

## CH3 Product Innovation and Supply Chain Management

**46** Technology R&D GRI 3-3, 201-1

**50** Customer Service GRI 2-6

**53** Supply Chain Management GRI 2-6, 2-23, 2-24, 3-3, 308-1, 308-2, 414-1, 414-2

### Performance Highlights

New product development: **1**, Quality improvement: **1**

The ratio of R&D funds in total revenues **0.71%**

Overall Customer Satisfaction **98%**

Supplier CSR commitment signing achievement rate **100%**

### Material Topics

Technology R&D, Supply Chain Management

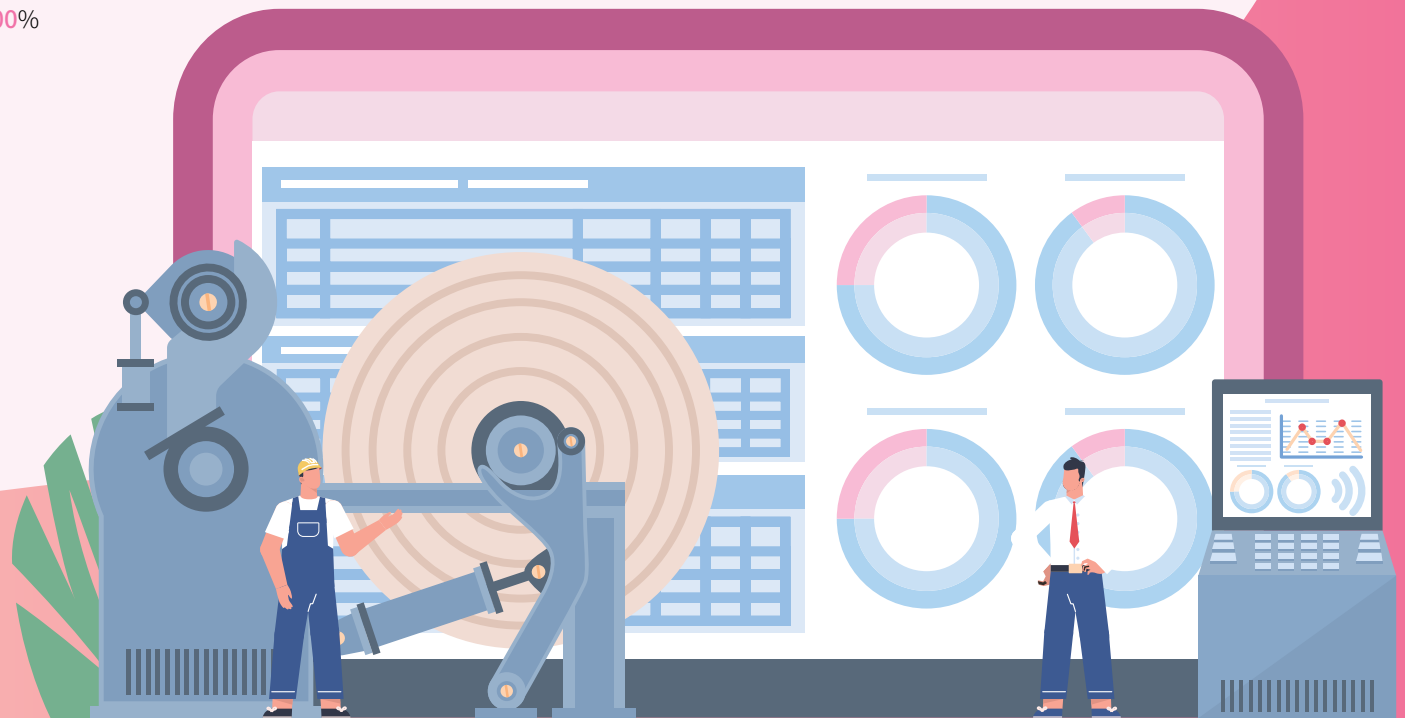
### SDGs Correspondence



### Certified management system



ISO 9001 Quality Management Systems  
Validity Period: 2022.05.03~2025.05.03



## 3.1 Technology R&D

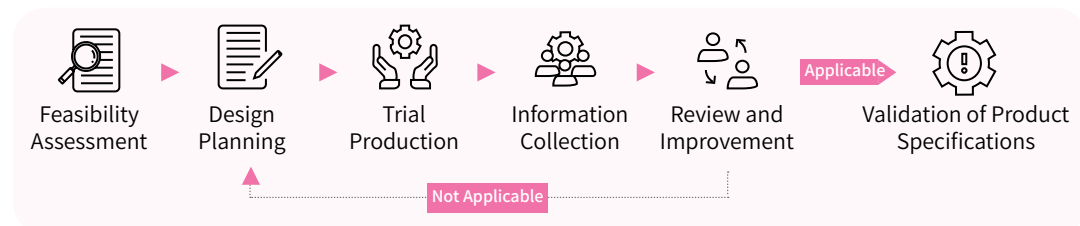
Material topics: Technology R&D corresponding with sustainability development principle: Innovative Technology GRI 2-25, 3-3

Management Approach and Components	Impact Management	Targets Execution and Performance of Management Approach	Evaluation of Management Approach
<b>Significance to APC</b>	<b>Positive/Negative Impacts</b>	<b>2023 Goals</b>	<b>Effectiveness Assessment</b>
Successful sustainable materials development and corporate transformation are crucial to corporate competitiveness. Therefore, continuous improvement of product quality and the development of new products are not only key to maintaining corporate profitability but also the foundation of corporate sustainable development.	Positive potential impact - Getting rid of the industry burdens through manufacturing transformation Positive potential impact - Successful sustainable materials development Positive actual impact - New product development and diversification	<ul style="list-style-type: none"> <li>At least one new product development or product quality improvement per year</li> </ul>	<ul style="list-style-type: none"> <li>Control product development progress with the "Product Research and Trial SOP"</li> <li>Review R&amp;D direction through the quality meeting</li> <li>Exchange Technology R&amp;D through the executive meeting</li> </ul>
<b>Management Practice and Objectives</b>	<b>Processes to remediate and prevent negative impacts</b>	<b>2023 Performance</b>	<b>Grievance Mechanism</b>
Fulfill customer demands by collect information regarding market development trends, set directions for product quality improvement and new product development, and enhance product quality and market competitiveness.	—	<ul style="list-style-type: none"> <li>New product development: 1, Quality improvement: (✓)</li> </ul> <p>Analysis Reason: The research and test for hot melt adhesive V19400 requires the addition key equipment, chiller, to proceed effectively. This is a cross-year program and currently in progress.</p> <p>2023 Progress Descriptions:</p> <ol style="list-style-type: none"> <li>Completed V19400 Trial Production Plan in September 2023.</li> <li>Completed installation of the chiller project in December 2023.</li> </ol>	<ul style="list-style-type: none"> <li>Customer Management Process</li> <li>Customer Dispute Management Procedures</li> </ul>
<b>Strategy</b>		<b>Short-Term (&lt; 3 years) Goals</b>	<b>Adjust the management approach</b>
<ul style="list-style-type: none"> <li>Niche product development</li> <li>High-value products</li> </ul>		<ul style="list-style-type: none"> <li>At least one new product development or product quality improvement per year</li> <li>The major new product research and trial quality achievement rate <math>\geq 80\%</math></li> </ul>	<ul style="list-style-type: none"> <li>The Business Division collects market information and capture the market trends of products through technical customer service.</li> </ul>
<b>Target</b>		<b>Medium- Long-Term (<math>\geq 3</math> years) Goals Planning</b>	
<ul style="list-style-type: none"> <li>New product development or product quality improvement, at least 1 item per year</li> </ul>		<ul style="list-style-type: none"> <li>Development of market-leading products, at least 2.</li> </ul>	

## R&D Process

### Information Collection

- The Business Division collects market information and customer feedback, proposing product development or improvement needs.
- Linyuan Plant proposes product improvement based on demand



## R&D Outcomes

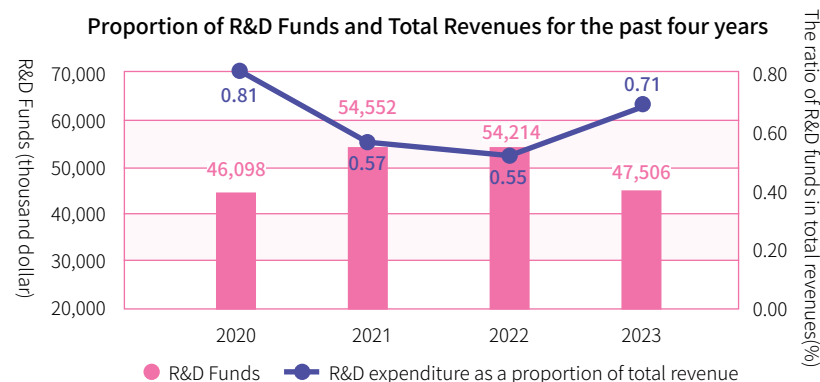
	R&D Outcomes	Primary reasons for R&D
2021	High-speed Laminating Grade EVA Product (Grade V18251) Quality Improvement and Technology Enhancement	<ul style="list-style-type: none"> <li>The production technical threshold of low-gel grade EVA is high</li> <li>Application of high-speed laminating processing to meet market demands</li> </ul>
2022	Hot Melt Adhesive Grade EVA Product Completed trial production of (grade V08085/V19150), The quality meets the specification	<ul style="list-style-type: none"> <li>The production technical threshold of hot melt adhesive grade EVA is high</li> <li>In response to the commencement of the Gulei Petrochemical, there is diversification in the products</li> </ul>
2023	Hot Melt Adhesive Grade EVA Product. The trial production planning (grade V19400) has been completed, and the additional construction of the chiller is expected to conclude by December 2023	<ul style="list-style-type: none"> <li>The production technical threshold of hot melt adhesive grade EVA is high</li> <li>In response to the commencement of the Gulei Petrochemical, there is diversification in the products</li> </ul>

In response to the product high-value strategy and changes in market demand, APC has not only expanded its EVA production capacity, but also moved towards high-end applications and high VA content. Mass product development, in addition to high-speed lamination grade EVA products, which are APC's main products, hot melt adhesive grade EVA products have a wide range of uses with the expansion of production capacity in the future, the flexibility of product portfolio can be improved, which has become the focus of product development in recent years. **GRI 201-1**

## Resource

### R&D Funds

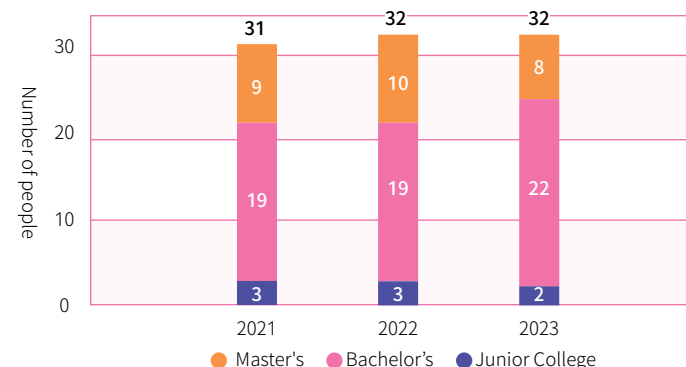
The amount of R&D funds in 2023 was NT\$47,506 thousand, accounting for **0.71%** of the revenue. In addition to the R&D funds, USIG has also established a common R&D department to provide both R&D funds and human resources, to help accomplish the R&D targets with the group's power.



### R&D Workforces

There were 32 R&D personnel in 2023, accounting for 13.7% of all employees. Most outstanding talents R&D personnel are holding a bachelor's or master's degree. The distribution of education attainments of R&D personnel in the past three years is as follows:

### Education Attainment Distribution of R&D Personnel for the past three years



## Green products

### Non-toxic Products GRI 403-7 SASB RT-CH-410b.2

We consider the related laws and regulatory requirements such as FDA, CNS, JIS, and EU Restrictions on Hazardous Substances (RoHS) Directive right from the feasibility assessment of product development to ensure compliance with the standards, regulations, and laws governing human health and environmental impact.

We received the SONY Green Partner certification (Green Partner Environmental Quality Approval System) in 2009, establishing our corporate image of toxic substance free and clean production. In order to meet the legal and regulatory requirements for environmental protection and quality, we request suppliers to provide raw materials that comply with the relevant environmental quality requirements to ensure no use of limited or restricted substances at the procurement stage.

Apart from engaging in energy conservation and clean production in the product manufacturing process, the Company also develop EVA products suitable for the shielding layer of electric wires and cables for producing low-smoke, halogen-free wire and cable jackets to comply with the environmental protection requirements.

APC products have passed various regulatory requirements as certified by third-party notary units, as detailed in the table below:

Item	Standards and Norms	Inspect Product Model
1	USA FDA Standards (Title21, Pt 177.1520)	LDPE
2	Halogen-free	LDPE
3	Plasticizer Test	M5100
4	EU Standards (EU 10/2011)	C7100
5	EN 71 Part 3: 2013 (19 items of migratable heavy metals)	LDPE/EVA
6	Restriction of Hazardous Substances (RoHS) Directive Standards	LDPE/EVA
7	New balance specifications	C7100, EV101, EV102, EV303
8	USA FDA Standards (Title21, Pt 177.1350)	EVA
9	Adidas specifications	EVA
10	Article 4 of the Sanitary Standards for Food Utensil, Container and Packaging in Taiwan	C7100
11	Standards for Plastic Food Contact Plastic Materials in Mainland China	C7100, C4300, F2201
12	Crocs RSL specifications	EVA
13	Nike RSL Specifications	C7100
14	Asics specifications	EV101



## Product Innovation

### 1 New product R&D progress

Year	R&D Project	Progress	Invest in research funds (in thousand dollars)	Estimated Time of Mass Production Duration	Descriptions of R&D Outcomes
2023	Trial productions of the hot melt adhesive grade EVA	1. Completed V19400 Trial Production Plan in October 2023. 2. The key equipment, chiller, is set to be installed in December 2023.	26,800	2024	1. Completed the feasibility assessment for the trial production plan of V19400. 2. The addition project of the chiller for key equipment was completed. 3. Development of this product requires the addition of key equipment, chiller (RF-1302), to proceed effectively. This is a cross-year program and currently in progress, with trial production anticipated to commence in March 2024.

### 2 New Product R&D Plan

Year	R&D Project	Progress	Invest in research funds (in thousand dollars)	Estimated Time of Mass Production Duration	Descriptions of R&D Outcomes
2024	Trial (mass) production of the hot melt adhesive grade EVA	1. V19400/V19150 quality meets the requirements for customers. 2. V19400/V19150 trial (mass) production, with completion by the end of December. 3. V19400 is scheduled for trial production in March 2024. 4. Install cutting axis water.	200	2024	Develop higher specification hot melt adhesive products to meet market demand, and the process can be flexibly adjusted according to market changes, which is expected to increase the company's revenue.

### 3 Product Quality Improvement

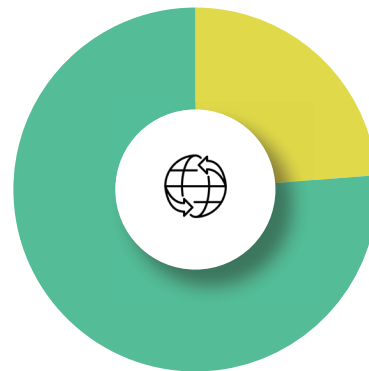
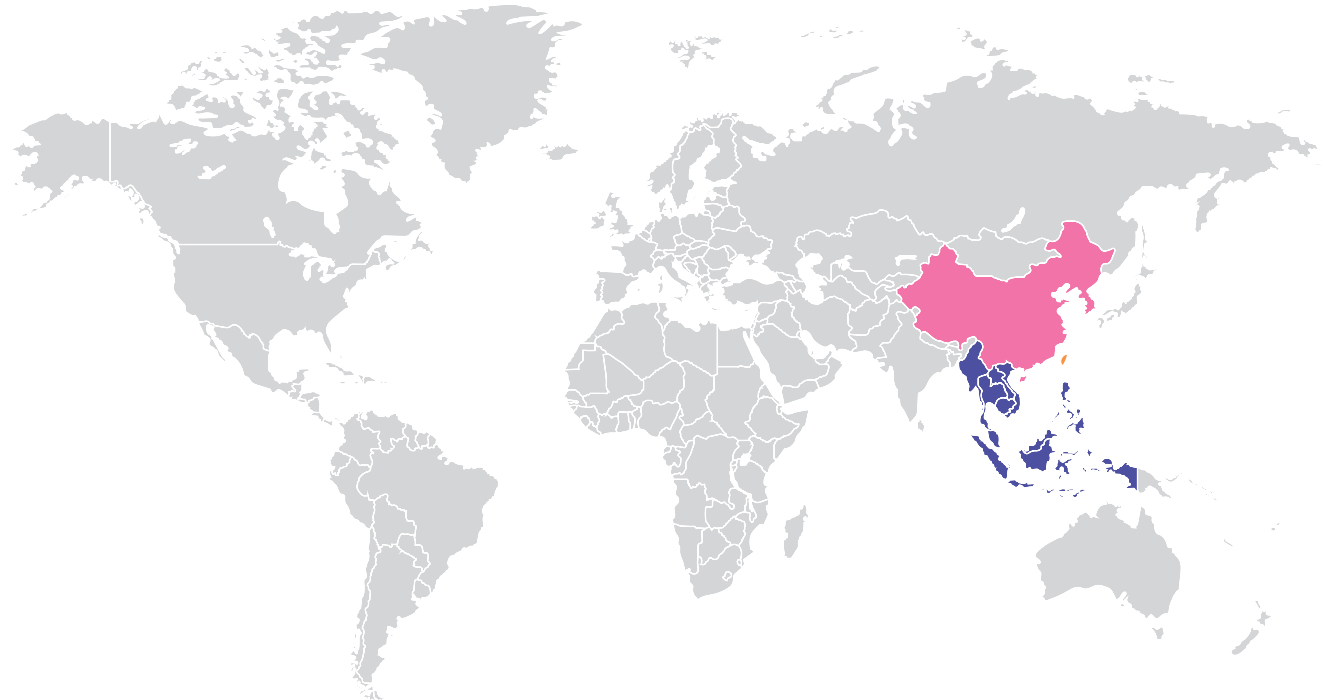
Year	R&D Project	Progress	Invest in research funds (in thousand dollars)	Time of Improvement Completion	Descriptions of R&D Outcomes
2023	L2&L3-V18161	Establishing EC policy	-	June 2023	Resolve customer disputes to prevent recurrence

## 3.2 Customer Service

The Technology department of APC Linyuan Plant assists the Business Division by supporting customer services, product improvement, new product and new market development. It also supports the development of custom products and product characteristic improvement. In recent years, the sound collaboration of both departments has earned customer recognition.

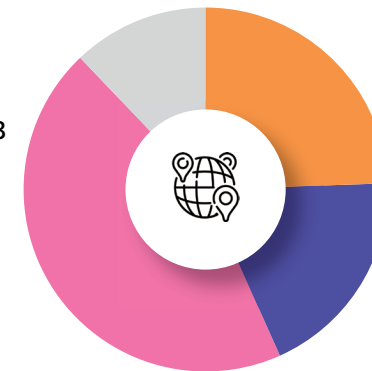
### Product sales and markets GRI 2-6

The Company product markets: LDPE is primarily for domestic sales, while EVA is for export. In addition to Taiwan, we also distribute products worldwide to Mainland China, Hong Kong, Japan, Thailand, Vietnam, Malaysia, Singapore, the USA, Indonesia, Cambodia, India, Bangladesh, Pakistan, Sri Lanka, the UAE, Israel, Egypt, South Africa, and Russia, etc. Our customers include processing plants and traders of packaging films, food packaging materials, microfibers, plastic injection molding, foaming shoe materials, sports goods, PV packaging films, pre-coating/lamination films. The proportion of domestic and export sales and market distribution in 2023 are shown below by sales volume.



**Proportion of Domestic and Export Sales in 2023**

- Export, 76%
- Domestic, 24%



**Market Distribution in 2023**

- China and Hong Kong, 45%
- Taiwan, 24%
- Southeast Asia, 20%
- Other Regions, 11%

## Customer privacy

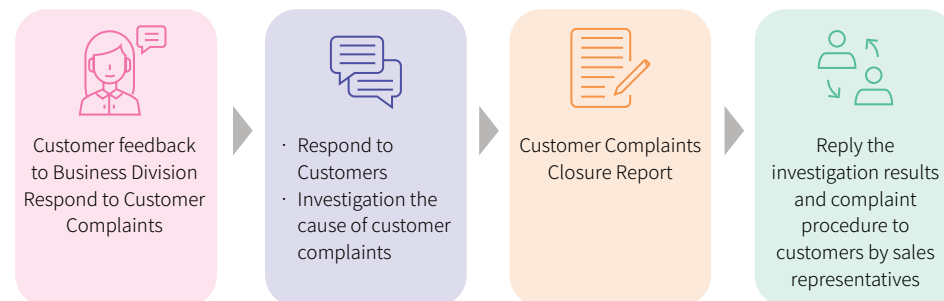
In terms of customer privacy confidentiality, the Group Credit Department establishes the Customer Personal Data Control Regulations in response to the Personal Data Protection Act to ensure customer data is controlled in compliance with the Personal Data Protection Act. The control process is as follows:

- 1 Cancel the access, including the system and file access privilege, to customer personal data over the Enterprise Resource Planning (ERP) system, except for the Group Credit Department personnel.
- 2 Obtain the “Personal Data Collection, Processing, and Use Notification and Agreement” in advance before collecting documents containing customer personal data.
- 3 After receiving customer personal data, the Group Credit Department should input paper data in the ERP system. Personnel should store paper documents in media files and cover text or data containing customer personal data before archiving. Except as otherwise required, destroy paper documents afterwards.

**There was no customer privacy right infringement or loss of customer personal data in 2023.**

## Customer Complaints Procedure

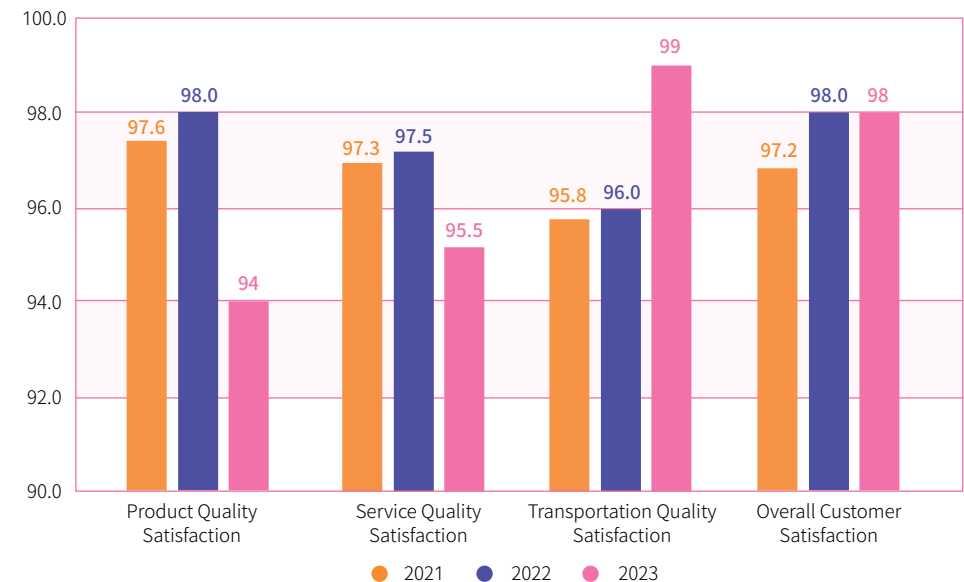
To optimize the customer complaints procedure, APC has established the Customer Dispute Management Platform to digitize the customer complaint process, control and analyze the causes of customer complaints, and follow up the progress of responsible units and corrective and preventive actions so as to implement quality improvement activities and improve the quality of customer service.



## Customer satisfaction survey

In order to understand the opinions of customers about the products and services provided by APC, besides contacting or visiting customers personally through sales representatives, an annual customer satisfaction survey is conducted through questionnaires. This ensures that customer needs are fully understood and properly addressed. Following this, improvement plans are made in light of customer feedback and presented at the "management review meeting", where the results are tracked to continually enhance the quality of products and services. Respondents of the customer satisfaction survey are selected yearly from the top 25 customers by purchasing quantity of domestic sales and export sales respectively. If the collected responses are insufficient, we will select respondents of lower ranks. The survey is conducted on the four aspects among 50 customers to assess the product quality, service quality, transportation quality, and overall satisfaction of APC products. The satisfaction score is calculated based on the proportion of [highly satisfied] and [satisfied] responses. **In 2023, a total of 50 valid customer satisfaction survey responses were collected, and the overall satisfaction was 98%, which is the same as 2022.** APC appreciate the vast majority of customers for their recognition of our product and service quality. APC will make continual improvement to repay the long-time support of customers. Customer satisfaction in the past three years is shown below:

Customer Satisfaction Survey results of APC in past three years



Suggestions gathered from customer satisfaction survey have been transferred to the relevant units for assistance, such as “assistance in solving Customers’ processing problems by the technical service unit”, “selection of shipping companies with better punctuality and more reasonable transportation cost by the customs department to meet the shipment expectation of customers”, “provision of standby plastic pallets”, and so on.

### List of Customer Feedback Analysis and Review for 2023

Item	Customer Feedback	Analysis and Review	Satisfaction Type
2	Advance notice is required for any delays in the shipping schedule.	Customs and sales representatives will monitor the shipping schedule closely, and in case of any delays, customers will inform promptly.	Service quality
3	The quality of the goods delivered by the Company is good, but the delivery duration is longer than other suppliers.	Given that shipping schedules are based on the route planning of the shipping company that is beyond the Company's control. Our sales representatives will communicate with customers accordingly.	Transportation Quality
4	1. Please increase the number of sailings to ensure stable shipping schedules. 2. The Bunker Adjustment Factor (BAF) for ocean freight shall be borne by the shipper.	1. The sales representatives will maintain constant communication with the shipping company to ensure punctual sailings and meet customer demands. 2. The sales representatives have informed the customers that the BAF costs will be jointly borne by the shipping company and the Company.	Transportation Quality
5	Look forward to stable production line and successful delivery.	The message has been conveyed to the Linyuan Plant, where attention will be given to maintain production stability to ensure consistent product shipments.	Other Suggestions
	In the event of unforeseeable circumstances such as typhoons causing delays in the shipping schedule, please kindly notify the Company in advance.	Customs and sales representatives will be vigilant potential shipping delays caused by natural disasters and promptly inform customers.	Other Suggestions

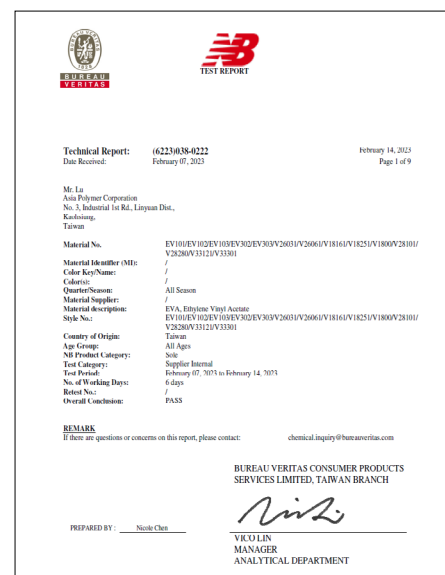
## Product Responsibility and Technical Support

APC particularly focuses on product responsibility and services. Hence, we provide the catalogs that include the specifications, performance, and application description, and safety data sheet (SDS) of existing and new products in the “Product” section on the Company website for customers to access related product information and meet their demands in time.

To ensure the rights and interests entitled to customers for using the Company products, there are technical service and marking units established under the Business Division to develop the new application of products to help customers improve processing issues and facilitate technological cooperation and exchange.

To meet the strict requirements of global customers for product quality, all APC products comply with the relevant legal and regulatory requirements and contain no Health and Environmental Hazardous Substances as categorized in the Globally Harmonized System (GHS). In 2023, EVA products passed the testing and verification by prominent sports brands such as New Balance and NIKE, etc., demonstrating the safety of APC's products.

**There was no legal non-compliance or fine in relation to product labeling in 2023.** **SASB RT-CH-410b.1**



**BUREAU VERITAS**  
TEST REPORT

Technical Report: (622)038-0222  
Date Received: February 07, 2023  
February 14, 2023  
Page 1 of 9

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Material No.: EY101/EV102/EV103/EV104/EV105/EV106/EV107/EV108/EV109/EV110/EV111/EV112/EV113/EV114/EV115/EV116/EV117/EV118/EV119/EV120/EV121/EV122/EV123/EV124/EV125/EV126/EV127/EV128/EV129/EV130/EV131/EV132/EV133/EV134/EV135/EV136/EV137/EV138/EV139/EV140/EV141/EV142/EV143/EV144/EV145/EV146/EV147/EV148/EV149/EV150/EV151/EV152/EV153/EV154/EV155/EV156/EV157/EV158/EV159/EV160/EV161/EV162/EV163/EV164/EV165/EV166/EV167/EV168/EV169/EV170/EV171/EV172/EV173/EV174/EV175/EV176/EV177/EV178/EV179/EV180/EV181/EV182/EV183/EV184/EV185/EV186/EV187/EV188/EV189/EV190/EV191/EV192/EV193/EV194/EV195/EV196/EV197/EV198/EV199/EV200/EV201/EV202/EV203/EV204/EV205/EV206/EV207/EV208/EV209/EV210/EV211/EV212/EV213/EV214/EV215/EV216/EV217/EV218/EV219/EV220/EV221/EV222/EV223/EV224/EV225/EV226/EV227/EV228/EV229/EV230/EV231/EV232/EV233/EV234/EV235/EV236/EV237/EV238/EV239/EV240/EV241/EV242/EV243/EV244/EV245/EV246/EV247/EV248/EV249/EV250/EV251/EV252/EV253/EV254/EV255/EV256/EV257/EV258/EV259/EV260/EV261/EV262/EV263/EV264/EV265/EV266/EV267/EV268/EV269/EV270/EV271/EV272/EV273/EV274/EV275/EV276/EV277/EV278/EV279/EV280/EV281/EV282/EV283/EV284/EV285/EV286/EV287/EV288/EV289/EV290/EV291/EV292/EV293/EV294/EV295/EV296/EV297/EV298/EV299/EV300/EV301/EV302/EV303/EV304/EV305/EV306/EV307/EV308/EV309/EV310/EV311/EV312/EV313/EV314/EV315/EV316/EV317/EV318/EV319/EV320/EV321/EV322/EV323/EV324/EV325/EV326/EV327/EV328/EV329/EV330/EV331/EV332/EV333/EV334/EV335/EV336/EV337/EV338/EV339/EV340/EV341/EV342/EV343/EV344/EV345/EV346/EV347/EV348/EV349/EV350/EV351/EV352/EV353/EV354/EV355/EV356/EV357/EV358/EV359/EV360/EV361/EV362/EV363/EV364/EV365/EV366/EV367/EV368/EV369/EV370/EV371/EV372/EV373/EV374/EV375/EV376/EV377/EV378/EV379/EV380/EV381/EV382/EV383/EV384/EV385/EV386/EV387/EV388/EV389/EV390/EV391/EV392/EV393/EV394/EV395/EV396/EV397/EV398/EV399/EV400/EV401/EV402/EV403/EV404/EV405/EV406/EV407/EV408/EV409/EV410/EV411/EV412/EV413/EV414/EV415/EV416/EV417/EV418/EV419/EV420/EV421/EV422/EV423/EV424/EV425/EV426/EV427/EV428/EV429/EV430/EV431/EV432/EV433/EV434/EV435/EV436/EV437/EV438/EV439/EV440/EV441/EV442/EV443/EV444/EV445/EV446/EV447/EV448/EV449/EV450/EV451/EV452/EV453/EV454/EV455/EV456/EV457/EV458/EV459/EV460/EV461/EV462/EV463/EV464/EV465/EV466/EV467/EV468/EV469/EV470/EV471/EV472/EV473/EV474/EV475/EV476/EV477/EV478/EV479/EV480/EV481/EV482/EV483/EV484/EV485/EV486/EV487/EV488/EV489/EV490/EV491/EV492/EV493/EV494/EV495/EV496/EV497/EV498/EV499/EV500/EV501/EV502/EV503/EV504/EV505/EV506/EV507/EV508/EV509/EV510/EV511/EV512/EV513/EV514/EV515/EV516/EV517/EV518/EV519/EV520/EV521/EV522/EV523/EV524/EV525/EV526/EV527/EV528/EV529/EV530/EV531/EV532/EV533/EV534/EV535/EV536/EV537/EV538/EV539/EV540/EV541/EV542/EV543/EV544/EV545/EV546/EV547/EV548/EV549/EV550/EV551/EV552/EV553/EV554/EV555/EV556/EV557/EV558/EV559/EV560/EV561/EV562/EV563/EV564/EV565/EV566/EV567/EV568/EV569/EV570/EV571/EV572/EV573/EV574/EV575/EV576/EV577/EV578/EV579/EV580/EV581/EV582/EV583/EV584/EV585/EV586/EV587/EV588/EV589/EV590/EV591/EV592/EV593/EV594/EV595/EV596/EV597/EV598/EV599/EV600/EV601/EV602/EV603/EV604/EV605/EV606/EV607/EV608/EV609/EV610/EV611/EV612/EV613/EV614/EV615/EV616/EV617/EV618/EV619/EV620/EV621/EV622/EV623/EV624/EV625/EV626/EV627/EV628/EV629/EV630/EV631/EV632/EV633/EV634/EV635/EV636/EV637/EV638/EV639/EV640/EV641/EV642/EV643/EV644/EV645/EV646/EV647/EV648/EV649/EV650/EV651/EV652/EV653/EV654/EV655/EV656/EV657/EV658/EV659/EV660/EV661/EV662/EV663/EV664/EV665/EV666/EV667/EV668/EV669/EV670/EV671/EV672/EV673/EV674/EV675/EV676/EV677/EV678/EV679/EV680/EV681/EV682/EV683/EV684/EV685/EV686/EV687/EV688/EV689/EV690/EV691/EV692/EV693/EV694/EV695/EV696/EV697/EV698/EV699/EV700/EV701/EV702/EV703/EV704/EV705/EV706/EV707/EV708/EV709/EV710/EV711/EV712/EV713/EV714/EV715/EV716/EV717/EV718/EV719/EV720/EV721/EV722/EV723/EV724/EV725/EV726/EV727/EV728/EV729/EV730/EV731/EV732/EV733/EV734/EV735/EV736/EV737/EV738/EV739/EV740/EV741/EV742/EV743/EV744/EV745/EV746/EV747/EV748/EV749/EV750/EV751/EV752/EV753/EV754/EV755/EV756/EV757/EV758/EV759/EV760/EV761/EV762/EV763/EV764/EV765/EV766/EV767/EV768/EV769/EV770/EV771/EV772/EV773/EV774/EV775/EV776/EV777/EV778/EV779/EV780/EV781/EV782/EV783/EV784/EV785/EV786/EV787/EV788/EV789/EV790/EV791/EV792/EV793/EV794/EV795/EV796/EV797/EV798/EV799/EV800/EV801/EV802/EV803/EV804/EV805/EV806/EV807/EV808/EV809/EV810/EV811/EV812/EV813/EV814/EV815/EV816/EV817/EV818/EV819/EV820/EV821/EV822/EV823/EV824/EV825/EV826/EV827/EV828/EV829/EV830/EV831/EV832/EV833/EV834/EV835/EV836/EV837/EV838/EV839/EV840/EV841/EV842/EV843/EV844/EV845/EV846/EV847/EV848/EV849/EV850/EV851/EV852/EV853/EV854/EV855/EV856/EV857/EV858/EV859/EV860/EV861/EV862/EV863/EV864/EV865/EV866/EV867/EV868/EV869/EV870/EV871/EV872/EV873/EV874/EV875/EV876/EV877/EV878/EV879/EV880/EV881/EV882/EV883/EV884/EV885/EV886/EV887/EV888/EV889/EV890/EV891/EV892/EV893/EV894/EV895/EV896/EV897/EV898/EV899/EV900/EV901/EV902/EV903/EV904/EV905/EV906/EV907/EV908/EV909/EV910/EV911/EV912/EV913/EV914/EV915/EV916/EV917/EV918/EV919/EV920/EV921/EV922/EV923/EV924/EV925/EV926/EV927/EV928/EV929/EV930/EV931/EV932/EV933/EV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## 3.3 Supply Chain Management

Material topics: Supply chain management; Corresponding sustainability development principle: Sustainable development GRI 2-25, 3-3

Management Approach and Components	Impact Management	Targets Execution and Performance of Management Approach	Evaluation of Management Approach
Significance to APC	Positive/Negative Impacts	2023 Goals	Effectiveness Assessment
Understanding the ESG impacts on the suppliers and implementing supplier management is crucial to the sustainable development of the Company. As an indicative business in Taiwan, APC not only pursues profit, but also has a responsibility and obligation to share the responsibility of sustainable supply chain management with our supplier partners.	Positive actual impact - Success supply chain management Positive actual impact: Enhance supply chain management and improve raw materials quality Negative potential impact - International situations, pandemic, weather affecting supply	<ul style="list-style-type: none"> <li>Develop the "Supplier Code of Conduct and Quality Requirements Self-Assessment Form" for suppliers to determine compliance with the regulations through self-assessment.</li> <li>Achieved a 100% signing rate for Supplier CSR Commitment with existing suppliers.</li> </ul>	Please refer to the table on page 55 for the performance of supply chain ESG risk management and its implementation status.
Management Practice and Objectives	Impact Boundary	2023 Performance	Grievance Mechanism
Establish the mechanism for supply chain sustainability risk assessment and prevention to develop a supply sustainability management culture.	Global raw material and Project Contractor, Customers	<ul style="list-style-type: none"> <li>Introduced the "Supplier Code of Conduct and Quality Requirements Self-Assessment Form," and conducted investigations into the risks of negative impacts on environmental and sociality (🟢)</li> <li>Achieved a 100% signing rate for Supplier CSR Commitment with existing suppliers (🟢)</li> </ul>	APC has a Group Audit Division grievance hotline and a suggestion email on the corporate website for filing grievances
Strategy	Processes to remediate and prevent negative impacts	Short-Term (< 3 years) Goals	Adjust the management approach
<ul style="list-style-type: none"> <li>Improve procurement performance and establish partnerships</li> <li>Establish safety awareness and improve the workplace environment</li> <li>Jointly undertake corporate social responsibility</li> </ul>		<ul style="list-style-type: none"> <li>In conjunction with the Supplier Code of Conduct and Quality Requirements Self-Assessment Form, we have officially implemented the on-site audit system to investigate the risks of negative impacts on environmental and sociality, with the goal of examining two suppliers per year.</li> </ul>	Internally, conduct supplier evaluation and project construction evaluation periodically, discuss the results, and make adjustments; externally, hold irregular supplier opinion exchange conferences to discuss and share opinions on unspecific topics.
Goals	Advance procurement, increase safety stock, and seek alternative suppliers	Medium- Long-Term ( $\geq 3$ years) Goals Planning	
We are committed to developing communication channels with suppliers to increase the opportunities for opinion exchange so as to achieve environmental protection, industrial safety, and human rights for sustainable operations together with suppliers.		<ul style="list-style-type: none"> <li>Conduct on-site audits at the supplier's plant, increasing to 4 suppliers each year.</li> <li>Based on the on-site audit results, build an opinion exchange platform with suppliers and ask related the Company professionals to make recommendations for their inadequacies and help them make corrective planning.</li> </ul>	

## Supplier Classification and Procurement Proportion

With the rise in the awareness of the issues related to sustainable development and supply chain risk management, apart from proactively performing social responsibilities and contributing to society, APC has gradually realized the need to understand the ESG impacts on our suppliers in order to implement supplier management.

APC's major suppliers include materials suppliers, equipment suppliers, and project contractors. Additionally, the procurement from information hardware and software suppliers and office supplies were omitted as the proportion was statistically insignificant. To effectively integrate group resources, the Company implements procurement in collaboration with the Group Procurement & Logistics Division. Through utilizing the internal e-procurement system, we ensure the transparency and impartiality of procurement process, uphold business integrity and ethics, and develop a steady partnership with suppliers.

APC Supplier Category and Proportion of Transaction Amount in 2023

Supplier Type	Materials Supplier	Equipment Supplier	Project Contractor
Definition	Suppliers supplying raw materials for product manufacture	Suppliers supplying equipment or parts for product manufacture	Suppliers to which projects are outsourced
Proportion of procurement amount (%)	63	23	14

## Supply Chain Sustainable Development Policy GRI 2-23

Apart from requesting suppliers to provide high-quality products and high-efficiency services of raw materials and services, we are also committed to expanding communication channels with suppliers to increase the opportunities for exchange so as to achieve the goals of environmental protection, labor safety, and human rights.



## Supply Chain Risk Management GRI 308-2, 414-2

Risk Assessment	Prevention measures	Impact Response	Future Planning
<p>In addition to the supply chain safety requirements, the identification of the special conditions for the chemicals supplier is as follows:</p> <ul style="list-style-type: none"> <li>· Risk of leakage and contamination in the chemicals manufacturing process</li> <li>· Occupational safety and environmental pollution risks in dusty, high-temperature, noisy, and humid operating premises.</li> <li>· Work at height risk.</li> <li>· Industrial safety risk of cutting or welding (S).</li> <li>· Risk of fugitive emissions of VOCs (Volatile Organic Compounds).</li> <li>· Labor-intensive industries.</li> <li>· Supply chain and project disruption/delay in delivery and completion risk.</li> <li>· Raw materials and construction quality risk.</li> </ul>	<ul style="list-style-type: none"> <li>· Implement the supplier sustainability self-assessment questionnaire to provide information for initial risk assessment.</li> <li>· Establish long-term cooperation with suppliers; cultivate a second source or multiple sources and maintain cooperation to coordinate long-term material preparation.</li> <li>· Develop an internal safety stock mechanism and set a purchase base point according to the supply schedule to prevent the risk of supply disruption.</li> <li>· Purchasers implement educational training for the sustainable supply chain.</li> <li>· Environmental, safety and health educational training for contractors.</li> </ul>	<ul style="list-style-type: none"> <li>· Adjust the supply proportion of suppliers, timely supplement or dispatch from other suppliers.</li> <li>· For construction projects, the ESH unit immediately investigates personnel safety, equipment damage, and environmental impact. After consolidation, the ESH unit will hand over the results to related units to address and understand the situations.</li> </ul>	<ul style="list-style-type: none"> <li>· Apart from setting chemical suppliers as the focus, a risk assessment mechanism will also be established based on the procurement amount, project outsourcing amount, or project importance, and the on-site audit results of the said sustainable development strategy.</li> <li>· Statistical analysis and subsequent disposal methods are planned according to the above risk assessment and identification mechanism as well as the respective risk levels.</li> </ul>

## Performance of Supply Chain ESG Risk Management GRI 2-24





Risk and Attribute	Supplier (chemicals)	Project Contractor
	Environmental (E), social (S), and governance (G) aspects of evaluation	
<b>Potential Risk</b>	<ul style="list-style-type: none"> <li>· Chemicals manufacturing process (E)</li> <li>· Dusty, high-temperature, noisy, and humid operating premises (E)</li> <li>· Risk of fugitive emissions of volatile organic compounds (VOCs) (E)</li> <li>· Labor-intensive industries (S)</li> <li>· Supply chain disruption/delay risk (G)</li> <li>· Quality risk (G)</li> </ul>	<ul style="list-style-type: none"> <li>· Dusty, high-temperature, noisy, and humid operating premises (E)</li> <li>· Work at height risk. (E, S)</li> <li>· Labor-intensive (S)</li> <li>· Industrial safety risk of cutting or welding (S)</li> <li>· Project disruption/delay risk (G)</li> <li>· Project quality risk (G)</li> </ul>
<b>Number of audited and visited suppliers</b>	On-site trial audits were conducted on 2 companies in 2023, with a 100% pass rate	
<b>Audit Details</b>	<p>Environmental (E): Regulatory compliance of the manufacturing and storage of environmentally controlled substances</p> <p>Governance (G): Management of quality, production, and orders; customer feedback and satisfaction follow-up; employee educational training; and management of outsourced processing.</p>	

## Promotion of Supplier's Code of Conduct (Supplier CSR Commitment)

GRI 308-1, 403-7, 414-1

Sustainable development indicators such as environmental, labor, human rights, and social impacts have been getting increasing public attention in recent years. In addition to APC, we will also review the completeness of the code of conduct of suppliers. In 2022 APC already completed the revision of internal SOPs to include the Supplier CSR Commitment as a required document for new supplier evaluation.

Currently, apart from including labor and human rights, environmental, and social impacts sustainable development indicators as part of the criteria for new supplier selection and evaluation, we also request new suppliers to sign related undertakings to comply with the following:

Indicators for screening new suppliers	
 <b>Labor and human rights</b>	Prohibition of forced labor and child labor, provision of due wages and benefits, protection of workers' working hours and breaks, elimination of workplace sexual harassment, bullying and discrimination, and no conflict minerals.
 <b>Health and safety</b>	Includes providing necessary measures such as occupational safety, emergency response, industrial hygiene, machine safeguarding, public health and accommodation, as well as health and safety information.
 <b>Environmental</b>	Including environmental operation permits, pollution prevention and resource conservation, hazardous substances, sewage, harmless solid waste, noise, exhaust emissions, product and service restrictions, as well as energy/resource consumption and GHG emissions, etc.
 <b>Ethics and integrity</b>	Includes Ethical Corporate Management, Respect for IP rights, compliance with relevant confidentiality agreements, privacy protection, and avoidance of Conflicts of interest, etc.

Apart from setting the existing Supplier CSR Commitment as an incentive, APC has also requested suppliers to sign and comply with the commitment. We have revised internal SOPs to include the Commitment as one of the required documents for new suppliers. Currently, major suppliers of bulk materials and the top five materials suppliers are requested to sign the Commitment. After suppliers sign the Commitment, an unannounced on-site supplier audit for

compliance with the Commitment will be implemented from time to time. **By 2023, all existing supplier CSR commitment letters were signed, achieving a 100% signing rate.**

Currently, major feedstock suppliers and contractors such as Taiwan CPC, Dairen Chemical, and our partner CTCI have all obtained relevant certifications of ISO14001 and 45001, which meet the Company's requirements for suppliers in terms of environmental management and Occupational health and safety management, making them our excellent partners in Sustainable Development. APC adopts the "active risk management" policy to investigate suppliers with potential negative impacts, including irregular visit of THAU BING to check for the offences or news regarding suppliers' violation of the said terms and assess if such offences or news will bring negative or potential impacts to the Company (such as punishment or suspension order of competent authorities). In addition, we will take related risk controls and countermeasures for the potential raw materials supply crisis based on their offences.



## SCM mechanism GRI 403-7

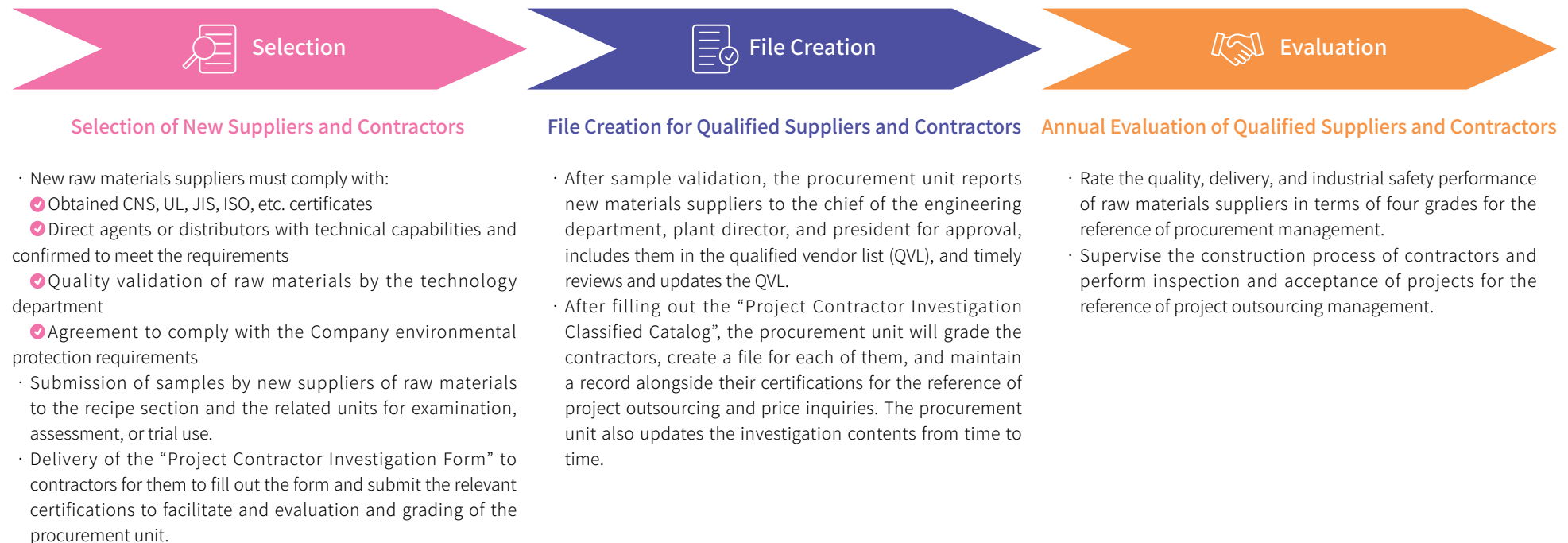
With quality, ability, and environmental policy as conditions, APC performs corporate social responsibility in collaboration with outperforming suppliers on a long-term basis. We also communicate with contractors and transporters our environmental policy, comply with the EU's RoHS directive, enhance environmental educational training, and care about the safety of contractors working in our plants in order to ensure the safety of all operations, protect the life, safety, and health of personnel, and optimize risk management.

Establish a long-term strategy partnership with major raw material suppliers and set up a safety stock according to the material preparation schedule to ensure a smooth supply chain. Additionally, the Group Procurement & Logistics Division evaluates suppliers periodically in terms of quality, delivery performance, environmental protection, industrial safety, packaging, quality certification (whether ISO 9001

verification is passed), and service.

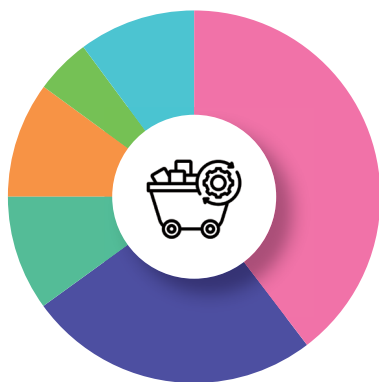
Apart from conducting the annual supplier evaluation to ensure that all the Company suppliers comply with our commitment to environmental sustainability and sustainable operations, we also hold supplier conferences from time to time to communicate with suppliers so as to maintain long-term cooperation and opinion exchange. In addition to new product promotion, new technology and market intelligence exchange are also included in the conferences to ensure the steady supply of major materials.

Additionally, during the project construction of contractors, the supervision and management of plant on-site personnel are key to construction quality control, and the quality monitoring of the engineering and industrial safety units is crucial to ensure environmental safety, occupational safety, human rights, and labor practices. Results are reported to HQ periodically to keep up with the latest conditions.



Source: Qualified Supplier Selection and Withdrawal Regulations, Supplier Evaluation Regulations, Capital Expenditure Requests (CER) Project Outsourcing Management Regulations

## Raw Materials Supplier Evaluation and Contractors Project Evaluation



### Contractor project acceptance evaluation items and proportions

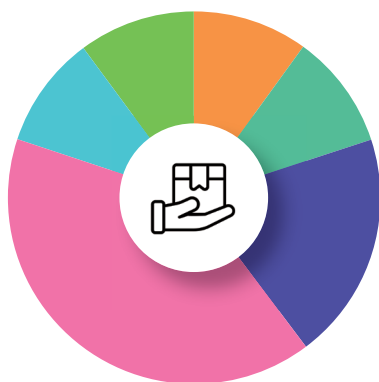
- Quality(G), 40%
- Delivery Punctuality(G), 25%
- Environmental Protection and Industrial Safety(E, S), 10%
- Packaging Quality(G), 10%
- Quality Certification(G), 10%
- Service(G), 5%

E, S and G represent respectively environmental, social, and governance

### Results of Annual Raw Materials Supplier Evaluation in Past Three Years

Item	2021	2022	2023
Suppliers Evaluated	31	33	20
Pass Rate	100%	100%	100%

- Source: APC Supplier Evaluation
- Overall Rating Standard:
- A grade 85-100 points, B grade 75-84 points, C grade 60-74 points, D grade below 59 points, B grade and above are qualified suppliers
- For grade A Supplier - priority in obtaining trading opportunities or increasing their procurement volumes
- For grade C Supplier - suggestions for improvement are proposed, and business transactions with them are reduced or suspended until reassessment confirms their improvement has been accomplished
- For grade D Supplier - stop transactions and revoke from the qualified vendor list
- Suppliers rated grade A for three consecutive years are exempted from evaluation for three years. As a results, only 24 suppliers were evaluated in 2019 and 2020



### Contractor project acceptance evaluation items and proportions

- Construction Quality(G), 40%
- Safety, Health, and Environmental Measures(E, S), 20%
- Coordination Performance(G), 10%
- Site Manager(G), 10%
- Construction Progress(G), 10%
- Environment maintenance(E), 10%

E, S and G represent respectively environmental, social, and governance

### Results of Contractor Project Evaluation in Past Three Years

Item	2021	2022	2023
Suppliers Evaluated	28	6	20
Pass Rate	100%	100%	100%

- Source: APC contractor construction evaluation
- Contractors receiving 70 or more marks are qualified contractors
- Score: 60-69, suspended from price inquiry for 6 months
- Score 50-59 points, suspended from price inquiry for 1 year
- Contractors receiving 49 or less marks will be disqualified from tendering and transaction

The proportion of the purchasing amount of major materials in 2023 accounted for 83% of the total purchasing amount for the year. To ensure a sustainable supply of raw materials and stimulate market vitality, we are actively developing new suppliers. There are a total of 16 main material suppliers, among which 3 are from Taiwan and 13 from overseas.

Materials procurement will be prioritized for local suppliers with reliable and stable supply. Due to the longer annual repair duration from domestic Ethylene suppliers, the supply has been decreased in 2023, and the procurement thus reduced compared to 2022. The domestic procurement volume of VAM is higher than in previous years as more stable supply from local suppliers.

### Support for local procurement

To promote local economic development, simplify the transportation process, and reduce transportation risks, we prioritize local procurement when the procurement conditions are similar. In 2023, the proportion of local procurement, including raw materials and equipment procurement and project outsourcing, accounted for about 70%.

**Proportion of Local Procurement Amount of Raw Materials and Equipment and Project Outsourcing in Past 3 Years (%)**

Year	2021		2022		2023	
Locations/Materials	VAM	Ethylene	VAM	Ethylene	VAM	Ethylene
Taiwan	83	73	84	65	100	51
Foreign	17	27	16	35	0	49
Source	3 Taiwan suppliers, 13 foreign suppliers		3 Taiwan suppliers, 13 foreign suppliers		3 Taiwan suppliers, 13 foreign suppliers	

Source: APC amount statistics 2023

### Procurement of Energy-Saving and Emission-Reduction Equipment

APC has been promoting energy saving and carbon reduction program in recent years, and the procurement unit has also prioritized support for eco-friendly materials by establishing SOPs to prioritize price inquiries to products certified for using the Green Mark

by the Environmental Protection Administration; or products complying with Environmental Protection Administration of the Ministry of Economic Affairs's requirements for recycled materials, recyclable products, low pollution, or energy saving; or products recognized by relevant authorities that increase social benefits or reduce social costs.

**APC declared a total Green Procurement amount of NT\$14.13 million in 2023.** The procurement items included lamps and equipment carrying the Green Mark and Energy Label and the energy-efficient equipment replacement projects of Linyuan Plant, reducing energy consumption to achieve energy conservation and carbon reduction effectiveness.

**Proportion of Local Procurement Amount of Raw Materials and Equipment and Project Outsourcing in Past 3 Years (%)**

Location	Proportion of Procurement Amount		
	2021	2022	2023
Taiwan	81	83	70
Foreign	19	17	30

Source: APC amount statistics 2023

