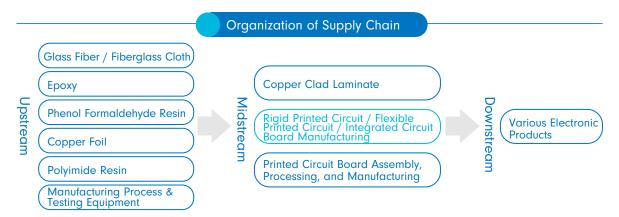
#### Supplier Management

NYPCB executes procurements through "public bidding" via the Formosa Plastics Group's online platform, where suppliers can request quotes and make offers, place orders, and make deliveries.

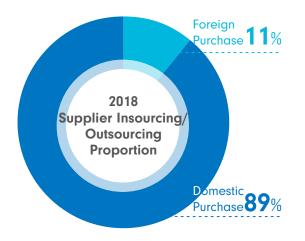
The Company considers its suppliers as important partners, and therefore, it strives to facilitate long-term cooperation with them to establish a stable and sustainable supply chain. Except to ensure the supplied product quality, delivery time, and price, the Company shall also urge the environmental protection, safety and sanitation improvement, emphasis on human rights, to jointly perform the corporate social

responsibility, and require the supplier signing the "Letter of Commitment of Supplier of Formosa Plastics Group for Corporate Social Responsibility", and make the risk management and business continuity plan.

NYPCB positively implements and practices material purchasing localization in order to reduce unnecessary air transportation and ocean freight costs as well as the related carbon footprint generated from transportation. The local raw material purchasing rate increased from 43.0% in 2017 to 62% in 2018 (note: the raw materials for primary customers' appointed high-level products are still imported from abroad).



Note: Among the company products that use raw materials from the upstream supply chain, copper foil accounted for about 30% of the volume, build up film accounted for about 10-15% of the volume, and the rest belongs to related chemicals and consumables.





#### A. Quarterly Operation Evaluations

Before introducing new materials and developing corresponding products, NYPCB evaluates its operations with the senior management of key suppliers every month and discusses the supplier's performance with regard to technology (T), quality (Q), response (R), delivery (D), costs (C), environment (E), and finance (F). Meanwhile, new suppliers are also required to receive ISO9000 or ISO14000 certificates. The company evaluates suppliers through these qualities and requires that they make continuous improvements to meet NYPCB's supplier requirements. The suppliers are evaluated and published in quarterly evaluation reports every year, which leads to the replacement of unsuitable suppliers and ensures maintenance of long-term partnerships with outstanding suppliers. Suppliers are required to make improvements based on NYPCB's evaluation reports and are regularly audited by the Company to ensure that necessary improvements have been made. The reports are reviewed by the procurement department for future reference.

#### B. Management System Certification

NYPCB requires that its raw materials suppliers follow the TS 16949 standard. Suppliers are also required to achieve ISO 9001 and other international certifications

#### C. Evaluation

NYPCB visits its major suppliers every year according to its annual plan and review supplier quality. As a result, suppliers are required to make improvements if non-compliances are found. The suppliers would be given a clear schedule and target to make improvements.

In accordance with RBA audit standards, the audit rate of the past two years has been greater than 80%. The Company listed 9 significant manufacturers for auditing in 2018, of which a 100% audit rate was achieved. In addition, all audit shortfalls have been successfully addressed.

The company regularly audits and evaluates its suppliers and requests its suppliers to comply with RBA requirements and other relevant environmental regulations, as well as to carry out self-assessments and on-site audits. On-site audits emphasize quality systems, human rights and working conditions, environmental safety, green partnerships, etc. of actual operation status. Any of the aforementioned issues that do not meet the established criteria will be asked to create an improvement plan. The company will also provide suppliers with necessary assistance in order to promote corporate social responsibility.

#### D. Suppliers and Labor Rights

The Responsible Business Alliance has been promoting labor rights in the electronic industry and suppliers in recent years. NYPCB has adopted the RBA Code of Conduct and requires its suppliers to meet the code's requirements in environmental protection, health and safety, labor rights, and labor conditions.

#### E. Conflict Minerals Managemen

NYPCB requests its suppliers to promise not to use mineral and metals mined from conflict zones. Suppliers must disclose the information of its smelters to obtain a new material certificate prior to commencement of supply. Suppliers who do not provide complete information or work with illegal smelters shall be replaced. Smelters are encouraged to participate in the Conflict-Free Smelter Program (CFS) as a way of achieving third party certification.

# F. AEO (Authorized Economic Operator) Supply Chain Management

The Company applied for AEO certification from Customs Administration in order to ensure that the supply chain environment of the Company can swiftly pass through customs during trading operations, thus providing customers with rapid delivery. The Company became an official AEO member on December 20, 2013.

#### Contractor Management

#### A. Contractor Evaluation

Any contractor who intends to work with the Company will need to apply to the general management office bidding & contracting center of Formosa Plastics Group via a physical application for evaluation.

An on-site evaluation may be necessary, and once the contractor passes the evaluation and is on file, it will be included as a partnering contractor for further cooperation.

In the construction process, if there are subsequent delivery (construction) delays, poor quality control, violation of construction safety, or environmental protection and of other regulations, after the personnel report, and after the manufacturer confirms, it will be kept on record into the computer, and the system will automatically run the evaluation mechanism on the contractor. If the monthly evaluation score of a contractor is lower than 74 points, the contractor will be excluded from future cooperation. This is to ensure the Company's long-term partnering contractors are of high quality.

#### B. Contractor Management Tiered System

To reinforce safety management, control the quality of contractors, improve contractors' occupational safety standards, and prevent their employees from injuries, the Company implemented a tiered system for contractor management.

The general management office bidding & contracting center is responsible for collecting information about contractors and inspecting their workshops, equipment and workplace safety measures, techniques, etc. Contracted projects are used to rate their capabilities and performances according to three levels: A, B, and C. The cost of safety and health management is also included as a compulsory item when the engineering budget department sets its budgets. Contractors must make a list of equipment they will use to ensure safety and maintain health. The list will be included in their contracts with the Company to ensure the costs will be included in the budget. To avoid the possibility of the budget department's overlooking the health and safety management costs, the Company's computer system monitoring and controlling budget planning would automatically include the health and safety management costs. When the bidding and contracting center makes a price inquiry, the cost of health and safety management cannot be lower than the budget. This is to prevent contractors from sacrificing health and safety management for the sake of winning a bid.



### Prior to the construction

Outsourcing Outsourced

- · Place outsourcing order
- Provide a construction safety checklist. Establish workplace safety measures and identify potential risks.



**Budget** 

Planning

**Design Class** 

- · Include safety measures into the construction plan and budget
- Evaluate the necessary safety equipment on the construction site and plan them into the budget as a reference for the supplier when giving a quote.



e Machine nd Equipment Inspection

- Inspect hazardous equipment.
- Inspect electronic machinery.

Construction Supervision

**Daily Toolbox** 

Meeting

Promote construction safety.



**Safety Notice** 

for Contractors

Construction

Supervision

3

• After finalizing the bidding for construction, inform the person in charge of the construction site and the contractor's health and safety management personnel of safety regulations and have them sign the agreement.

 Make sure the construction personnel have completed the educational training on health and safety and have been entered into the computer system for managing purposes.

• The person in charge for the construction site should fill out the form assessing occupational injuries and illnesses for the construction personnel and submit the form.

• The contractor should submit a case study on Job Safety Analysis (JSA), provide educational training for the construction personnel, and sign to state completion.

Safety supervisor

- · Inspect and supervise safety facilities and devices during construction.
- Prohibit construction in unapproved areas and control entry

### Factory construction safety personnel

· Daily spot check on safety facilities and devices for construction sites and construction staff.

### Construction supervision

· Inspect and supervise safety facilities and devices before, during, and after construction.

Apply for Entry Permit Construction Supervision



Issuance of

**Entry Permit** 

**Guard Unit** 

Construction

**Application** 

Construction Supervision · Contractors that are computerized can apply for the entry permit from the Internet.

can apply through the construction management department.

Contractors who are not yet computerized

• Provide contractors a construction

Check in the computer system for construction personnel's safety educational training before entering the site (using employee number).

safety notification form (with contract number) and ask them to sign.

• Fill out the application form for work safety permit and submit the form for approval.

· Assign construction supervisor.

**After** construction

Confirm After Construction

- · Make sure the working area is cleaned.
- Make sure industrial waste is properly disposed.

### Construction supervision

Outsourcing unit

• Check on the daily attendance of every construction staff.



Outsourcing Unit

6

Assign safety supervisor







# 5 ENVIRONMENTAL SUSTAINABILITY



### • Identified Material Aspects and Management Approach

	3 11
Corresponding Material Issues	Water use and wastewater discharge management, air pollutant management, waste management, and greenhouse gas emissions management
Significance	<ol> <li>Water use and wastewater discharge management: This represents the level of attention an enterprise pays to resource utilization and the reduction of the impact of wastewater on the environment.</li> <li>Air pollution control: This means to reduce substances that directly or indirectly impair human health or the living environment.</li> <li>Waste management: This means to reduce waste and make the most effective use of resources and materials</li> <li>Greenhouse gas emission management: This means to lower electricity consumption and reduce greenhouse gas emissions.</li> </ol>
Policy and Commitment	To cherish resources, eliminate pollution, and reduce waste. To implement safety and health control to prevent hazards.  To comply with regulations and standards. To consult and communicate with neighbors for building good relationship.  To understand responsibilities and respond to risks. To trace the root and cause of a problem, and continue to improve.
Responsibility	Safety and Health Environment Team
Resource	Manpower: Safety and Health Environment Team, the Safety and Health personnel in each factory and division.
Action	<ol> <li>Integrate regulation requirements and corporate management policies to set up an environmental management system which is in line with the clauses prescribed in the ISO14001 Standard.</li> <li>Promote wastewater census and re-classify wastewater for pipeline adjustment in order to improve the overall effectiveness of wastewater treatment.</li> <li>Set up an instant text notification system for informing about abnormal pH level in the water tower.</li> </ol>
Communication Channel	Participate in government sessions with regard to environmental protection     Participate in the circuit board association and share and learn information related to system management technology with other industrial members.
Evaluation Method	<ol> <li>Corrections made to be in line with government regulations and customer requirements.</li> <li>Inspection made in accordance with the Nan Ya Printed Circuit Board Corporation's environment concern and assessment performed in accordance with regulations regarding environmental impact assessment procedures.</li> </ol>
Target (Short/Medium/ Long-Term)	<ol> <li>Short-term (within 3 years): To achieve the rate of passing the audit of competent authority at 100%.</li> <li>Medium and long term (3~7 years):         <ul> <li>To comply with all government environmental regulations and customer requirements.</li> <li>Zero environmental protection ticket.</li> <li>To improve management systems and facilities towards the direction of sustainable development of the Corporation.</li> </ul> </li> </ol>

Overall Performance

From 2017 to 2018: The rate of passing the audit of competent authority: 100%.



## **3-1 Commitments to Environmental Sustainability**

### 1 Environmental Protection Policy

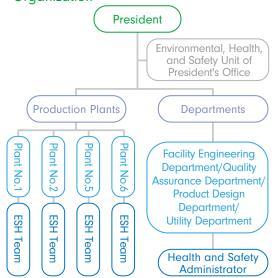
NYPCB is aware of the importance of the environment for human beings. It believes the environment is as important as the economy, and has actively participated in and promoted various environmental protection programs. Measures such as procurement of green raw materials, green product design, production process improvements, factory management, the process of packaging and shipments, and so on have been implemented. Through setting up performance evaluation indicators, annual targets, and a strict monitoring system on energy and resources consumption, NYPCB has continuously made improvements and upheld its founder's philosophy to strive for good deeds and perfection. To fulfill social responsibility, control risks, reduce energy consumption and emission, and protection of the environment, NYPCB has established the following environmental, safety and health policies:

1. Cherish resources ,2. reduce pollution and wastes,3. ensure safety and health, 4. prevent accidents. 5. Abide by the law,6. follow standards, 7. facilitate communication, 8. consult and maintain good neighborly relations. 9. Shoulder responsibility, 10. prepare for crisis, 11. discover the truth, 12. make improvements continuously.

# A. Organization Chart and Responsibility of the FHS Unit

To ensure safe, healthy, and environmentally friendly management and sustainable development, the Company has established a SHE unit that reports directly to the President's Office. In 2009, the SHE unit was evaluated by the Council of Labor Affairs (Executive Yuan) as the first-tier Labor SHE Management Unit. On the other hand, the general manager is

### Environmental, Health and Safety Organization



responsible for integrating and stipulating company policies and standard operating procedures, while providing relevant services to external parties. Each plant has established an environment and safety department responsible for the plant's internal safety, sanitation, and promotion of environmental protection through the monthly "safety and sanitation management meeting", monthly "environmental protection and energy saving meeting", quarterly "safety and sanitation committee meeting" (the required rate of labor representatives is at least 1/3 and we have reached 47%), and the annual "SHE Management Review Meeting" shall be held to discuss and review workplace safety and health, with the goal of eliminating potential accidents and hazards and achieving zero pollution.

# B. Environmental, Health, and Safety Management System

NYPCB has strived to protect the environment and ensure the safety of employees, and promote their health. The Company has achieved the ISO 14001 certification of the environmental management system in November 1996, and passed the OHSAS 18001 assessment in 2001. Since then, NYPCB has established an EHS Management System to promote and manage the environment and occupational health and safety within the company. In 2007, the Company consulted the TOSHMS regulation and integrated it into its existing Environmental, Health, and Safety Management System. The TOSHMS certification has also been achieved, and continues to enhance its comprehensive care and management methods to its stakeholders.

NYPCB formulated the Environment, Safety, and Health Management Manual pursuant to the content of ISO 14001, OHSAS 18001, TOSHMS, and RBA, and implemented it after training to ensure that all of its employees possess the proper knowledge and skills to carry out the environment, safety, and health policies of the Company.



### C. Management review operation procedure

In order to reinforce the company constitution, promote its administrative and operation capacity, establish a reasonable environment, safety, and health management system, and effectively develop activities related to environment, safety, and health targets, NYPCB continues making improvements to ensure the applicability, applicableness, and effectiveness of environment, safety, and health management.

NYPCB annually holds the "environment, safety, and health management review meeting" to review and assess the environment, safety, and health management plan of the previous year (tracking measures), the performance of target and object implementation, and target achievement degree, as well as set the annual environment, safety, and health management targets, target values, and the environment, safety, and health management plan, and the ESH team shall supervise the relevant implementation departments. We shall manage the effects of industry on the environment with strict management methods to fulfill our social responsibility and create a win-win situation.

### ISO 14001 Certificate





### OHSAS 18001 and TOSHMS Certificate





### 2 NYPCB environmental protection history

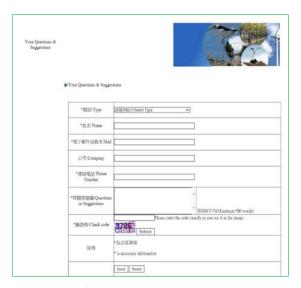
NYPCB has implemented various relevant environmental protection jobs in pollution prevention, operation management, monitoring management and reporting. No violation of any environmental protection regulation has been made, nor has any major leakage that damages the environment occurred in 2018. The Company has participated in the government's environmental improvement programs, promoted waste reduction, reuse of resources, and reduced green house gas emissions. Furthermore, the Company has been developing eco-friendly products and managing them to follow the growing eco-friendly trend.

### S Environmental problem complaint mechanism

NYPCB has set up a feedback mailbox on its global website and stipulated an external complaint and suggestion box in the public relations section, thus allowing for complaints to be delivered to the corresponding functional team for handling depending on the complaint type. The statistics show that no complaints were made regarding external environment problems of the Company in 2018.

NYPCB has also set up a mailbox on the internal website to receive employee feedback. The statistics show that no complaints were made regarding internal environment problems of the Company in 2018.

### Internal/External Feedback Mailbox



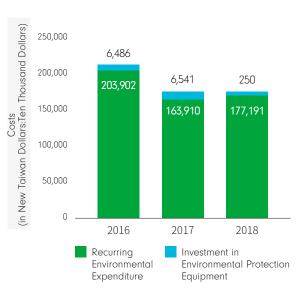


### **3-2 Environmental Accounting**

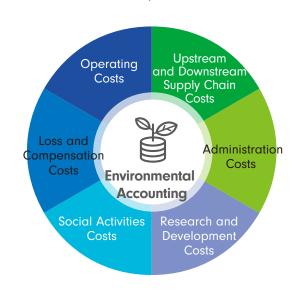
NYPCB has computerized its management and operations system. To computerize its environmental management, the Company has integrated Environmental Accounting to its systems and to control relevant expenses and evaluate costs, analyze the cost effectiveness of environment protection measures, and inform stakeholders of NYPCB's contributions to environmental protection accurately and clearly.

The accounting system identifies and quantifies the impact of corporate operations on the environment as well as the cost of measures undertaken by corporate operations to alleviate, reduce or prevent their environmental impact. NYPCB adopted the accounting system in 2008, and has divided its environmental expenses into six categories per the diagram below in accordance with environmental accounting. According to the data, the Company demonstrates having the following environmental protection expenses from 2016 to 2018. In 2018, investment in environmental protection totaled NT\$ 177,441,000.

### Statistics of Environmental Protection Expenses in Recent Years



### Environmental Expenditure



### Green Environment Code

XXXX	XXXX Non-Environmental Costs
E111	E111 Air Pollution Control Costs (including acid rain prevention)
E112	E112 Water Pollution Prevention and Control Costs
E113	E113 Soil and Groundwater Pollution Prevention Costs
E114	E114 Noise and Vibration Control Costs
E115	E115 Land Subsidence Control Costs
E116	E116 Toxic Substance Pollution Control Costs
E117	E117 Soil and Water Conservation
E118	E118 Ocean Pollution Prevention Costs
E121	E121 Metigating Climate Change Costs
E122	E122 Metigating Ozone Depletion Costs
E12Z	E12Z Other Global Environmental Protection Costs

# 3-3 Water and energy conservation and greenhouse gas reduction

### 1 Environmental Data

NYPCB's total input (raw materials and energy and water resources) and total output (greenhouse gases, air pollution wastes, and wastewater) for 2018 are shown in the following diagram.

### Material Analysis Flow Chart

Energy					
LPG	1×10°/KJ				
Gasoline	2×10 <sup>7</sup> /KJ				
Diesel Fuel	9*10 <sup>8</sup> /KJ				
Electricity	319,042 / MWh				
Steam	87,182 / ton				

	Water
Tap Water	3,190,801 / ton
Clear Wat	er 474,651 / ton
Recovered Water	963,524 / ton





Greenhouse Gases					
Direct Emissions	5,514 / tonCO <sub>2</sub> e				
Indirect Emissions	332,343 / tonCO <sub>2</sub> e				

Wastewater					
Treated Water	3,576,875 / ton				
Effluent Water	2,613,351 / ton				
Recovered Wat	ter 963,524 / ton				

Waste	
Total Waste	12,541 / ton
Outsourced Disposal Waste	1,425 / ton
Recyclable Waste	11,116 / ton

	All I Ollotants
VOCs	46.2 / ton
TSP	0.7 / ton

Note:

- 1. VOCs stands for Volatile Organic Compounds
- 2. No exhaust emissions of nitrogen oxides, sulfur oxides and ozone-depleting substances.



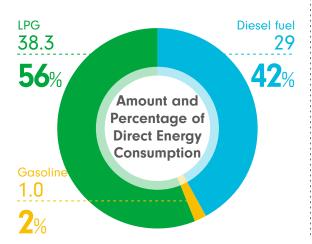
# 2 Improve energy management and reduce energy consumption

### A. Energy management

Greenhouse gas emissions have become one of the most important issues on Earth. Since energy use generates carbon dioxide and causes global warming and climate change, effective management of energy use has become NYPCB's priority. The Company's energy usage includes fossil fuels, and purchased steam and electricity, we also keep track of usage.

### B. Direct energy consumption

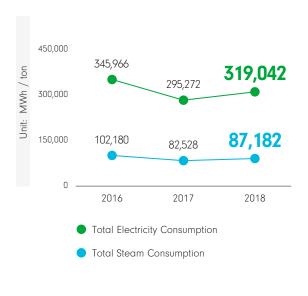
Most of the fossil fuel consumed by NYPCB in 2018 was used for the emergency power system, forklift trucks, company cars, firetrucks, and the cafeteria (kitchen). Gasoline, liquefied natural gas, and diesel fuel accounted for 2%, 56% and 42% total fossil fuel consumption, respectively.



### C. Indirect energy consumption

NYPCB's production focuses on printed circuit boards, which are mostly powered by purchased electricity and steam. The two energy sources are also the biggest source of the Company's greenhouse gas emissions (over 98 percentage in 2018) and are purchased from Nan Ya Plastics Corporation's Jing Hsin ans Sulin plants.

### Out-purchased Electric Power and Steam Usage Statistics in Recent Years



### D. Reduce energy consumption

NYPCB has strived to reduce energy costs and increase energy efficiency. Annual environmental management targets and incentives have been established to encourage employees to review and improve the efficiency of their energy usage. In addition, an energy management unit has been established to manage and implement measures, as well as hold monthly energy management meetings to examine whether employees have reduced their energy usage or not.

In 2018 the Company completed a total of 55 energy saving projects, with a daily reduction of 9,569 kilowatt hours and an annual benefit of NT\$ 8,090,000.



### Environmental Management Targets

Туре	Items	2018 Target	2018 Actual Value	2018 Completion Rate	Description
Water conservation	Water consumption per unit of output (ton/NT\$ million)	108.5	127.1	85	Reduced by 2% per year based on actual usage in the previous year.
	Effluent recycle ratio	32.1	26.9	83	Increase by 1% per year based on the actual recovery rate for the previous year.
Energy conservation	Greenhouse gas emissions per unit of output (ton/ NT\$ million)	12.1	11.7	103	Reduced by 2% per year based on actual emissions in the previous year
Waste reduction	Waste produced per unit of output (kg/ NT\$ million)	81.2	79	102	Decrease by 1% per year based on the actual amount generated in the previous year

### Note:

- 1. Effluent recycle ratio= recovery/( Effluent recycle volume+ recovery volume)
- 2. CO<sub>2</sub> suppression volume is calculated based on the emission coefficient conversion as provided by the Jinxing Plant, which is the power supply unit of Nan Ya Plastics.
- 3. The output value is based on the amount of consolidated revenue.

### Power Saving Implementation Completed in 2018

Improvement	Energy saving amount (KWH/day)	CO2 restraint amount (ton CO2/year)	Improved benefit (NTD 1,000/ year)
Processing energy use reduction	on 1,259	430	1,093
Energy management	5,049	1,723	4,171
Public utility efficiency promotic	on 3,260	1,113	2,826
Total	9,569	3,266	8,090

Note: The improved benefit is determined after deducting the improvement equipment investment cost.

### 3 Water resource management and water conservation

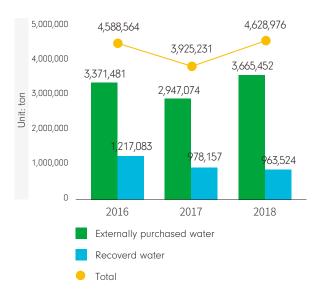
### A. Water resource management

The Company's plant uses water categorized as processing water, whose main sources include tap water, recycled water, and other externally purchased water, but no underground water. Since NYPCB does not use groundwater, it has strived to reduce water consumption by reducing water used during production and recycle the water used in cleaning during production process. The Company has also invested heavily on an effluent recycling and treatment system, and has reduced wastewater in all of its plants. Recycled water that is neutral or alkaline is reused in pollution prevention. Purified recycled water is directly reused by plants and stored at pure water storage reservoirs to reduce water recharge. Water-saving devices have also been installed on the faucets in offices to reduce office water use and cultivate water-saving culture.

NYPCB has established policies to mitigate impact from potential short-term, mid-term, and long-term drought, and to respond to insufficient water supplies, water price hikes, and water conflicts with stakeholders. Water-saving measures have been implemented to reduce consumption and secure water supply. As a result, costs associated with purchased water have reduced in recent years.

# Reduce water consumption during production Reduce office water use Recycle wastewater and purify water Recycle alkaline waste water and reuse it on acidic scrubbers Recycle waste water that is neutral

### Water Consumption Statistics in Recent Years



Note: Externally purchased water is provided by the Jinxing Plant of Nan Ya Plastics.

### B. Water conservation policies yield positive results

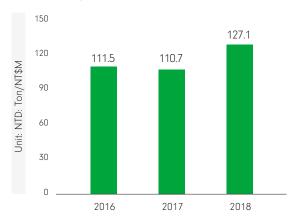
and reuse it for toilet flushing

In 2018, the Company continued to promote water saving improvement measures and completed a total of 7 water consumption deduction projects throughout the year, amounting to a daily reduction of 343 tons and an annual benefit of NT\$ 1,716,000.

### Completed Water Saving Improvement Activities in 2018

Improvement	Water consumption saved amount (ton/day)	Improved benefit (NTD 1,000/ year)
Waste water recovery and reuse	297	1,318
Processing water consumption dedu	ction 46	398

### Trend Chart of Water Consumption of Unit Output Value



### Discharged Wastewater Recovery Rate Trend Chart



# 3-4 Protect the Environment Around Plants

### 1 Air pollution prevention

The main source of air pollutants generated in NYPCB's plant came from the use of neutral, acidic, alkaline chemicals and volatile organic compounds during production processes. These chemicals have been separated by collecting exhausts during the processes. Specific equipment such as scrubbers, bag filters, and activated carbon towers has been installed to handle each type of exhaust. To enhance air quality and eliminate odors around the plant, NYPCB purchased a UV-C reactor and VOC treatment system in 2011, pH monitoring alarm systems for packed towers in 2012 and a high notification frequency continuous pH monitor facility for packed towers to increase the efficiency of exhaust reduction. The Company also ensures the equipment are maintained regularly so that they can effectively prevent pollution per the following chart. If new equipment is installed or if existing equipment is upgraded, NYPCB has Environmental Protection Administration-certified companies to test air pollutants in their stacks to make sure air pollution prevention is effective. Past test results show NYPCB's air pollutant emissions are far lower than national emission standards.



### Air Pollution Control Equipment



Scrubber



UVC Reaction Tower

# Exhaust Pollution Prevention Process Emissions Flowchart



 Process Emissions



- Exhaust Classification
- Acid Alkaline Separation
- Decontamination Triage



Collect Partal Exhaust on Comfined Space Exhaust

• Best Contral Equipment



- Daily Inspection and Monitoring
- Regular Maintenance
- Outsource Routine Testing



 Emission Standards Complance





Bag Filter



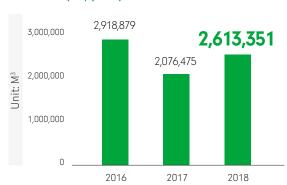
Activated Carbon Adsorption Tower

### 2 Water pollution prevention

NYPCB considered the characteristics of wastewater and the stability and accessibility of wastewater treatment when designing its wastewater treatment procedures and facilities. A comprehensive treatment process, treatment facilities, and wastewater piping system were designed for production lines to effectively treat, recycle, and purify wastewater. Wastewater is stringently and immediately categorized when produced by production equipment and machinery. The water is collected through distribution channels and sent to specific water treatment facilities. The Company tests effluents daily to ensure that the quality of treated water is far lower than national standards. Due to the long-term drought that persisted in the first half of 2015, water restrictions were enacted in Taoyuan District from March to May. With the restricted water supply, the Company internally agreed to postpone the annual repair and maintenance of its wastewater purification and recycling system. Through system overloading operations, the wastewater recycling rate was increased while wastewater effluent was decreased in order to reduce the overall wastewater discharge.

The company's factories are located in or near class B industrial land set aside for industrial purpose only and thus are not within any ecological protection zones. NYPCB pledges to persistently improve its production processes and equipment to reduce wastewater discharge and enhance wastewater treatment to reduce its impact on the environment.

### Wastewater Discharge Amount in Recent Years (M³/year)



Plant	Factory location	Drinking Water Source and Water Conservation Area	Dams and Reservoirs	National Parks		Nature Reserve	Protected Coastline Zone
Jinxing plant	Downstream sections of Nankang River	X	X	X	X	X	X
Shulin plant	Downstream sections of Dahan River	X	X	X	X	X	X

Note:  $\lceil X \rfloor$ : the company is not in the above protected area.

### 2018 Wastewater Quality Evaluation Results

			Regulations		Test Results	Does the Sample Comply with	
Plant	Test Item	Unit	and Standards	Minimum	Average	Maximum	Water Quality Standards?
Jing Usin	рН	_	6~9	6.3	7.0	7.5	<b>~</b>
Jing Hsin No. 1	COD	mg/L	<120	19.6	47.9	72.8	<b>~</b>
Wastewater Treatment	Suspended Solids	mg/L	<50	1.3	4.6	6.4	<b>~</b>
Plant	Copper Ions	mg / L	<3	0.4	0.4	0.5	<b>~</b>
Jing Hsin	рН	_	6~9	7.3	7.6	7.9	<b>~</b>
No. 2 Wastewater Treatment Plant	COD	mg / L	<120	13.5	17.0	19.2	<b>✓</b>
	Suspended Solids	mg / L	<50	1.4	2.6	3.9	<b>~</b>
	Copper lons	mg / L	<3	0.3	0.5	0.7	<b>~</b>

### Photographs of Wastewater Treatment Equipment







biological

coagulation and sedimentation

chemical reaction

### 3 Waste management

NYPCB has established multiple waste collection points within its plants to reduce wastes and make the best use of its resources and materials. The Company also continuously improves its production processes and operations for this purpose. For the first is reducing wastes from the beginning of the process . Second is considering reused. And the last, categorizing and renew them to recycle for the resource.

Certified Taiwanese recyclers have been commissioned to handle its wastes, which are mostly treated at certified waste treatment plants in Taiwan. Only a few of them have been treated abroad. Regarding domestic waste management contractors, the company follows up the hired contractor to ensure that they properly manage the waste. Those that have been transported to other countries have obtained legal permission from those countries and treated in accordance with local laws.

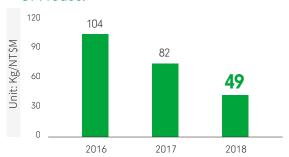
### Waste Treatment Methods and Quantity

Treatment	General Bus	siness Waste	Hazardous Busir	ess Waste (Tons)	Total		
Methods	weight(Tons)	Percentage(%)	weight(Tons)	Percentage(%)	weight(Tons)	Percentage(%)	
Incineration	1,310	10.4%	92	0.7%	1,402	11.2%	
Landfill	23	0.2%	0	0.0%	23	0.2%	
Recycling	145	1.2%	348	2.8%	493	3.9%	
Others	743	5.9%	9,879	78.8%	10,623	84.17%	
Total	2,222	17.7%	10,319	82.3%	12,541	100%	



Regarding resource recovery effect, through the continuous promotion of relevant waste reduction measures, the amount of unrecovered waste in terms of the unit output value of the Company (kg / NT\$ 1 million) has reached the target for three consecutive years as of 2018. We shall continue to promote various waste reduction and resource reuse measures in order to reach our targets to reduce the waste occurrence amount.

### Non-recycled Waste Disposal per Unit Of Product



### Wastes Categorizing and Collecting





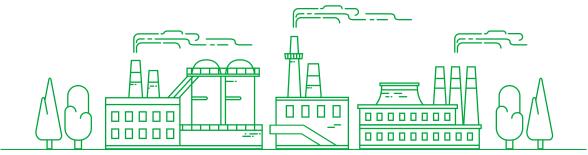
### 4 Examination and reduction of greenhouse gas emission

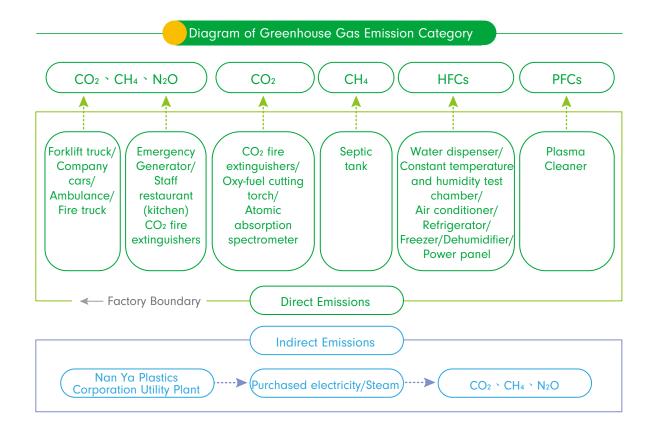
Global warming and climate change has become a key obstacle for sustainable development. Increase of greenhouse gases raises temperatures around the world and causes abnormal climate changes and unpredictable impact on the environment. NYPCB has recognized the importance of these issues and has conducted comprehensive examinations and evaluation of its greenhouse gas emissions since 2005 in accordance with the principles of ISO 14064-1 to reduce its greenhouse gas emissions and achieve sustainable development. As an electronic processing industry, over 95% of NYPCB's greenhouse gas emissions were generated by the indirect discharge of its purchased electricity. Reducing electricity consumption thereby is the most effective way to reduce greenhouse gas emissions. The Company also adopted the Plan-Do-Check-Act management model to improve its facilities and reduce its emissions continuously and increase competitiveness.

### A. Evaluation

The main source of greenhouse gas emitted by NYPCB came from indirect discharge of electricity use at its plants. To reduce greenhouse gas emissions, alleviate global warming, and fulfill its responsibilities as a global citizen and abide by the Kyoto Protocol that became effective in 2005, the Company has planned and promoted the reduction of greenhouse gas emissions and controlled its greenhouse gas source. It has also set reduction targets based on the plan every year, implemented measures to reduce energy consumption, and reviewed the results on a monthly basis. NYPCB also inspects the amount and quality of its direct and indirect greenhouse gas emissions (Scope 1 and 2) in accordance with the ISO 14064-1 standard. Scope 3 is only examined for its quality since it involves employee transportation between home and work and for business. NYPCB has also established a ridesharing system for business trips, encouraging the use of video conferencing and production support to reduce the exhaust generated from the vehicles employees used for transporting goods or commuting.

Note: Scope 3 refers to the exhaust generated by employee commuting and business trips, outsourced waste treatment, and contractor vehicles.

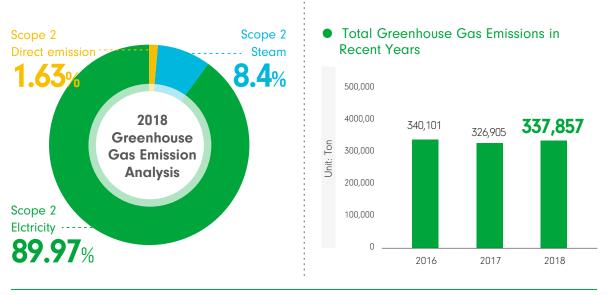




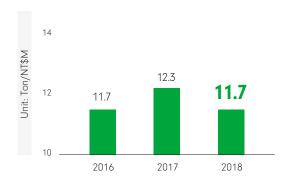
### B. Emission analysis

According to ISO 14064-1 standards, the total GHG emissions of the entire Company in 2018 totaled 337,857 tons of  $CO_{2e}$ , of which 5,514 tons of  $CO_{2e}$  were Scope 1, occupying 1.63% of total emissions, and 332,343 tons of  $CO_{2e}$  were Scope 2, occupying 98.37% of total emissions. The emissions load statistic data is calculated based on the coefficient of 2018, and it is estimated that the emission load statistic data will be verified by a third-party external verification organization before July 2018. As shown in the following table, out-purchased electric power and steam utilization is the main emission source, and the electric power and steam used in NYPCB are purchased from NPC Jingxing Plant . Therefore, in order to effectively restrict  $CO_{2e}$ , the Company should start by saving electric power.

The company's total greenhouse gas emissions (tons/year) in 2018 increased by 3% compared to 2017, mainly due to increased production, resulting in increased steam and electricity use, resulting in increased greenhouse gas emissions.



### • Greenhouse Gas Emission Trend Chart of the Unit Output Value



The company's unit output value of greenhouse gas emissions (ton / million Taiwan dollars) reached the target value in 2018 (based on the actual annual emissions of the previous year as a benchmark of 2% reduction), we will continue to promote energy-saving improvement measures in the future, Efforts to improve energy efficiency and reduce greenhouse gas emissions.

### Green supply chain

Nanya PCB Corp. takes client health and safety very seriously at every one of its stages, from the procurement of raw materials to the sale of products. In order to meet the demands of both market trends and downstream customers, the company is moving towards manufacturing non-toxic green products that conform to EU RoHS regulations. Nanya PCB Corp. has also met the requirements of product statement and third party assessment report from the top 20 suppliers in order to ensure that new generation circuit boards are used in green appliances, thus further reducing the environmental burden.

### A. Management of green products

NYPCB introduced a hazardous material management system in 2001, and has been promoting the concept and certification of Green Partners. The Company has since conducted internal audits for this purpose. To promote the concept of Green Partners, the Company established a Green Partner standard procedure and began implementing waste reduction plans and developing a hazardous materials management system in 2004, and regularly reviewed their enforcement.

- 2001 Introduced the concept of Green Partners and defined hazardous materials.
- 2004 Established Green Partner SOP and updated relevant information.
- 2005 Achieved Green Partner certification. (2005-2007)
- 2006 The EU established Restricted of Hazardous Substances (RoHS) Directive
- 2008 Achieved Green Partner certification. (2008-2010)
- 2009 Developed and adapted a RoHS management system
- 2010 Achieved Green Partner certification. (2010-2012)
- 2011 Installed x-ray fluorescence devices to detect hazardous materials in products
- 2012 Achieved Green Partner certification. (2012-2014)
- 2013 Passed the RBA Audit Standards (Product Content).
- 2014 Received the customer's green partner certificate (2014 2016).
- 2015 Passed the RBA Audit Standards (2015-2017).
- 2016 Received the customer's Green Partner certificate (2016-2018)
- 201 Received the customer's Green Partner certificate (2018~2020)

NYPCB has been promoting green procurement and has required its raw material suppliers to provide written assurances to ensure their products do not contain hazardous materials. They are also required to provide annual test reports to prove their products meet the requirements of customers and are in compliance with relevant laws.



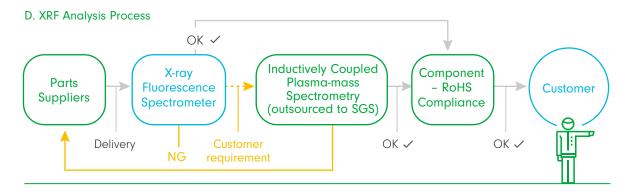
NYPCB has produced documents and designed management principles for its green partners and effectively monitored the sources of its raw materials and other relevant materials to make sure they are in compliance with RoHS, REACH, international laws, customer requirements and the standards of green products, and to reduce their impact on the environment.



### C. Hazardous Substance Free policies

NYPCB has established a Hazardous Substance Free system and required its green partners to comply and enforce it:

The Company has set up groups and specified their responsibilities to manage green partners effectively. Its environmental safety and quality assurance units are responsible for promoting green products and ensuring they comply with relevant laws and customer requirements. Other relevant departments were required to integrate the system into their operations in compliance with NYPCB's HSF management target.



### E. XRF system can detect and measure hazard element accurately

The XRF system can accurately measure hazardous substances such as Cd, Pb, Cr,Hg, Br, and Cl. The system helps NYPCB to meet customer requirements to include such data in shipment reports,in order to be in compliance with EU RoHS regulations.

### Hazardous Material Elemental Table

Hazardous	Analytical Pattern						
Materials	Shipment Analysis	SGS Analysis					
Cadmium							
Lead	X-ray Fluorescence Spectrometer	Inductively Coupled Plasma- mass Spectrometry Analysis					
Mercury							
Hexavalent Chromium	X-ray Fluorescence Spectrometer	Use UV/VIS Spectroscopy to Measure Absorbance of Liquid Samples					
Halogens – Chlorine Halogen - Bromine	(analyzes chrome)	Ion Chromatography Analysis					

### F. RoHS regulations and product packaging

(A) Raw materials produced in compliance with RoHS regulations: All raw materials used by Nanya PCB Corp in the manufacturing of all its products (ABFS, PCB, PPS) conform to RoHS regulations through the management of suppliers.NYPCB has monitored its suppliers to ensure the raw materials they supply are RoHS compliant. The elements that RoHS bans are cadmium, lead, mercury and mercury compounds, Chromium VI and Chromium compounds, and PBB and PBDE. Furthermore, RU published RoHS 2.0 instructions on December 17, 2014, adding four phthalates (DEHP, BBP, DBP, and DIBP) to the banned substance list, and the Company has listed them in its control scope.



### G. SGS product testing (Frequency:Per year one time)

All of NYPCB's products are in compliance with SGS standards and do not contain materials hazardous to the environment.

### **Compliance Certifications**



# 測試報告

**Test Report** 

號碼(No.): CE/2017/11937 日期(Date): 2017/01/17 頁數(Page): 2 of 22

為亞電路板股份有限公司 NAN YA PRINTED CIRCUIT BOARD CORPORATION

桃園市蘆竹區南炭路一段338號

NO. 338, SEC. I, NANKAN RD., LUJHU DISTRICT, TAOYUAN CITY 338, TAIWAN

测试结果(Test Results)

测试部位(PART NAME)No.1 : 綠色基板 (GREEN SUBSTRATE)

测试项目 (Test Items)	単位 (Unit)	测试方法 (Method)	方法債刑 極限值 (細L)	結果 (Result) No.1	飛住 (Limit)
絲 / Cadmium (Cd)	mg/kg	参考IBC 62321-5 (2013), 以底應與合 電景原子發射光錯儀檢測, / With reference to IBC 62321-5 (2013) and performed by ICP-AES,	2	n. d.	100
∯ / Lead (Pb)	mg/kg	参考IBC 62321-5 (2013), 以底應無合 電景原子發射光錯儀檢測, / With reference to IBC 62321-5 (2013) and performed by ICP-AES,	2	n. d.	1000
张 / Mercury (Hg)	mg/kg	参考IBC 62321-4 (2013), 以底應無合 電景原子發射光譜儀檢測, / With reference to IBC 62321-4 (2013) and performed by ICP-AES.	2	n. d.	1000
六價絡 / Hexavalent Chromium Cr(VI)	mg/kg	多有IEC 62321 (2008)。以UV-VIS檢 例, / With reference to IEC 62321 (2008) and performed by UV-VIS.	2	n. d.	1000
全集辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	多考US EPA 3550C (2007), 以淮相層 村/質錯儀檢測, / With reference to US EPA 3550C (2007), Analysis was performed by LC/MS.	10	n. d.	-
全集辛酸 / PFOA (CAS No.: 335-67-1)	mg/kg	多考US EPA 3550C (2007), 以液相層 析/質錯儀檢測, / With reference to US EPA 3550C (2007), Analysis was performed by LC/MS.	10	n. d.	-

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SGS Taiwan Ltd. 台灣核粉并放映台省限公司

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### 3-5 Greening and Tree-planting Activities Around Plants

NYPCB has designed a comprehensive greening plan for its limited land resources. The plants and flowers planted in the Company include tropical foliage such as Chinese Banyans, Royal palm, Formosan Nato Tree, Chinese rain tree, weeping fig, Buddhist Pine, Blackboard tree, Indian rubber bush, Madagascar Almond, Common Garcinia, Sea Fig and cotton tree, and shrubs such as Pink Ixora, Rhododendron, Golden Dewdrop, Chinese hibiscus, China rose, umbrella tree and Golden Banyan tree as well as seasonal plants such as Impatiens walleriana, scarlet sage, Wax Begonia, petunia, New Guinea Impatiens, Torenia, and Egyptian Starcluster.

The greening plan divided the Company into three zones, the administrative zone, production and plant zone, and the dormitory and living zone. The 30-year-old Chinese Banyan trees in the plants and the habitats of wild birds such as wild quail, Chinese Bulbul, and Japanese White-eye have been preserved and protected. The production and plant zone has been afforested. Chinese Banyan trees were planted alone Nanjing 1st Road and Nanjing 2nd Road. The gardens along lanes, according to their sizes and characteristics, were planted with Hoop Pine, Terminalia mantaly H. Perrier, weeping fig, Common Garcinia, and round banyan trees. Seasonal plants and flowering shrubs were planted in front of the plant gate, improving surrounding landscape. To make the three men and women's dormitories in the dormitory and living zone more hospitable and more homely, the plants around these buildings were specially selected. Large tropic foliage such as the blackboard tree and Formosan Nato Tree as well as seasonal flowers and shrubs such as Impatiens walleriana, Bougainvillea, viola and China Rose were planted around these buildings. During their blooming seasons, their flowers are not only pleasant to employees' eyes but also help them to relax.

NYPCB's greening plans at its plants and on its land are as follows:

### 1 Greening

- A.The Chinese Banyan trees that have existed since 1983 when the plants were built will be preserved. The areas that have been left untouched will be planted with blackboard trees, Hoop Pine, and Indian rubber bush depending on the characteristics of the gardens there.
- B.Offer free tree seedlings through government departments such as the department of agriculture and forestry bureau.
- **C.**The gardens that became barren because of heavy shade will be planted with groundcovers
- D.Such as the Singapore Daisy and boat lily to increase NYPCB's ratio of green cover.

### 2 Gardening

- A.NYPCB has been growing its own seedlings since 1995 and has produced plants and flowers that are used in the gardens across its plants and buildings. The Company has made its plantation entirely self-sufficient, saving costs of purchasing flowers and plants every season.
- B.The lawns and gardens in the administrative zone were specially designed and are gardened carefully and planted with seasonal flowers and plants.
- C.The miss-planted rate of seasonal flowers and plants cultivated across the Company is kept below 10%. The percentage of flowers that blooms every season reach 80% and above.

Physical and metal strengths are much-needed in technology industry. The strengths work its best in a workplace that is beautiful, full of culture, leisure, and relaxation. NYPCB's greening management will continue to focus on creating a beautiful environment that values quality of life and nature of the future.

In 2018, the Company autonomously nurtured more than 108,700 seasonal flowers and grasses with daily maintenance costs totaling NT\$ 1,515,000.



Refined landscaping next to the Construction dpartment



Chinese Banyans near the Offices



Plant within the South Kam Road, a corner of the flower bed



Factory production area of seasonal flowers



### • Identified Material Aspects and Management Approach

Corresponding Material Issues	Employees' salaries, benefits, diversity and equal opportunities for the employees, career development and education & training, and occupational health and safety (including industrial and public safety).
Significance	<ol> <li>Employees are the most important asset of the Corporation. The Corporation should endeavor to ensure every employee can work safely and are willing to be fully fledged in contributing their talent. To attract talented employees, the Corporation offers not only stable and competitive salaries, but also a comprehensive training and promotion system in order to fully utilize the work force.</li> <li>Occupational health and safety (industrial and public safety) is to eliminate or reduce workers' casualties as well as the loss in machinery and equipment caused by occupational disasters.</li> </ol>
Policy and Commitment	<ol> <li>To set up reasonable and competitive salary remuneration in accordance with the labor market, establish the employee appeal system, formulate work rules and personnel management rules, and promotes diversified employee care measures.</li> <li>To conduct analysis of the safety of the equipment maintenance work, and improve the alert of the fire alarm mainframe disconnection system.</li> </ol>
Responsibility	The Human Resource Team of President's Office, the Safety and Health Team, Administration Department
Resource	Manpower: The Human Resource Team, the Safety and Health Team, Administration     Department     Funding: Employee welfare fund.
Action	<ol> <li>Establish comprehensive training and promotion development system, sound internal communication mechanism, and regular salary adjustment review mechanism; promote work performance bonus; and hold various employee leisure activities.</li> <li>Participate government forums regarding labor regulations, case studies about the treatment and prevention of occupational disasters and incidences shared by the circuit board association and other businesses in the same industry, and the broadcast of incident cases all across the Taiwan Formosa Group; meanwhile, conduct simultaneous review on existing procedures and make adjustments.</li> </ol>
Communication Channel	Trade union forums, online opinion platform, employees suggestion box, hotline for feedbacks
Evaluation Method	<ol> <li>Employee satisfaction survey</li> <li>Modifications executed in accordance with government labor and safety regulations and customers' requirement, and assessment performed based on Nan Ya Printed Circuit Board Corporation's safety, hygiene, and health risk management procedures.</li> </ol>
Target (Short/Medium/ Long-Term)	<ol> <li>Salary         <ul> <li>Short-term (within 3 years): To achieve women to men salary ratio at 1:1.</li> <li>Medium and long term (3~7 years): To achieve equal pay for equal work at competitive salary levels.</li> </ul> </li> <li>Benefits:         <ul> <li>Short-term (within 3 years): To achieve 9 points in employee satisfaction survey.</li> <li>Medium and long term (3~7 years): To promote employee care plan and promote the development of balance between work, health, and life.</li> </ul> </li> <li>Career development:         <ul> <li>Short-term (within 3 years): To achieve a turnover rate below 1.5%.</li> <li>Medium and long term (3~7 years): To recruit suitable talents for suitable positions, and stabilize manpower status.</li> </ul> </li> <li>Occupational Health and Safety (Industrial and Public Safety): Zero occupational injuries and zero hazards.</li> </ol>
Overall Performance	<ol> <li>Salary ratio of women to men: 1:1.2~1.28 in 2017 and 1:1.2~1.30 in 2018.</li> <li>Employee satisfaction level: 8.53 points in 2017 and 8.71 points in 2018.</li> <li>Turnover rate: 1.2% in 2017 and 0.5% in 2018.</li> <li>Zero occupational injuries and zero hazards:         <ul> <li>(1) 2 cases of disability injury, and 0 cases of disaster in 2017.</li> <li>(2) 2 cases of disability injury, and 0 cases of disaster in 2018.</li> </ul> </li> </ol>

### **4-1 Employment**

Employees are the most important asset of a company. Every company should strive to ensure every employee can work safely and are willing to contribute his/her talent. To recruit talented employees, NYPCB offers stable and competitive salaries and benefits, comprehensive training, and promotion system.

NYPCB selects candidates for positions under the principle of fairness, justice, and equality. Every candidate has equal opportunity to apply for a job. The Company also ensures the personal qualities and ability of its newly-recruited employees fit the requirements of his/her position. Taiwan's Labor Standard Act specifies that employers are not permitted to hire workers aged below 15. Child labor (15 years of age and under 16 years old) and workers between the ages of 16 and 18 are not permitted to carry out heavy or hazardous work. NYPCB has complied with the Responsible Business Alliance(RBA). No child labor is currently employed.

### 1 2018 NYPCB Human Resource Structure

In 2018, the Company's human resources department consisted of 99.9% official staff and 0.1% temporary staff (all 5 staff were on contract including 3 males and 2 females, all working places are Taoyuan factory area), with no part-time employees. The department consisted of 84.8% domestic employees and 15.2% foreign employees (all from Vietnam). The ratio of male and female employees was 2:1, and the average age was 38.7. The average years of service was 14.0 years.

### Official staff structure distribution

Unit: person

							Offit. person
Cate-				,			
gory	Group	Number of People	Percentage	Number of People	Percentage	Total	Percentage
	Managing Directors and Above	-	Percentage         Number of People of Peopl	0.1%			
Position Location Age Years of Academic Service Degree	Executives and Managers	17	0.9%	277	7.5%	294	5.2%
ositi	Supervisors	155	8.0%	406	11.0%	561	10.0%
on	General Staff	1,606	82.8%	2,995	81.3%	4,601	81.8%
	Service Staff	162	8.3%	-	0.0%	162	2.9%
Loca	Taoyuan	1,941	100.0%	3,679	99.9%	5,620	99.9%
ation	Shulin	-	0.0%	4	0.1%	4	0.1%
	<29	587	30.2%	629	17.1%	1,215	21.6%
Cocation   Cocation	30-39	585	30.1%	1,158	31.4%	1,743	31.0%
	40-49	626	32.2%	1,558	42.3%	2,183	38.8%
	50-59	133	6.8%	319	8.7%	452	8.0%
	>60	11	0.6%	6       0.2%       6       0         277       7.5%       294       5         406       11.0%       561       10         2,995       81.3%       4,601       8°         -       0.0%       162       2         3,679       99.9%       5,620       9°         4       0.1%       4       0         629       17.1%       1,215       2°         1,158       31.4%       1,743       3°         1,558       42.3%       2,183       38         319       8.7%       452       8         20       0.5%       31       0         1,278       34.7%       2,024       36         1,717       46.6%       2,439       43         639       17.3%       1,086       19         50       1.4%       75       1         4       0.1%       4       0         162       4.4%       200       3         370       10.0%       441       7         3,148       85.5%       4,979       88	0.6%		
	<10	745	38.4%	1,278	34.7%	2,024	36.0%
Yec	11-20	722	37.2%	1,717	46.6%	2,439	43.4%
irs of vice	20-30	448	23.1%	639	17.3%	1,086	19.3%
	>30	25	1.3%	50	1.4%	75	1.3%
Executives and Managers 17 0.9% 277 7.5  Supervisors 155 8.0% 406 11.  General Staff 1,606 82.8% 2,995 81.  Service Staff 162 8.3% - 0.0  Taoyuan 1,941 100.0% 3,679 99.  Shulin - 0.0% 4 0.	0.1%	4	0.1%				
	Master's	38	2.0%	162	4.4%	200	3.6%
	370	10.0%	441	7.8%			
	Other	1,832	94.4%	3,148	85.5%	4,979	88.5%
Subto	tal by Gender	1,941	100%	3,683	100%	100.0%	5,624

### 2 New employees by age and region

Cate-				•			
gory	Group	Number of People		Number of People	Percent- age		
	<29	255	13.1%	324	16.7%		
	30-39	5	0.3%	11	0.6%		
By age	40-49	2	0.1%	0	0.0%		
0	50-59	0	ople         age         of People         ag           95         13.1%         324         16.           9         0.3%         11         0.6           10         0.1%         0         0.0           10         0.0%         1         0.1           10         0.0%         0         0.0           10         0.0%         0         0.0           10         1.3%         73         3.8           17         12.2%         263         13.           12         13.5%         336         17.	0.1%			
	>60	0		0.0%			
By region	Domestic	25	1.3%	73	3.8%		
ion	Foreign (Vietnam)	237	12.2%	263	13.5%		
Total nemploy		262	13.5%	336	17.3%		
Service employ		1,943	34.5%	3,686	65.5%		

### Note

- Statistics based on employees who started work between 2018.1.1 and 2018.12.31(including formal and informal staff)
- Percentage of new employees ratio= Total new employees/ (Total new employees+ Service employees)\*100

### **3** Local Supervisory Proportion

In order to develop stable working opportunities, local residents are given priority in the recruitment of new general employees. Furthermore, the Company trains local residents to become competent leaders. In 2018, the percentage of local residents holding senior supervisory roles was approximately 5.0% (the percentage of senior supervisory roles is defined as the proportion of employees working as a supervisor or above, who have held the position for at least five years and have the same household registration as the factory).

# 4 Number of Physically and Mentally Disabled Recruitments

In order to safeguard the rights and interests of physically and mentally handicapped individuals, our Company protects their equal participation in social, political, economic, and cultural activities to promote their self-reliance and personal development. According to Article 38 of "People with Disabilities Rights Protection Act", a certain number of job vacancies shall be opened to physically and mentally handicapped individuals. By the end of 2018, a total of 44 physically and mentally handicapped individuals (26 male and 18 female) were recruited, among which 9 have severe disabilities, 7 have moderate disabilities, and 28 have mild disabilities.

### 4-2 Salaries and welfare

### **1** Employee Salaries

NYPCB not only complies local labor laws but also joins local associations that survey salaries and welfare to ensure its salaries are competitive. In addition, it is ensured that employee salaries are not gender biased, therefore, the salaries of male and female workers are equal. The company advocates the idea of the "same pay for the same work". The base salary ratio between male and female employees with the same position and rank is 1:1. Once hired, employees will have their salaries adjusted annually and may be promoted based on their performance.

		Uni	t: %
Position	Å	•	
Manager and above	100	132.76	
Supervisor and below	100	121.94	

### The number and average salary of non-administrative staff

Position	2017	2018	Percentage of Difference
Number of non-administrative full-time employees (person)	5,374	5,484	2.0%
Average annual salary (in thousand NT dollars)	803	842	4.9%



### 2 Employee welfare

The Company values its employees, respects their rights to work, and offers reasonable salaries. It also strives to alleviate employee concerns and burdens in their lives so that they can fully develop and utilize their talents and thereby enhance the Company's performance. In order to ensure that all employees feel secure in their work and utilization of their profession, the company advocates the idea of "treating employees as family" and has set up excellent facilities for food, accommodation and leisure. Furthermore, the company has taken into consideration the long-term benefits of its employees and has planned various comprehensive benefit systems. Furthermore, a variety of benefit measures have been provided for our employees:

- A. Year-end bonus and dividend
- **B.** Indemnity
- C. Wedding and funeral subsidies
- **D.** Medical cost discounts for employees and their family members seeking medical services at Chang Gung Memorial Hospital.
- E. Labor and health insurances
- F. Uniforms
- G. Accommodation for employees who are single or married with children
- H. Employee stock option
- I. Funds and subsidies for the employee year-end dinner party
- **J.** Relief payments for employees hospitalized due to illness, gold coins and recognitions for senior employees.

.....

Unit: NT\$ 1,000

Item	2016	2017	2018
Expense on Employee Welfare (salary / labor & health insurance / pension / other)	5,481,369	4,552,091	4,862,436

The company offers a variety of employee benefits and incentives based on Formosa Plastics Group and goes above and beyond many legal standards. Such benefits include:

### A .Leave benefits

The company provides its employees with special leave, marriage leave, bereavement leave, official leave, work-related injury leave, paternity leave, maternity leave, sick leave, physiological leave, personal leave, family leave, transfer leave, quarantine leave, reunion leave for employees stationed overseas, etc., of which, the pay standards for sick leave, certain types of funeral leave and typhoon leave are higher than required by labor law standards.

### B. Insurance benefits

In addition to helping employees with their labor insurance and national health insurance, the welfare committee member of each factory provides accident and medical insurance or provides employees with discounted group insurance (accident, medical, cancer) so that employees have more comprehensive insurance freedom.

### C. Retirement benefits

The company will pay monthly labor pension and retirement reserve fund. When an employee meets retirement criteria, the company will pay his/her pension according to the law, in addition to a retirement gift.







Movie Theater



Library



Healthcare Center



Basketball Court



Billiard Room



Table Tennis Room



Hairdressing Department



Bakery Shop



Staff Dorm



### D. Marriage and childbearing benefits

- D1.In the occasion of a marriage or funeral of the employee or a family member of the employee, the company will provide an incentive (funeral offerings) and subsidize managers at all levels for the incentive (funeral offerings).
- D2. The company offers nursing rooms for employees to use during work hours.
- D3.According to relevant laws, in order to provide parental leave, employees that meet the required criteria must adjust their work hours according to childcare needs.
- D4. The number of people who can apply for parental leave in the past three years can be as follows:

Item		2016 / 12	2017 / 12	2018 / 12	
Applicable for parental leave (excluding		40	32	20	
	•	230	181	114	
applicants)	Total	270	213	134	

D5.To provide unpaid maternal or paternal leave, employees who have served in the Company for half a year and have children under 3 can file their application depending on their needs. In the past three years, 238 employees (female 180, male 58) applied for unpaid maternal or paternal leave. The return rate was 56%, and the retention rate was 74%. Furthermore, in 2018 alone,61 employees (female 52, male 9) applied for unpaid maternal or paternal leave, with a return rate of 72% and retention rate of 85%.

### Parental-leave application, return rate and retention rate for the past three years Unit: person

	2016		2017		2018		Total					
Item	*	•	Total	*	Ť	Total	*	•	Total	*	•	Total
Actual number of employees that applied for parental leave	70	20	90	58	29	87	52	9	61	180	58	238
Number of employees that should have returned (A)	72	17	89	53	19	72	30	16	46	155	52	207
Number of employees that applied for return (B)	42	13	55	13	14	27	20	13	33	75	40	115
Return Rate (B/A) (%)	58	76	62	38	74	62	67	81	72	48	77	56
Number of post-parental leave employees who stayed for at least one year	29	13	42	33	10	43	10	13	23	72	36	108
etention Rate (%)	60	81	66	79	77	78	76	92	85	70	84	74

Note: "Retention Rate" is defined as the percentage of post-parental leave employees that returned and stayed for at least one year.



### 3 Staff evaluation

All NYPCB employees shall be periodically evaluated according to the "Evaluation Method", and the year-end performance grade shall be determined according to the periodic evaluation, attendance, reward and punishment, and case disposal time to serve as a reference for salary adjustment and year-end bonus, as well as for future development, promotion, and transfers. Employees with evaluation results of grade B or C shall be interviewed periodically by their supervisor to track the abnormality improvement plan and results.

### 4 Good Work Protection

In order to adapt to the rapidly changing business environment and constantly innovated technology, the company continues to rationalize management and keep its organization simple. However, even in the most difficult economic times, the company prioritizes the working rights of its employees. The company has established human resources integrative mechanisms to replace paid leaves with transfers. The resignation rate of the company has been around 1.1% for the past five years. Compared to the Taiwanese electronic components manufacturing industry, this company's resignation rate is considerably lower. This reflects the effectiveness of employee care and work protection provided by Nanya PCB Corp., and the strong trust in company management and the sense of identity of the employees.

### Comparison of Resignation Rate between NYPCB and the Electronic Components Industry over the Past Five Years

Unit: %

Position	2014	2015	2016	2017	2018
NYPCB	1.1	1.1	1.3	1.2	0.5
Taiwanese Electronic Components Manufacturing Industry	2.2	2.0	2.0	1.9	1.9

Source: Accounting and Statistics (time series data search - quit rate)

### • 2018 Resigned Staff by Age and Region

		1		• •		
Category	Group	Number of People	Percentage	Number of People	Percentage	
	Under 29	69	3.6%	74	3.8%	
m	30-39	49	2.5%	67	3.4%	
By Age	40-49	13	0.7%	29	1.5%	
Φ	50-59	7	0.4%	14	0.7%	
	Over 60	2	0.1%	6	0.3%	
By Reg	Taoyuan Factory	140	7.2%	190	9.8%	
By Region	Shulin Factory	0	0.0%	0	0.0%	
Total dismissed employees		140	7.2%	190	9.8%	
Service employees		1,943	34.5%	3,686	65.5%	

### Note

- 1. Statistics based on employees who started work between 2018.1.1 and 2018.12.31(including formal and informal staff)
- 2. Percentage of dismissed employees ratio= Total dismissed employees / (Service employees)\*100

### 4-3 Training system

### **1**Training

NYPCB has established a comprehensive training system with quality working and learning environment, aimed to inspire employees' proactive attitudes and innovative views. In addition, a comprehensive training plan for different stages of each employee's career has been created to facilitate gradual improvement, allowing him/her to excel and become outstanding and practical professional. The complete training program includes: New employee training, job training of shifts and basic work practice for new junior college recruits, basic job training, job specialty training, first/secondary level reserved supervisor training, cross-functional training for middle and high level supervisors, etc., and accompanied with external training and job certification available for acquisition. Online lessons, language training, training to develop internal lecturers, combined with promoting and job rotation, ad hoc invitations of external experts to come for teaching, the creation of good work and study environment, and the amplification of training energy; all of these are to satisfy those requirements in personal career planning and corporate operation growth.

### 2 Employee training and advanced courses

In 2018, NYPCB's employee training courses, including those held by individual units and professional and manager training courses organized by the President's Office, were conducted 2,005 times and attended by 5,623 employees (not included Managing Directors). The total duration of the training was 121,882 hours (an average of 21.7 hours for each individual), and the cost of the training was NT\$ 1,606,424.

### Average training hours per employee in the most recent three years

Unit: hrs/person

Position	General Staff		Supervisor		Manager		Executive		合計		
Year	Number of People	Total Hours	Number of People	Total Hours							
2016	79	1,609	236	6,785	894	26,495	4,485	95,903	5,694	130,792	
Average	2	20.4		28.8		29.6		21.4		23.0	
2017	74	653	228	4,309	713	17,885	4,310	127,978	5,325	150,824	
Average 8.8		3.8	18	3.9	2	5.1	29	9.7	28	.3	
2018	71	720	223	2,405	705	13,465	4,624	105,293	5,623	121,882	
Average		0.1	10	0.8	1	9.1	22	2.8	21	.7	

### Average training hours for per male and female empolyee in the most recent three years

	Gender	Number of People	Total Hours	Average	
2017	•	3,829	95,558	25.0	
2016	*	1,865	35,234	18.9	
2017	•	3,524	110,289	31.3	
2017		1,801	40,535	22.5	
0040	•	3,680	86,316	23.5	
2018		1,943	35,566	18.3	

Note: 1.Number of people is not included Managing Directors

<sup>2.</sup> The number of people is based on the comparison table of the number of people in December of that year.



### **4-4** Employee relations

### 1 Negotiations between employer and employees

- A. Establish a complaint system to improve employer and employee relations.
- B. Establish clear regulations and a human resource management system to specify employees and employer obligations and administrative matters so that employees can understand and protect their rights.
- C. Organize regular physical examinations in accordance with labor safety and health law, assign a labor safety and health coordinator, and set up relevant management systems and regulations to avoid accidents and protect employees.

### 2 Care for employees

Organize campaigns to encourage employees and improve their welfare. Encourage employees to seek a balance between work, health, and life.

- A. Diverse employee welfare: Provide medical fee discounts for employees and their family members at Chang Gung Memorial Hospital, scholarships for employees' children, encouragement bonus for stock purchasing, birthday coupons, wedding and funeral subsidies, holiday gifts and coupons, and comprehensive living facilities. The Company offers paid sick leave and indemnity that exceeds what is required by law. It also organizes various leisure activities such as sports game, domestic travel, and a variety of clubs.
- B. Salary: Offer reasonable salaries and bonuses that are competitive. Set up a regular salary adjustment system. Provide bonuses during the Dragon Boast Festival, Lunar Festival, and at the end of a year depending on the Company's overall performance.
- C. Communication: Hold regular management meetings and publish an internal magazine every quarter. Set up recommendation boxes, hot lines, and sexual harassment prevention hot lines for employees. In 2018, there is no complaints related to human rights infringement were made through the official complaint channel.
- D. Encourage innovation: Offer incentives for good suggestions and encourage employees to report excursions at work and offer their improvement advises. Incentives are provided if the suggestions have made significant improvement. In 2018, a total of 802 improvement suggestions were made and a total of NT\$ 245,400 were given out as rewards. The Company have set up an online platform for its employees to discuss and exchange ideas, and rewards those who provide innovative ideas.
- E. Employee Assistance Program(EAPs): Resources can be sought through the county's health bureau mental health center to senior managers and employees if they have management, psychological, family, or relationship problems. The Company offers services to reduce the damage caused by man-made, natural factors, or inappropriate treatments.



### 4-5 Employee wellness program

### 1 Improve the health and wellness of employees

Since parts of the NYPCB workplace uses various chemicals, including sulfuric acid, manganese, plumbum, nickel, potassium cyanide, and sodium cyanide, while some processes use non-ionizing radiation related devices or make considerable noise, in order to maintain employees' health, the Company shall stipulate a sampling plan depending on the current situation of each processing area and carry out environmental detection every six months. Furthermore, NYPCB cooperates with Chang Gung Hospital to periodically provide its staff with health examinations and yearly provide special operation personnel with special health examinations, with an emphasis on screening for common cancers depending on the personal demand.

In addition to organizing health examination for employees, NYPCB's plants also offer breast-feeding rooms for female employees. Other workers can enjoy medical services and a smoking quitting assistance at the health-care center in campus. Since NYPCB has partnered with the Chang Gung Medical Foundation, it is able to provide medical center-level services and health care. Employees and their family members can also enjoy discounts if they seek medical services, health examinations, or services not covered by health insurance at the Chang Gung Medical Foundation. The Company's welfare committee also organizes irregular leisure activities to help employees relax and promote health. Group insurance has also been purchased for employees to offer financial support if employees suffers from serious illness or injuries due to accidents.

### Health Education Activities







### • NYPCB Health Care 2018 Health Promotion Schedule

Topic	Season	Health Promotion Content	Item Category	Time	Lecturer Numl Partici	per of
	1st Quarter	Lecture: Health Care in the Low-Temperature Winte	Lecture	January	The Health Center	92
Health		Lecture: Healthy Eating During Chinese New Year	Lecture	February	The Health Center	62
Promotion		Activity: Nutrient Policy and Stretching Exercise to relive Pain — Battling against the Red Figures after a Health Check	Event	March	Linkou Chang Gung Hospital	35
		Activity: Blood Donation	Event	April	Hsinchu Blood Donation Center	55
Life Care	2nd Quarter	Lecture: Health Care in the Low-Temperature Winte	Lecture	May	The Health Center	61
		Lecture: Prevent Hyperthermia During the Summer Heat	Lecture	June	The Health Center	67
Pressure	3nd Quarter	Activity: The Health Passbook	Event	June	National Health Insurance Office	259
Release in the Workplace		Lecture: Understand the Three High Indices in Health Check and the Prevention	Lecture	August	The Health Center	541
, vo mproree		Activity: To Activate Youth Joints, Start with Healthy Diets	Event	September	John Tung Foundation	53
- · · ·	4nd Quarter	Lecture: Ear Acupuncture Massage	Lecture	October	John Tung Foundation	60
Preventive Health		Lecture: Aromatherapy	Lecture	November	John Tung Foundation	64
Care		Lecture: Understand Special Operations and the Prevention	Lecture	November	The Health Center	226
		Total number of participants:			1,57	5



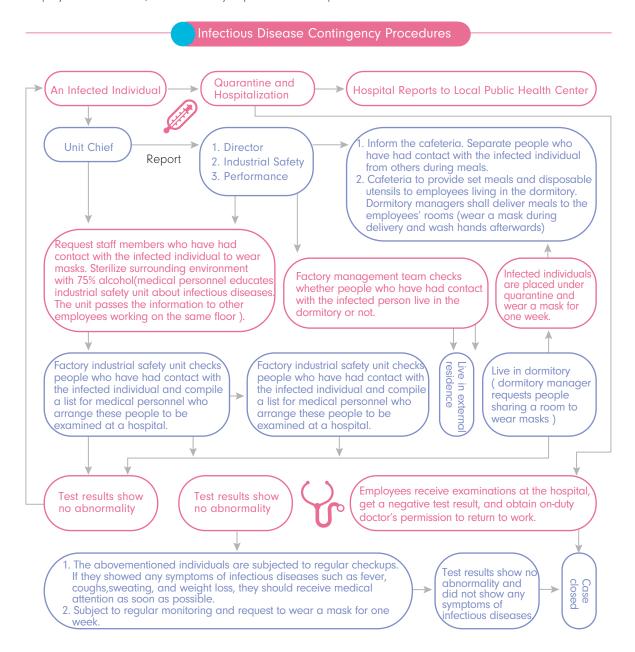




### 2 Contingency plan for infectious diseases

NYPCB has established comprehensive reporting and preventing systems for infectious diseases:

- 1. Prevention of infectious diseases -Increase employee awareness to infectious diseases prevention and educate employees about the preventative measures against infections through air, droplets, and contact.
- **2.Reporting of infectious diseases** -Report occurrence of infectious disease to local health bureaus and persuade the infected employees to receive medical attentions or have them hospitalized if necessary.
- **3.Preventative measures** -Provide medical control and preventative leave, implement preventative measures on employees and visitors, and effectively separate infected patients from others.



### Prevention advocacy



### 3 Health and safety education and contingency response training

Below lists the occupational safety training classes held in 2018 and the corresponding numbers of participants:

### A. Manufacturing process or hazardous material usage:

There were 24 sessions of training held in total which were participated by 1,522 people. The total number of hours was 4,656.

### B. Radioactive substance on-the-job training:

4 sessions held in total and participated by 137 people. The total number of hours was 411.

### C. Emergency rescue on-the-job training:

5 sessions held in total and participated by 65 people. The total number of hours was 195.

### D. Supervisor on-the-job training for specific chemical substances:

4 sessions held in total and participated by 28 people. The total number of hours was 168.

### E. Contractor pre-entry training:

22 sessions held in total and participated by 1,289 people. The total number of hours was 2,578.

### F. On-the-job training for supervisors of organic solvent operations:

3 sessions held in total and participated by 21 people. The total number of hours was 126.



4 sessions held in total and participated by 38 people. The total number of hours was 114.



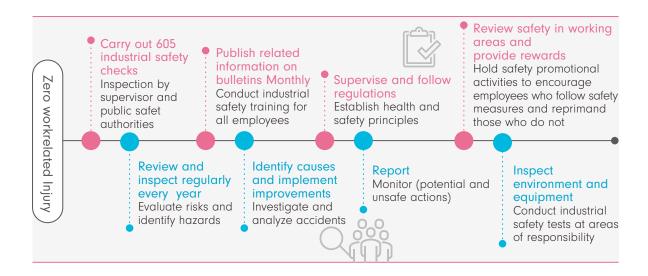
NYPCB views contractors as one of its own employees; therefore, the Company organizes regular pre-work trainings for contractors. The Company holds daily toolbox meetings to promote pre-work employee protection ware inspection and physical and psychological health checks. Through the toolbox meeting, the Company will notify and remind workers about the specific dangerous of construction, process, and environment of the work on the day. Construction and maintenance departments need to coordinate and collaborate with each other to achieve the goal of zero incidents.

The Company has also established detailed contingency response policies and has held drills in preparation for various emergencies such as earthquakes, fires, chemical spills and leakages, and other natural disasters. The Company has trained its employees to be familiar with contingency response measures such as reporting, reaction, and containment of incident, and medical aid.

### Training reality



### Fire alarm safety interlock Set intrinsic safety as a switch / air conditioned Set up standard / basic principle in equipment rooms / bonded area / design Enforcement drilling machine area Zero Manage and control Inspection and examination of Class hazardous materials **Accidents** Label, Enforcement A hazardous workplace to enhance public safety Establish protocols of Educate operating high and low **Enforcemer** voltage distributor panel



### 4 Statistic of occupational disasters and accidents and the effect of health and safety management

In 2018, a total of 2 significant injury causing incidents occurred (1 being clipped and hit respectively). Industrial Complex, with an injury frequency rate of 0.17 (0 and 0.17 for female and male respectively), an injury severity rate of 1.48 (0 and 1.48 for female and male respectively), and a frequency-severity indicator of 0.02 (0 and 0.02 for female and male respectively).

However, to prevent similar disabling incidents from happening again in the future, our corporation has carried out a series of management activities that enable our workers to identify, evaluate, and control potential hazards in their respective work environments. Furthermore, cases involving occupational hazards have been integrated into the teaching materials to raise occupational safety awareness among our employees. Our employees are also provided with SHE suggestion channels, instant responses, and appropriate countermeasures to achieve the ultimate safety management goal of "zero disasters and zero industrial injuries".

			2016		2017		2018	
	Occupation	al Safety Performance Index	Jin Hsin plant	Shulin plant	Jin Hsin plant	Shulin plant	Jin Hsin plant	Shulin plant
1		Frequency Rate 1,000,000 hours worked)	0.17	0	0.17	0	0.17	0
2	Serious Injury (Working days	Severity Rate s lost/per 1,000,000 hours worked)	2.33	0	8.59	0	1.48	0
3	Frequency-Sev	verity Indicator	0.019	0	0.038	0	0.02	0
		1.Death	0	0	0	0	0	0
4	Number of major	2.Disaster and accidents that cause more than three people injured	ed 0	0	0	0	0	0
	disasters and accidents		0	0	0	0	0	0
5	Number of serious injury incidents (excluding major occupational disasters and accidents)		2	0	2	0	2	0
6	Working days lost		28	0	98	0	17	0
7	Male absence rate (%)			0	1.0	0	0.7	0
8	8 Female absence rate (%)			0	1.0	0	0.8	0

### Calculation rule:

- 1.Disabling injuries frequency=Disabling injuries cases\*1,000,000/Total experienced work hours
- 2.Disabling injuries severity=Disabling injuries days not worked\*1,000,000/Total experienced work hours
- 3. Comprehensive injuries indicator=√disabling injuries frequency\*disabling injuries severity/1,000
- 4. Absence rate (%) = Total Absence days / Total working days × 100%

### 4-6 Human rights

NYPCB believes employee should be respected and treated equally. The Company provides equal job opportunity to every jobseeker and employee and protects individual's basic human rights. The Company does not discriminate employees due to their race, skin color, age, gender, sexuality, disability, pregnancy, religious beliefs, political stance, club members, or marital status at work in terms of compensation, promotion, training or hiring. Employees are not forced to accept discriminatory medical examinations. In addition, recruitment is always conducted in a public way both internally and externally, and the firm does not restrain its employees or recruit forced labor through coercion, debt, fees, or contract. NYPCB also provides sexual harassment training to its managers and employees to prevent sexual harassment.

New recruits are provided with labor and ethics training so that newcomers will understand their rights and obligations. Such training is conducted to ensure that all employees are treated fairly and are able to uphold a responsible attitude in following the moral codes and ethical standards of the Company.

The Company has met all local government laws and regulations regarding employers and employees. The Company Employee Handbook has also been reviewed and certified by the Taipei City Government before distribution to all NYPCB employees. The employees has strived to do its best to peacefully resolve any labor disputes through fair, just, reasonable, and humane measures and to maintain a harmonious employer and employee relationship.

The company's labor employees have the option to freely participate in a union and run for representative without the fear of harassment, threats or retaliation. The company's labor employees can openly discuss issues regarding work with management.

The total people participating in the collective bargaining agreement of the Company in 2018 were 62.6% of total employees. The Company's labor union also holds regular director and supervisor meetings, and, to avoid colleagues' doubts, the Company does not intervene in the union's practical operations and member lists. Furthermore, it will give full play to the labor union under legal and reasonable scope in order to make wide discussions on labor issues and shall implement policies after reaching an agreement and making an agenda, which considerably helps to improve employee-employer relations and the planning of labor welfare.

NYPCB closely adheres to the line of national labor specifications and international Declaration of the Rights of Man and of the Citizen, and seeks fair treatment to and respect of all employees, including:

- 1. Providing work conditions in accordance with the government's labor related laws and regulations.
- 2.Offering equal work opportunities for all job seekers according to the Employment Services Act.
- 3. Setting up complaint channels for employees when their legal rights are damaged or inappropriately handled.
- **4.**Setting up an "Employee Rewards and Punishment Review Committee" for reviewing employees to received significant rewards or punishments.
- **5.**Providing "Sexual Harassment Prevention, Complaint, and Punishment Measures in the Workplace" to prevent employees and job seekers from a sexual harassment work environment and to respond to any related issues.

Furthermore, no significant investment agreements or contracts relating to human rights were made in the company in 2018.



# 5 SOCIAL WELFARE



# Charity

The creation of company culture occurs over the long term and is developed by operation principles, and, in summary, Formosa Plastics Group's operating concept is to pursue the rationalization of everything with a "diligent and simple" attitude and with "strive for perfection" as the ultimate goal. Since the objective environment is changing and nothing can ever actually reach "perfection", but through the endless pursuit of all, these principles have become the original drive force for the Company to constantly improve business performance and competitive conditions, thus achieving the purpose of "sustainable operation" and "contribution to society" based on the aim of "Take from society, and give back to society". The Formosa Plastics Group founder said "one can only hold so many things in his/her hands but if one opens the hands, he/she can hold the world." The remark stressed the importance of contributing to society which appears to be a one-way action; but in fact, people who can give more to the society will get more in return. The more they can contribute to the society, the more they can achieve. Therefore, the founder has helped many people in need with the same passion and zealousness he had while leading the Company. NYPCB has been contributing to society and engaging positively with neighboring communities. NYPCB believes that people are depending on each other, and that the one who is strong should help the weak, and the rich should help the poor. If people contribute their strengths, society and the world would be a better place to live in day by day.

# **5-1 Community Relations**

The Corporation has taken in-depth participation in local community. It also cares for the life at the neighborhood. There are Neighborhood Relations Team and volunteer teams set up in the Administration Department. They have reached out and visited and communicated with local residents to establish a channel for mutual trust. At the same time, the Corporation takes a contributory part in community and the earth by paying care for the elderly, the youth, and other disadvantaged groups, assisting local or devoted social welfare organizations in holding festive activities or non-profit second hand market, and encouraging employees to be an environmental protection volunteer. With the promotion of various activities, Nan Ya Printed Circuit Board Corporation expects to spread love and hope into every corner of society and strengthen the tie between the Corporation and local community.



Each of the Corporation's campuses promotes community outreach by following local Administration Department's planning. Take the plants in the north area as an example, the community outreach works actually conducted in 2018 are listed as follows:

Item	Cooperative Unit	Promotion Method	2018 Performance
Visits and Communications	1.Neighborhood Offices 2.Local residents	1. Ad hoc visits to create communication channels 2. Invitation to participate in campus activities to harmonize relationship	1. The campuses have maintained good relationship with local communities and residents. There have been no complaints or suggestions arising therefrom.  2. The Corporation signed a memorandum of cooperation on disaster prevention with the District Office, which aimed to carry out pre-disaster evacuation and post-disaster material transportation, and provide disaster backend support services through volunteering workforce. This aims to improve the disaster prevention network in local areas and establish disaster prevention partnership.
Traditional Culture Promotion	Apple Theater for Children Shulin Plant and Jinxing Plant	The Theater was sponsored to perform in plants.	Shulin Campus: 1,000 audiences Jinxing Campus: 4,000 audiences
Neighborhood Relationship	Township Office     Neighborhood     Offices     Community     development     associations	Actively participate in activities held by township offices, neighborhood offices, and community development associations in order to maintain good relationship between each other.	The sponsorship amount totaled NT\$ 3,028,012
Environmental Protection Volunteer Work	Plant employees and families	Employees and their families were encouraged to become volunteers of environmental protection works to maintain a clean place in campuses as well as the surroundings.	The activity was held once a month. There were 47 activities held which were participated by 1,556 volunteers in total.
Charity Service	1. Charity Service Club of the Welfare Committee 2. Labor unions 3. Local charity groups	1. Make regular visits to orphanages and nursing homes and collect goods to be donated to social welfare institutions. 2. Hold second-hand markets in collaboration with the Charity Service Club of Welfare Committee and local charity groups. All proceeds were donated. 3. Help disadvantaged groups applying for the "Ching Pao Charitable Trust Fund" of Formosa Plastics Group for emergency relief 4. Promote donation for disadvantaged schoolchildren in Taoyuan County who are unable to pay for nutritious lunches	<ol> <li>A total of 41 charity services were held, and the total number of participants was 1,238. The donation amount reached NT\$ 1,564,618.</li> <li>The total amount of Ching Pao Charitable Trust Fund available for application is NT\$ 635,000</li> <li>There were a total of 428 people making donation, with the donation amount reaching NT\$1.6 million and there were 25 primary schools benefited.</li> </ol>





Joining the disaster prevention practice held by District Government Office



Wujiutongshan Mountain hiking and cleaning activities



Joining the lantern festival held by District Government Office



Helping disadvantaged people to apply for emergency relief fund



Holding charity sales in cooperation with local charity groups



Volunteers are helping a nursing home to clean the window



Mayor Wentsang Cheng watches the Apple Theater's performance with the people



The Apple Theater is interacting with people in a lively atmosphere.  $\;$ 



Employees volunteer to clean up community surroundings



Send moon cake gift boxes to social welfare organizations

# **5-2 Promotion of Medical Services**

# 1 Chang Gung Medical System

Alerted to the lack of medical resources in Taiwan during the 1970s, the two founders of Formosa Plastics Group dedicated themselves to promoting social welfare donations and decided to establish a non-profit teaching hospital, thus officially establishing the Chang Gung Memorial Hospital in March 1973. In December 1976, Taipei Chang Gung Memorial Hospital began to provide medical services, and Linkou, Keelung, Kaohsiung, Chiayi, Taoyuan, and Yunlin Chang Gung Memorial Hospitals were formed one after another through 40 years of effort. Furthermore, these hospitals provide preventive, emergency, chronic, Chinese medicine, long-term, and community medical care. With vertical and horizontal specializations, we provide our communities with an integrated healthcare system. To take better care of cancer patients, the best proton radiation therapy center in Asia was established at Linkou Chang Gung Memorial Hospital. After completing human subject research, medical services began to be provided on October 15, 2015.

Since the establishment of Chang Gung Hospital, we have proactively recruited excellent medical care talents to nurture potential talents, continuously introduced advanced medical equipment, led public and private hospitals to expand physical facilities and updated medical equipment, and provided patients with high-quality and safe standards of care. We have had many record-setting and pioneering management achievements, including the guarantee to cover medical expenses incurred during hospitalization, doctors rejecting red envelopes, lowering the cost of dialysis, and further improving the overall quality of medical services in Taiwan. Due to the efforts of Chang Gung Memorial Hospital, the average number of hospital beds for every ten thousand citizens has increased from 19 to 69 (Source: statistics from the Ministry of Health and Welfare). The effects have even surpassed some advanced countries, such as Great Britain and the United States.

The Chang Gung Memorial Hospitals have evolved into one of Taiwan's largest scale hospital networks, and their extraordinary medical equipment and service are the equal of first-tier hospitals around the world. As of 2018, they are operating 9,000 open beds, with 23,900 employees, and have served more than 9.1 million emergency and outpatient visitors (average patients: 31,400 / day), proving that Chang Gung Memorial Hospital has become one of the most trustworthy hospitals in Taiwan.

## 2 Local and Overseas Medical Care

## A. Emergency Medical Services

Chang Gung Memorial Hospital assists the government by providing medical preparedness and responses to major disasters. All facilities have been designated by the government as area disaster response centers in order to facilitate local disaster response and training. Over the years, they have participated in many rescue operations and have been designated by the Ministry of Health and Welfare as vital emergency aid hospitals. For example, on the night of June 27, 2015 where the Formosa Fun Coast explosion took place, Linkou Chang Gung Hospital immediately launched a large-scale wounded mobilization mechanism while dispatching emergency medical aid to save and hospitalize a total of 63 victims, giving full play to the emergency rescue capacity.



# B. Medical Assistance to the Underprivileged

Chang Gung Memorial Hospital provides necessary medical aid to regions where medical resources are largely deprived. Long-term medical assistance to rural areas are fully listed below:

Branch	Year of Participation	Region Assisted	Medical Assistance Provided
Linkou Chang Gung	From 2013 till today	Fuxing District, Taoyuan City	In association with Saint Paul's Hospital, the Public Health Center in Fuxing District has dispatched a number of medical personnel to provide medical services at the 24-hour outpatient clinic and emergency department. Operations grow gradually each year, and more specialization clinics have been established (gynecology, pediatrics, ophthalmology, gastrointestinal hepatobiliary, Chinese medicine acupuncture, orthopedics). Medical services such as dental clinics, health awareness promotion at church, children's mental state screening, health management, health screening, cardiovascular disease case management and tuberculosis screening, etc., served 6,600 people annually.
Q	From 2013 till today	Kinmen	In association with Kinmen Hospital and Ton-Yen General Hospital, some medical staff were stationed in Kinmen District to reduce the medical referrals from Kinmen to Taiwan over the years.
	From 2001 till today	<ul> <li>Liugui District, Maolin District, Neimen District, and Sanmin District, Kaohsiung City</li> <li>Mudan Township, Sandimen, and Xiaoliuqiu, Pingtung County</li> <li>Wang-an Township, Penghu County</li> </ul>	Regular free medical clinic and health promotion.
Kaohsiung Chang Gung Memorial Hospita	From 2009 till today	8 medically-deprived villages located in Jiaxian District and Shanlin District, Kaohsi- ung City	Implement the National Health Insurance Administration's "Project to Improve Areas Short of Western Medical Resources in National Health Insurance." Consequently, medication tour is held weekly. Phone interviews are conducted to improve medication continuity for patients with chronical disease. Home visits are conducted to enhance patient's compliance with medication and improve drug use. Home medical services were provided for people with limited mobility or the elders living alone. On average, there are two free clinical services and eight health education lectures held per year
emorial Hospit	From 2011 till today	Communities in remote or indigenous villages.	A long-term community healthcare center was established so that medical practitioners specializing in integrated rehabilitation, family medicine, Chinese medicine, nutrition, nursing, physical therapy, and occupational treatments can provide fixed and home-based integrated medical services.
Ω	From 2011 till today	Community liver disease screening service	From 2011 to 2018, special clinical services for hepatitis prevention and treatment have been conducted in Yujing and Guantian, both of Tainan, and Linyuan and Dagu, both of Kaohsiung.
+	From 2012 till today	Provide support for remote areas insufficient with medical resources such as Penghu, Qishan, and Fangliao, etc.	<ol> <li>Penghu: A total of 3 doctors go to Penghu Hospital to provide support in the Neurology Department, the Neurosurgery Department, and the Cardiology Department of the hospital.</li> <li>Qishan: 2 doctors provided support in the Pediatrics Department of Qishan Hospital and one in the Gynecology Department, in addition to some clinical services offered in rheumatology, Chinese medicine, infection and integral surgery.</li> <li>Hengchun: Doctors were sent to Fangliao Hospital, Nanmen Hospital, MOHW Hengchun Tourism Hospital, and Heng Chun Christian Hospital to provide clinical support in departments of cardiology, genecology, rehabilitation, and neurology, etc.</li> </ol>

Branch	Year of Participation	Region Assisted	Medical Assistance Provided
	From 2016 till today	Wanluan Township, Kanding Township, Jiuru Township, and Zhutian Township of Pingtung County	Implement Chinese medicine clinical service tours in response to National Health Insurance Administration's "Medical Tour Service Plan for Areas Short of the Medical Resource of Total Chinese Medication Clinical Services in National Health Insurance." Eact time, there are attending physicians and resident physicians coming together to hold Chinese clinical services, in addition to Chinese medicine acupuncture treatment, Chinese health consultation, and correct drug use of Chinese medicine, etc.
Kaohsiung Chang Gung Memorial Hospital	From 2018 till today	Changbin Township, Chenggong Township, and Donghe Township of Taitung County	In order to alleviate the long-term problem in the Chenggong branch of MOHW Taitung Hospital about residents missing the golden period of rescue due to hospital transfer, Chang Gung Hospital helps Taitung Hospital to plan and purchase a remote medical clinical service system, and establish education training for remote joint clinical service processes and related medical staffs Initially, the plan is mainly implemented in the Ophthalmology Department and the Dermatology Department. In the midterm service will be expanded to add to new medical equipment, and create clinical services for hepatobiliary and gastroenterology.
Keelung Chang Gung Memorial	From 2009 till today	Medically deprived villages such as Meifeng Village in Gongliao District and Shulang Village, Nansha Village, Baishi Village a in Pingxi District, New To	nd Coastal Tribes
	From 2012 till today	All the 18 townships in Chiayi County	Since 2012, Chang Gung Hospital has been in line with Chiay County's public health measure of "3+1 Mobile Medical Service." In 2014, the service expanded its "Community Combined Health Checks." Every month, specialist doctors were scheduled to attend clinical and consultation services for general treatment, Chinese medicine, and ophthalmologic treatment in those towns and neigh borhoods where there were no large-scale hospitals. On average each year, there were 147 clinical sessions at service and 5,883 patient visits in total. Implement the care for remote medication
Chiayi Chan	From 2016 till today	Alishan Township, Chiayi County	Support the establishment of holiday emergency medical stations to provide local residents with medical services, health education services, and disease prevention educational services. Emergence medical services were also provided to wounded tourists.
Chiayi Chang Gung Memorial Hospital	From 2017 till today	Remote areas of Chiayi County	In response to the National Long-Term Care 2.0 Policy, of three-in-one service combined with day care center, home medical tion, and care transfer was established. Undertaking long-term care plans devised by the Ministry of Health and Welfare and Chiay County Government (including transfer service on discharge, prevention, delay and care plans for the disabilities, the promotion of integrated community service center, and dementia care center) local community service sites have been established to provide complete medical care services for disadvantaged groups and elder people in communities. This is an achievement of creating cone-stop care system combined with care, prevention, social volunteering, and medication.
ST.	From 2018 till today	All townships in Chiayi County	<ol> <li>Since Chiayi County is in a severe shortage of medical resource and its public transportation is unsatisfactory, the medication service in the County is hence inconvenient. In order to improve preventive medicine service, a mobile medical van as well as a Pap smear car van was donated to Chiayi County worth NTS 25.74 million in total.</li> <li>During the 823 Typhoon, emergency medical care was provided proactively in Zhangtan Village, Sanjia Village, Xilun Village, and Wunzih Village, all of which were areas the most seriously damaged. Apart from the above, Chang Gung Hospital donated medical supplies and provided assistance to settle the victims and patients.</li> </ol>

Branch	Year of Participation	Region Assisted	Medical Assistance Provided
All Branches	From the first foundation till today.	All districts around Taiwan.	1. Neonatal referral center 2. Providing care services to special underprivileged groups. For example, providing tattoo removal services to juvenile under protection penalty, assisting youngsters who have gone astray to return to society, providing health management and life care services to orphans at the orphanage, visiting solitary seniors who live alone in the community, recruiting mouth and foot painters, and setting up blind massage stations to increase job opportunities for the physically or mentally handicapped.

# C. International Medical Assistance and Diplomacy

Branch	Targeted Countries	Service Content
	80 countries around the world	From 2014 to 2018, a total of 1,132 foreign medical personnel were trained.
	31 countries.	From 2014 to 2018, 135 cleft palate-craniofacial team members were trained .
Linkou CI Memoria	Cambodia, China, the Philippines, and 8 other Countries	Assisted in the establishment of 19 craniofacial medical centers.
Linkou Chang Gung Memorial Hospital	Cambodia, Indonesia, and Myanmar	In 2011, the "International Medical Volunteer Platform" was officially established so that our employees can participate in medical volunteering services in Southeast Asian countries. 14 trips were arranged with 177 participating employees having served 8,977 local residents.
	Vietnam, Qingdao, Mongolia, Indonesia, Cambodia, Myanmar	From 2014 to 2018, emergency treatments such as free cleft palate-craniofacial care and humanitarian relief.
Kaohsiun Memoria	Guatemala	Since 2010, we have been training doctors from different departments as well as liver transplant physicians. In 2012, a "National Organ Transplant Center" was officially established.
	44 countries globally	From 2011 to 2018, 245 foreign medical professionals were trained.
	Vietnam, Cambodia, Myanmar, Nepal and Mongolia, etc.	1.The cleft palate-craniofacial team from the plastic surgery department teamed up with the Noordhoff Craniofacial Foundation to perform free medical care in developing countries and to generate local institutions' interests for further cooperation.  2. From 2012 to 2018, the company arranged medical professionals to support the foundation's mission of medical volunteering work in foreign countries.
Gung	Malawi	In 2018, Chang Gung Hospital cooperated with Pingtung County and Keelung County to jointly hold a visit called "Connect with the Global Sustainable Development and Achieve Full Coverage of National Health: Malawi Medical Quality Improvement and Health Information System."      In 2018, a memorandum of international cooperation was signed with the Malawi Office of the Norwegian Luke International
Kaohsiung Chang Gung Memorial Hospital	Qinghai Province, China	In order to implement borderless medical treatment and take care of remote disadvantaged groups in medication, from 2008 onwards, a team consisted of doctors, nurses, pharmacists, and social workers, called "the Heart of Qinghai International Medical Clinic Team," was organized to serve the disadvantaged groups of ethnic Tibetan, Hui, and Sela in Qinghai Province of China. Free clinical services are performed with the support of Qinghai Red Cross Hospital. Our doctors were also sent to Qinghai Red Cross Hospital to perform personnel training which fulfils our responsibility as a university hospital.
Chiayi Chang Gung Memorial Hospital	Cambodia, Indonesia, Myanmar	In 2011, the "International Medical Volunteer Platform" was officially established so that our staff members could provide local residents and school students with health examinations, free clinics, and health education services out of their own pocket during holidays.
norial	Cambodia	Since 2016, ophthalmologists are sent on trips to Cambodia for medical volunteering work and English medical seminars and volunteer prep courses.

#### D. Welfare Services and Medical Subsidies

Chang Gung Memorial Hospital sets aside a fixed portion of its monthly revenue and donations from the community to its social charity funds for community welfare services, including the donation of cochlear implants, an umbilical blood bank subsidy, deep brain stimulation treatments, and so on. Medical subsidies are given to the poor and disabled to provide them with equal access to medical services. Many lives have been saved among the indigenous population. Meanwhile, patient forum activities, community services, and organ donation campaigns are held in order to promote the welfare of the larger community. In 2018, medical subsidies surpassed NT\$ 530 million. As of today, the figure has reached NT\$ 8.66 billion.

## E. Health Promotion - Community Services

Since the number of people with chronic illness has increased in our country, Chang Gung Medical Hospital has acted according to national policies and conducts various free health counseling sessions, preventive services and screenings, and health promotion events every year. These community events help local residents to identify health issues prior to experiencing advanced complications and thus allows them to seek treatment at an early stage.

## Community Health Promotion and Lecture Activities

Item	2014	2015	2016	2017	2018
Number of Activities	1,345	1,373	1,088	1,414	1,411
Number of People Served	106,321	117,418	185,961	221,457	237,826
Expense (in NT\$ 10,000)	1,426	2,138	3,159	2,632	2,778

## F. Plant Health Promotion Activities

In association with the Chang Gung Medical Care System, our Company makes good use of the hospital resources and arranges several health promotion activities at our industrial complexes so that our colleagues are updated with the latest healthcare and medical information to help them maintain their good health. By striving for a perfect balance between daily work and personal health, our employees are leading better lives in terms of safety and quality.

- 1. Physical examinations for our employees(once a year).
- 2. Four major cancers screening for our employees (once a year).
- 3. Professional nutritionists from Chang Gung Memorial Hospital were invited to design healthy menus for our employees (once a month).
- 4. Medical physicians from Chang Gung Memorial Hospital were invited to be stationed at our industrial complexes to provide our employees with medical consultation services (4 times each week).
- 5. Public health education information from Chang Gung Memorial Hospital was provided to our employees to ensure their healthy habits (Once a month).
- 6. Chang Gung Monthly Medical Journal was printed every month to provide our employees with the latest health information (1 journal per month).
- 7. Lectures about the '4 Major Cancers Screening' and '3 Highs' (high blood pressure, high blood sugar, and high blood cholesterol) prevention were delivered at our industrial complexes (Irregular).



# 5-3 Education Undertaking

## Founded three schools

In order to cultivate the special talents in the industrial field, FORMOSA Plastics Corporation established Ming Chi Technical College (Ming Chi University of Technology now) in 1963, and established Chang-Gung Medical University(Chang-Gung University now) and Chang-Gung Institute of Nursing (Chang-Gung University of Technology now) in 1987 and 1988 successively along establishment of Chang-Gung Medical University in 1976 in order to cultivate the outstanding medical talents. Three universities take "Be diligent and plain" as motto and implements cooperative education and work-and-study internship system to cultivate the independence and hardworking of the students and achieve the objective of theory combining with practices while training the special talents having outstanding knowledge and skills.







## Melp the native young people to receive education and find the jobs

In order to care for the native vulnerable groups, Formosa Plastics Corporation has been sparing no effort to help the native students to receive education to acquire the professional skill since 1995. Chang-Gung University of Technology recruits native young girls to receive the courses with major of nursing in order to train the professional nursing personnel, then Ming Chi University of Technology starts the technical training class for native people and special technical and vocational class for native people to help the native young people not continuing their study in school to train their employability and offer the opportunity to receive education to the students wanting to continue study. Moreover, in order to make the native students to study wholeheartedly, two founders donate to pay all tuition and incidental fees during the students' school years; at the same time, the two founders offer the work-and-study internship opportunity in order to lighten their financial burden; and the total number of students receiving the benefit has exceeded 5400 so far, and the total amount of grant money has also exceeded TWD 1.6 billion.

Year	School	Cumulative number of graduates	Cumulative number of subsidies since the start of class	Total awarded amount for the year (in ten thousand NT dollars)	Cumulative awarded amount since the start of class (in ten thousand NT dollars)
2009		1,627	1,721	1,100	38,470
2010		1,640	1,727	1,020	39,490
2011		1,689	1,755	1,043	40,533
2012		1,711	1,759	465	40,998
2013	Ming Chi University of Technology	1,732	1,763	395	41,393
2014		1,739	1,772	391	41,784
2015		1,744	1,778	399	42,183
2016		1,752	1,783	400	42,583
2017		1,758	1,785	264	42,847
2018 (A)		1,766	1,792	211	43,058
Before 2010		2,232	3,144	3	124,593
2011		2,362	3,190	582	125,257
2012		2,373	3,226	336	125,593
2013	Chang-Gung	2,383	3,286	388	125,981
2014	University	2,395	3,493	284	126,265
2015	of Technolog	2,410	3,543	261	126,526
2016		2,427	3,596	187	126,713
2017		2,437	3,646	151	126,864
2018 (B)		2,449	3,684	70	126,934
TOTA	AL (A + B = C)	4,215	5,476	_	169,992



# Appendix 1 Global Reporting Initiative ,GRI Standards 2016

(GRI Standards Comparison List)

Note :  $\lceil \star \rfloor$  Major Issues,  $\lceil \bullet \rfloor$  : General Discloure of Core Options

GRI Standard Number	Disclosure Number	Disclosure Title	Reference chapter	Page	Com- ment
	102-1	Name of the organization	1.1 Corporate profile	11	•
Standard	102-2	Activities, brands, products, and services	<ul><li>1.2 Market position</li><li>1.4 Major products and R&amp;D</li><li>2.1 Governance overview</li><li>(4) Follow corporate regulation</li></ul>	12 14 29	•
	102-3	Location of headquarters	1.1 Corporate profile	11	•
	102-4	Location of operations	1.1 Corporate profile	11	•
	102-5	Ownership and legal form	1.1 Corporate profile	11	•
	102-6	Markets served	1.2 Market position	12	•
	102-7	Scale of the organization	<ul><li>1.1 Corporate profile</li><li>1.2 Market position</li><li>2.2 Financial performance</li></ul>	11 12 31	•
	102-8	Information on employees and ther workers	4.1 Employment	58	•
	102-9	Supply chain	2.6 Supplier and contractor management	33	•
	102-10	Significant changes to the organization and its supply chain	About the report	06	•
General Disclosures	102-11	Precautionary Principle or approach	2.1 Governance overview  (4) Follow Corporate Regulation  (6) Internal Audits  (8) Employee Behaviors and Code of Ethical Conduct	29 30 30	•
	102-12	External initiatives	1.6 Participating organization and standard	11 12 14 29 11 11 11 12 11 12 31 58 33 06 29 30	•
	102-13	Membership of associations	1.6 Participating organization and standard	18	•
	102-14	Statement from senior decision-maker	Message from the President	08	•
	102-15	Key impacts, risks, and opportunities	1.3 Prospect, opportunities, and challenges to the industry	13	
	102-16	Values, principles, standards, and norms of behavior	2.1 Governance overview (9)Anti-corruption	31	•
	102-17	Mechanisms for advice and concerns about ethics	2.1 Governance overview	24	
	102-18	Governance structure	2.1 Governance overview     (1)Operation of board of directors	26	•
	102-20	Executive-level responsibility for economic, environmental, and social topics	About the report	06	
	102-21	Consulting stakeholders on economic, environmental, and social topics	1.7 Stakeholder dialogue	18	
	102-23	Chair of the highest governance body	2.1 Governance overview (1)Operation of board of directors	26	

GRI Standard Number	Disclosure Number	Disclosure Title	Reference chapter	Page	Com- ment
	102-26	Role of highest governance body in setting purpose, values, and strategy	About the report -Methods 1.1 Corporate profile 2.1 Governance overview (1)Operation of board of directors	06 11 26	
	102-32	Highest governance body's role in sustainability reporting	2.1 Governance overview	24	
	102-37	Stakeholders' involvement in remuneration	4.2 Salaries and welfare	59	
	102-40	Stakeholders' involvement in remuneration	1.7 Stakeholder dialogue	18	•
	102-41	Stakeholders' involvement in remuneration	4.6 Human rights	71	•
	102-42	ldentifying and selecting stakeholders	<ul><li>1.7 Stakeholder dialogue</li><li>1.8 Identification of Major Issues</li></ul>	18 20	•
	102-43	Approach to stakeholder engagement	1.7 Stakeholder dialogue	18	•
	102-44	Key topics and concerns raised	Stakeholder dialogue     Is Identification of Major Issues	18 20	•
GRI 102 General Disclosures 2016	102-45	Entities included in the consolidated financial statements	1.1 Corporate profile	11	•
	102-46	Defining report content and topic Boundaries	1.8 Identification of Major Issues	20	•
	102-47	List of material topics	1.8 Identification of Major Issues	11 26 24 59 18 71 18 20 18 20 11 20 20 20 06 06 06 06 06 06 ve, 85	•
	102-48	Restatements of information	No Restatements		•
	102-49	Changes in reporting	No significant change		•
	102-50	Reporting period	About the report		•
	102-47 List of 102-48 Restar 102-49 Chang 102-50 Report	Date of most recent report	About the report	06	•
	102-52	Reporting cycle	About the report	06	•
	102-53	Contact point for questions regarding the report	About the report	06	•
	102-54	Calms of reporting in accordance with the GRI Standards	Appendix 1 Global Reporting Initiative, GRI Standards 2016(GRI Standards Comparison List)	85	•
	102-55	GRI content index	Appendix 1 Global Reporting Initiative, GRI Standards 2016(GRI Standards Comparison List)	85	•
	102-56	External assurance	Appendix 4 Assurance	94	•
	103-1	Explanation of the material topic and its Boundary	1.8 Identification of Major Issues	20	
GRI 103	103-2	The management approach	1.4 Major products and R&D	14	
Managemer	nt	and its components	2. Governance	25	
Approach			3. Environmental sustainability	39	
2016			4. Employee welfare	56	
	103-3	Evaluation of the management approach	1.8 Identification of Major Issues	20	

GRI Standard Number	Disclosure Number	Disclosure Title	Reference chapter	Page	Com- ment
	201-1	Direct economic value generated and distributed	2.1 Governance overview     4.2 Salaries and welfare     5.1 Neighborhood relations	31 59 75	*
GRI 201 Economic Performance	201-3	Defined benefit plan obligations and other retirement plans	4.2 Salaries and welfare	59	
2016	201-4	Financial assistance received from government	The Company has complete financial status and received no financial support from the government in 2018	-	
GRI 202 Market Presence 20	202-2 16	Proportion of senior management hired from the local community	<ul><li>4.1 Employment</li><li>(3) Local supervisory proportion</li></ul>	59	
GRI 203 Indirect Economic Impacts 2010	203-1	Infrastructure investments and services supported	5.1 Neighborhood relations	75	
GRI 204 Procurement Practices 20°		Proportion of spending on local suppliers	<ul><li>2.6 Supplier and contractor management</li><li>(1) Supplier Management</li></ul>	33	
	205-1	Operations assessed for	2.1 Governance overview		
		risks related to corruption	(4) Follow corporate regulation (8) Employee Behaviors and Code of Ethical Conduct	29 30	
			(9) Anti-corruption	31	
GRI 205 Anti-	205-2	Communication and training about anti-corruption policies	Covernance overview     (4) Follow corporate regulation	29	
corruption 2016		and procedures	(8) Employee Behaviors and Code of Ethical Conduct (9) Anti-corruption	31 29 30 31	
	205-3	Confirmed incidents of	2.1 Governance overview	J1	
	2000	corruption and actions taken	(4) Follow corporate regulation	29	
		·	(8) Employee Behaviors and Code of Ethical Conduct	30	
			(9) Anti-corruption	31	
GRI 206 Anti- competitive Behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	2.1 Governance overview  (8) Employee Behaviors and Code  of Ethical Conduct  **The Company did not have any lawsuit related to anti-competitive behavior, antit and monopoly behavior in 2018		
	301-1	Materials used by weight or volume	3.3 Water and energy conservation and Greenhouse gas reduction	43	
GRI 301 Materials	301-2	Recycled input materials used	The Company did not use recycled input materials in 2018	-	*
2016	301-3	Reclaimed products and their packaging materials	3.4 Protecting the environment around factories (5) Green supply chain F. RoHS regulations and product packagi	30 31 29 30 31 29 30 31 30 suit ntitrust, 43	*
GRI 302	302-1	Energy consumption within	3.3 Water and energy conservation and Greenhouse gas reduction		
Energy 2014		the organization	(1) Environmental Data	43	
2016			(2) Improve energy management and reduce energy consumption	44	

GRI Standard Number	Disclosure Number	Disclosure Title	Reference chapter	Page	Com- ment
	303-1	Water withdrawal by source	3.3 Water and energy conservation and Greenhouse gas reduction     (3) Water resource management and water conservation	45	*
GRI 303 Water 2016	303-2	Water sources significantly affected by withdrawal of water	3.3 Water and energy conservation and Greenhouse gas reduction (3) Water resource management and water conservation	45	*
	303-3	Water recycled and reused	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(3) Water resource management and water conservation</li></ul>	45	*
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	3.5 Greening and tree-planting activities around factories (The Company's factories are not located in ecological preservation areas)	48	
GRI 304 Biodiversity	304-2	Significant impacts of activities, products, and services on biodiversity	3.5 Greening and tree-planting activities around factories (The Company's factories are not located in ecological preservation are	48 eas)	
2016	304-3	Habitats protected or restored	3.5 Greening and tree-planting activities around factories (The Company's factories are not located in ecological preservation are	48 eas)	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	3.5 Greening and tree-planting activities around factories (The Company's factories are not located in ecological preservation are	48 eas)	
	305-1	Direct (Scope 1) GHG emissions	3.4 Protecting the environment around factories (4) Examination and reduction of greenhouse gas emission	50	*
GRI 305	305-2	Energy indirect (Scope 2) GHG emissions	3.4 Protecting the environment around factories (4) Examination and reduction of greenhouse gas emission	50	*
Emissions 2016	305-4	GHG emissions intensity	3.4 Protecting the environment around factories     (4) Examination and reduction of greenhouse gas emission	50	*
	305-5	Reduction of GHG emissions	3.4 Protecting the environment around factories (4) Examination and reduction of greenhouse gas emission	50	*
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(1) Environmental Data</li></ul>	43	*
	306-1	Water discharge by quality and destination	3.4 Protecting the environment around factories (2) Water pollution prevention	48	*
GRI 306 Effluents and Waste	306-2	Waste by type and disposal method	3.4 Protecting the environment around factories (3) Waste management	49	*
2016	306-3	Significant spills	3.1 Commitments to environmental sustainability     (2) NYPCB environmental protection history	41	*
	306-5	Water bodies affected by water discharges and/ or runoff	3.4 Protecting the environment around factories (2) Water pollution prevention	48	*

	Disclosure Number	Disclosure Title	Reference chapter	Page	Com- ment
GRI 307 Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	3.1 Commitments to environmental sustainability (2) NYPCB environmental protection history	41	
GRI 308 Supplier	308-1	New suppliers that were screened using environmental criteria	2.6 Supplier and contractor management	33	*
Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	2.6 Supplier and contractor management	33	*
	401-1	New employee hires and employee turnover	4.1 Employment (2) New employees by age and region	59	
GRI 401 Employment 2016	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	4.2 Salaries and welfare	59	
	401-3	Parental leave	4.2 Salaries and welfare	59	
GRI 402 Labor/ Management Relations 2016	402-1	Minimum notice periods regarding operational changes	4.6 Human rights (No latest date has yet been set)	71	
GRI 403 Occupational	403-1	Workers representation in formal joint management-worker health and safety committees	3.1 Commitments to environmental sustainability A.Organization Chart and Responsibility of the EHS Unit	40	*
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	<ul><li>4.5 Employee wellness program</li><li>(4) Statistic of occupational disasters and accidents and the effect of health and safety management</li></ul>	70	*
Health and Safety 2016	403-3	Workers with high incidence or high risk of diseases related to their occupation	4.5 Employee wellness program (1) Improve the health and wellness of employees (2) Contingency plan for infectious diseases	71 40 40 and 66 68	*
	403-4	Health and safety topics covered in formal agreements with trade unions	No health or safety-related topics can be found in the NYPCB union agreement.		
GRI 404	404-1	Average hours of training per year per employee	4.3 Training system (2) Employee training and advanced courses	64	*
Training and Education	404-2	Programs for upgradin employee skills and transition assistance programs	4.3 Training system	64	*
2016	404-3	Percentage of employees receiving regular performance and career development reviews	4.3 Training system	64	*
GRI 405 Diversity and Equal	405-1	Diversity of governance bodies and employees	4.1 Employment (1) 2018 NYPCB Human Resources Structure	58	*
Opportunity 20166	405-2	Ratio of basic salary and remuneration of women to men	4.2 Salaries and welfare (1) Employee Salaries	59	*
GRI 406 Non-discrimina 2016	406-1 ation	Incidents of discrimination and corrective actions taken	4.2 Salaries and welfare (1) Employee Salaries	59	
GRI 407 Freedom of	407-1	Operations and suppliers in which the right to freedom of	2.6 Supplier and contractor	33	
Association and Collective Bargaining 20		which the right to freedom of association and collective bargaining may be at risk	management 4.6 Human rights	71	

GRI Standard Number	Disclosure Number	Disclosure Title	Reference chapter	Page	Com- ment
GRI 408 Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	2.6 Supplier and contractor management 4.6 Human rights	33 71	
GRI 409 Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	4.6 Human rights	71	
GRI 411 Rights of Indigenous P	411-1 Peoples 201	Incidents of violations involving rights of indigenous peoples	4.6 Human rights (The company had no related to aborigines' rights infringement and measures adopte by the organization in 2	71 2018)	
GRI 412 Human Right Assessment 2		Significant investment agreements and contracts that include human rights clauses or that underwent human rights screet	4.6 Human rights	71	
GRI 413 Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	5.1 Neighborhood relations	75	
	413-2	Operations with significant actual and potential negative impacts on local communities	The Company had no significant or potentially negative influence on the loca community in 2018	- I	
GRI 414 Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	Supplier and contractor management     Supplier Management	33	*
	414-2	Negative social impacts in the supply chain and actions taken	2.6 Supplier and contractor management	33	*
GRI 415 Public Policy 2016	415-1	Political contributions	2.1 Governance overview (4) Follow Corporate Regulation (8) Employee Behaviors and Code of Ethical Conduct (The Company is free of political contribution donations in 2018.)	29 30	
GRI 416 Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	<ul><li>3.4 Protecting the environment around factories</li><li>(5) Green supply chain</li></ul>	52	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	The Company had no violation in 2018	-	*
GRI 417 Marketing and Labeling 2016	417-1	Requirements for product and service information and labeling	2.5 Customers 3.4 Protecting the environment around factories (5) Green supply chain	32	
	417-2	Incidents of non-compliance concerning product and service information and labeling	The Company had no violation in 2018	-	
	417-3	Incidents of non-compliance concerning marketing communications	The Company had no violation in 2018	-	
GRI 418 Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	The Company had no violation in 2018	-	
GRI 419 Socioeconom Compliance 2016	419-1 nic	Non-compliance with laws and regulations in the social and economic area	2.3 Internal control (The Company did not have any sanctions due to violation of laws or regulations in 2018)	31	*

# Appendix 2: Comparison Table for ISO 26000 Articles

	Major issue	Corresponding section in 2018 report	Page	Comments
Organization management	Decision-making and implementation system for target delivery	2. Governance	24	
Human rights	Conventional check	22. Governance	24	
	Risky position of human rights	4.6 Human rights	71	
	Prevent accomplices	2. Governance	24	
	Solve complaints	4.6 Human rights	71	
	Discrimination and disadvantaged grou	p 4.6 Human rights	71	
	Citizen and political rights	4.6 Human rights	71	
	Economic society and cultural rights	4.5 Employee wellness program	66	
	Basic work rights	4.5 Employee wellness program	66	
	Employment and employment relations	4.1 Employment	58	
	Work conditions and social protection	4.5 Employee care	66	
Labor practice	Social dialogue	1.7 Stakeholder dialogue 1.8 Identification of Major Issues	18 20	
	Work health and safety	4.5 Employee wellness program	66	
	Labor development and training	4.3 Training system	64	
	Pollution prevention	3. Environmental sustainability	38	
F	Sustainable resource utilization	Message from the President	08	
Environment	Climate change relief and adaptation	Message from the President	08	
	Natural environment protection and restoration	3.4 Protecting the environment around factories	47	
	Anti-corruption	<ul><li>2.1 Governance overview</li><li>(4) Follow Corporate Regulation</li></ul>	29	
Fair business practice	Responsible political participation	-	-	Not involved in any political activity
	Fair competition	2.1 Company management (4) Follow Corporate Regulation	29	
	Promote influence circle's social	<ul><li>2.5 Customers</li><li>2.6 Supplier and contractor</li></ul>	32	
	responsibility	management	33 74	
	Respect intellectual property rights	5. Charity -	-	The Company respects intellectual property rights
Consumer issues		2.1 Company management (4) Follow Corporate Regulation	29	<u> </u>
	Protect consumer's health and safety	-	-	Does not provide any final product to consumers
	Sustainable protection	-	-	Does not provide any final product to consumers
	Consumer service, support and complaint settlement	2.5 Customers	32	

	Major issue	Corresponding section in 2018 report	Page	Comments
Consumer issues	Consumer data protection and privacy	-	0	loes not provide ny final product to onsumers
	Provide necessary service	1.4 Major products and R&D	14	
	Education and new knowledge	1.4 Major products and R&D	14	
Community participation and development	Community participation	5. Charity	74	
	Education and civilization	5. Charity	74	
	Employment creation	Message from the President	08	
	Science and technology development	5. Charity	74	
	Create wealth and revenue	5. Charity	74	
	Health	4.5 Employee wellness program	66	
	Responsible investment	5. Charity	74	

# Appendix 3: Comparison Table for United Nations Global Compact

Category	Ten principles	Corresponding section in 2018 report	Page	Comments
Human rights	Business circles shall support and respect internationally recognized human rights	4.6 Human rights	71	
	Guarantee and does not associate with violators of human rights	4.6 Human rights	71	
Labor standards	Business circles shall support freedom of association and actually recognize the right of collective bargaining	4.6 Human rights	71	
	Eliminate all forms of forced labor	4.6 Human rights	71	
	Actually abolish child labor	4.6 Human rights	71	
	Eliminate employment and occupational discriminationr	4.6 Human rights	71	
Environment	Business circles shall support the adoption of preventive methods to protect the environment	3. Environmental sustainability	38	
	Act on their own initiative in promoting the most responsible things to do for the environment	3. Environmental sustainability	38	
	Encourage the development of and promote environmentally friendly technology	3.4 Protecting the environment around factories (5) Green supply chain	52	
Anti- corruption	Business circles shall try their best to fight again all forms of corruption, including extortion and bribery	2.1 Company management (9) Anti-corruption	31	



## INDEPENDENT ASSURANCE OPINION STATEMENT

2018 Nan Ya Printed Circuit Board Corporation Corporate Social Responsibility Report

The British Standards Institution is independent to Nan Ya Printed Circuit Board Corporation (hereafter referred to as Nan Ya PCB in this statement) and has no financial interest in the operation of Nan Ya PCB other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of Nan Ya PCB only for the purposes of assuring its statements relating to its corporate social responsibility (CSR), more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by Nan Ya PCB. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Nan Ya PCB only.

#### Scope

The scope of engagement agreed upon with Nan Ya PCB includes the followings:

- The assurance scope is consistent with the description of 2018 Nan Ya Printed Circuit Board Corporation Corporate Social Responsibility Report.
- 2. The evaluation of the nature and extent of the Nan Ya PCB's adherence to AA1000 AccountAbility Principles (2018) in this report as conducted in accordance with type 1 of AA1000 Assurance Standard (2008) with 2018 Addendum assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

## **Opinion Statement**

We conclude that the 2018 Nan Ya PCB Corporate Social Responsibility Report provides a fair view of the Nan Ya PCB CSR programmes and performances during 2018. The CSR report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the Nan Ya PCB and the sample taken. We believe that the 2018 economic, social and environmental performance information are fairly represented. The CSR performance information disclosed in the report demonstrate Nan Ya PCB's efforts recognized by its stakeholders.

Our work was carried out by a team of CSR report assurors in accordance with the AA1000AS (2008) with 2018 Addendum. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that Nan Ya PCB's description of their approach to AA1000AS (2008) with 2018 Addendum and their self-declaration in accordance with GRI Standards: Core option were fairly stated.

## Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a review of issues raised by external parties that could be relevant to Nan Ya PCB's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 10 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AP (2018).

## Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness and Impact of AA1000AP (2018) and GRI Standards is set out below:

#### Inclusivity

This report has reflected a fact that Nan Ya PCB has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for economic, social and environmental information in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the Nan Ya PCB's inclusivity issues.

#### Materiality

Nan Ya PCB publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of Nan Ya PCB and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the Nan Ya PCB's management and performance. In our professional opinion the report covers the Nan Ya PCB's material issues.

#### Responsiveness

Nan Ya PCB has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for Nan Ya PCB is developed and continually provides the opportunity to further enhance Nan Ya PCB's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the Nan Ya PCB's responsiveness issues.

#### Impact

Nan Ya PCB has Identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. Nan Ya PCB has established processes to monitor, measure, evaluate and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the Nan Ya PCB's impact issues.

## GRI Sustainability Reporting Standards (GRI Standards)

Nan Ya PCB provided us with their self-declaration of in accordance with GRI Standards: Core option (For each material topic covered by a topic-specific GRI Standard, comply with at least one topic-specific disclosure). Based on our review, we confirm that social responsibility and sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the Nan Ya PCB's social responsibility and sustainability topics.

#### Assurance leve

The moderate level assurance provided is in accordance with AA1000AS (2008) with 2018 Addendum in our review, as defined by the scope and methodology described in this statement.

### Responsibility

The CSR report is the responsibility of the Nan Ya PCB's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

## Competency and Independence

The assurance team was composed of Lead auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064 and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Peter Pu

Managing Director BSI Taiwan

22 April, 2019

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Taiwan Headquarters: 5th Floor, No. 39, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.

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# Nan Ya Printed Circuit Board Corporation

Investor Relations Unit of the President's Office

Address: No.338, Sec. 1, Nankan Rd., Luchu District, Taoyuan City

Tel: +886-3-3223751 ext.1014

Fax: +886-3-3218-470

E-mail: jameshan@nanyapcb.com.tw Website: http://www.nanyapcb.com.tw