ESG

Pb

Create and Share Warm Memories

Apacer

Technology Inc.

2023

Sustainability Report

Contents

About **the Report**

Reporting Structure

This report has been prepared in accordance with the disclosure guidelines of the GRI Standards 2021 Sustainability Reporting Standards published by the Global Sustainability Standards Board (GSSB). Through internationally recognized reporting frameworks, Apacer fully discloses issues of concern to stakeholders in the economic, environmental, and social fields.

Editing Principles

Apacer considers domestic and foreign sustainability and industry trends and identifies issues of concern to stakeholders through materiality analysis to form the focuses of information disclosure in the report. At the same time, the report editor follows the eight reporting principles required by GRI Standards and uses the materiality, inclusivity, responsiveness and impact under the 2018 AA1000 Accountability Principles Standard (APS) as the basis for the preparation of the report.

Report Scope

The information disclosure period of this report is from January 1 to December 31, 2023. This report is the 11th Sustainability Report published by Apacer. Although Apacer is not a company regulated by the FSC for reporting, it still follows the regulations outlined by the Taiwan Stock Exchange for the "Operation of Corporate Environmental, Social, and Governance (ESG) Information Reporting" and "Application for Correction of Operation of Corporate Environmental, Social, and Governance (ESG) Information Reporting". The former report was issued in August 2023. The Company publishes its sustainability report on a regular basis every year and publishes it on the Company's website to continuously communicate with the public about Apacer's sustainability actions. The scope of information disclosure in the report focuses on Apacer's headquarters, factories in Taiwan, and the information of its subsidiary UD Info, excluding overseas operating bases: Apacer Electronics (Shanghai) Co., Ltd., Apacer Memory America, Inc. (USA), Apacer Technology B.V. (Europe), Apacer Technology Corp. (Japan), Apacer Technologies Pvt Ltd. (India), etc. (Apacer's financial statements include all entities mentioned above.)

Data quality

-Internal management

To ensure the transparency and credibility of information disclosure, and to enhance the comparability of performance and the substance of this report, this report was prepared by the Sustainability Committee and approved by the Chairman and CEO through the internal electronic signature and approval process. Starting from 2024, it will be submitted to the Board of Directors for approval and then publicly announced.

-Third-party verification

The independent and credible third-party organization, the British Standards Institution (BSI), was commissioned to verify this report in accordance with the AA1000AS v3 Assurance Standard (2008) and its 2018 Appendix 1 Verification Type, meeting the medium assurance standard and the assurance of GRI standards. Please refer to the independent assurance statement in the appendix of this report for BSI's independent third-party assurance statement.

Contact Information

We see ourselves as "Becoming Better Partners" with all stakeholders. Your opinions will be the biggest driving force for our improvement. If you have any sustainable operation issues, please feel free to contact us:

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Download the Sustainability Report：

https://www.apacer.com/zh-tw/normaldownload/download-report

Message from the **CEO**

Chang Chia-Kun (formerly President, promoted to CEO on April 1, 2024)

Despite bidding farewell to the shadow of COVID-19, 2023 was still impacted by inflation, affecting consumers' purchasing ability. This led to weakened demand and caused upstream memory manufacturers to face oversupply, resulting in price collapses. The industry as a whole was shrouded in a dark cloud. We would like to thank all Apacer colleagues and partners. Despite facing immense operational pressure, we appreciate all Apacer colleagues and partners for adhering to the core brand value of "Becoming Better Partners": **By focusing on key areas, deploying future technologies, and via digital transformation and strategic partnerships even while facing the difficulties of falling raw material prices,**, despite the difficulties of falling raw material prices, Apacer achieved a gross profit margin of 23% and EPS of NTD 4.51 in 2023, showcasing outstanding operational performance!

Furthermore, in terms of sustainability, Apacer continues to invest resources in the three major aspects of ESG (Environmental, Social, and Corporate Governance). Apacer replaces outdated LED lighting fixtures and turns off air conditioning equipment one hour early to conserve energy, promotes the recycling of cartons and trays to reduce resource waste, and strives to achieve energy conservation and carbon reduction under limited but easy-to-cultivate conditions. Additionally, we have initiated an organizational GHG inventory project with the aim of planning more efficient carbon reduction strategies based on inventory results to minimize the negative impact on the environment.

In terms of social aspects, Apacer responded to the shortage of blood supply across Taiwan at the beginning of the year by organizing voluntary blood drives. Additionally, we encourage employees to make voluntary donations or contribute goods to social welfare organizations, harnessing the power of small gestures to create positive impacts. For our valued employees, in addition to promoting health and weight loss activities, planning family days, and organizing employee training courses, we also host dementia seminars. Through collaboration with the Taiwan Alzheimer's Disease Association, we provide colleagues with insights into the condition, empowering them to assist themselves and their families.

In terms of corporate governance, in response to the growing concern over information security issues in recent years, we not only conduct regular reviews of information security risks and propose optimization countermeasures but also establish a position of head of information security to ensure compliance with regulations. This enhances corporate governance effectiveness and has earned us recognition within the top 5% in the 10th Corporate Governance Evaluation.

Signs of economic recovery slowly emerged towards the end of 2023, and for 2024, with consumer demand gradually picking up, we believe it should be a year full of opportunities and excitement. No matter how the external environment changes, we have all learned from different experiences and turned them into energies for growth. We believe that as long as our colleagues uphold the belief of Becoming Better Partners and persist in doing the right things, we will ripe for success to be shared with all stakeholders.

CEO, Chang Chia-Kun

SSD

(SSD, Sustainability Strategy Development)

● Sustainability Strategy Blueprint

Apacer's brand core values, evolved from "trust" and "innovation" to "deliver on promises, strive for better, and advance together as partners", from the ethos of "Becoming Better Partners". This guides our long-term operational strategies and aligns our concrete actions with the United Nations Sustainable Development Goals (SDGs).

Becoming Better Partners

/ Deliver on promises /

With transparency and integrity as the cornerstone, we pursue stable corporate operations while responding to local needs and preserving Taiwanese culture.

	8 Employment and Economic Growth	11 Sustainable City	16 Peace and Justice System
United Nations Sustainable Development Goals			
Sub-target	8.2	11.6	16.5 / 16.6
Material Topics	R&D and innovation/ Economic Performance/ Operational Risk Management/ Information security/ Occupational Health and Safety	Governance	Governance
Apacer's Commitment	With digital storage as the core, we continue to cultivate and recruit talent, transforming innovative R&D technologies into tangible business benefits. This drives growth in R&D capabilities and sustains the Company's long-term operations.	With sustainable development as our goal, we expect to continue making profits and giving back to local communities within five years. We are committed to creating a symbiotic home for people to live in.	Continue to strengthen corporate governance, enhance information transparency, and protect the rights and interests of shareholders and stakeholders.
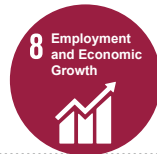
/ Insisting on the best /

Comply with regulations and continuously reduce the environmental impact of our operations, moving towards a green enterprise.

United Nations Sustainable Development Goals	6 Water Purification and Sanitation	12 Responsible Consumption and Production	13 Climate Action
Sub-target	6.3	12.2	13.3
Material Topics	Green Product Design	Hazardous Substance Management/ Raw Material Management/ Sustainable Supply Chain Management	Green Product Design/ Energy Management/ GHG Management
Apacer's Commitment	Refine processes, reduce power consumption, strengthen the design of product power-saving models, reduce environmental pollution in production operations, and build a green smart factory.	Committed to complying with the RBA regulations and implementing the hazardous substance-free (HSF) standards for suppliers, we also hold an annual supplier conference to promote these practices, achieving green and intelligent management.	Promote green product design, implement internal environmental protection education, internalize the concept of environmental protection into the overall value chain of the enterprise, and build a green smart factory.

/ Advance together as partners/

Create a friendly workplace, manage the sustainable supply chain, and grow together with business partners.

United Nations Sustainable Development Goals	4 Education Quality	5 Gender Equality	17 Global Partners
Sub-target	4.4	5.c	17.16
Material Topics	Talent Cultivation	Talent Attraction and Retention	Sustainable Supply Chain Management
Apacer's Commitment	-In accordance with occupational safety regulations, we construct a comprehensive workplace and obtain regulatory certifications, establishing a trustworthy employer brand. -Review training planning and development with PDDRO (Plan, Design, Do, Review, Outcome) as the management loop to build a trustworthy employer brand.	With A$^+$ health, A$^+$ family, and A$^+$ work combined with CSR & RBA as the longitudinal axis, and food, clothing, housing, transportation, education, entertainment, and sports as the horizontal axes, we have launched 28 grids of A$^+$ EAPs (Employee Assistance Program) to build a trustworthy employer brand.	Update the customer service process system, establish a global after-sales service system, optimize product customization services, and become partners in the creation of value with customers.

Note: For the United Nations Sustainable Development Goals (SDGs),Sub-target please refer to P.165

● Key Sustainability Performances in 2023

Economics and corporate governance aspects

Top **5**% in Corporate Governance Evaluation
(5 billion to 10 billion market value groups)

Revenue in 2023 was NTD **7.63** billion

EPS NTD **4.51**

Environmental aspect

The GHG emissions (Scope 1 and Scope 2) in 2023 decreased by **43.659** metric tons of CO_2e/year compared to the emissions in 2022.

The LED lighting fixtures were completely replaced in April 2023, saving **67**% of energy compared to the lighting fixtures in 2022.

A total of **806** cartons were recycled and reused.

Social aspect

- External remuneration comparison with **P50** or above

- Employee dismissal rate: **1.6**%

- The talent match between dual-track of **63**%

- Dual-track talent retention rate **98**%

Supplier management aspect

- Completed the customer satisfaction survey, retrieved **82** valid questionnaires with a score of **90.5**, and implemented improvement measures

- Completed the supplier's "Becoming Better Partners" questionnaire, retrieved **113** valid questionnaires with an average score of **92.7**.

For the achievement status of the goals in each aspect, see the relevant chapter for details.

● Internal Sustainability Management Mechanism

Sustainable Development Committee - Organizational Structure

Apacer has integrated the concept of sustainability into its business operations. To promote sustainability affairs, we have established the Sustainable Development Committee, chaired by the Chairman and the President as the Executive Secretary. In accordance with the Company's vision and goals, Apacer has formulated an ESG policy and devised goals, execution strategies, and management systems.

The Sustainable Development Committee consists of two teams, one being the ESG Implementation Team. This team includes five subgroups, including "Corporate Governance", "Employee Care", "Customer and Supplier Care", "Environmental Care", and "Community Care". Each subgroup is led by department heads, who are responsible for formulating projects and organizing action teams based on short-, mid-, and long-term goals. This integration of daily departmental operations with sustainable development aims to foster synergy within the organization. The Risk Management Team, on the other hand, is led by the heads of the six major centers and three departments. They are responsible for regularly reviewing various risks faced by the organization, implementing controls, and proposing improvement plans.

The Secretariat holds quarterly review meetings for each group separately, with both the Chairman and the Executive Secretary in attendance. This ensures the effectiveness of the actual operations of various tasks and initiatives. At the end of each year, all information, including key work progress, project benefits, and annual performance, is summarized and reported to the Board of Directors. This ensures consistency in the board members' understanding of policies and outcomes.

Sustainable Development Committee - Organization Structure

- Board of Directors
- Chairman - Austin Chen
- Sustainable Development Committee
- Chair - Chairman Austin Chen
- Executive Secretary - President
- Secretariat - President's Office

ESG Promotion Team
- Governance (Financial Management Center)
- Employee Care (Administration Management Division)
- Customer and Supplier Care (Manufacturing & Quality Center)
- Environmental Care (Manufacturing & Quality Center)
- Community Care (President's Office)

Risk Management Team
- Co-organizing Units
  - Sales and Marketing Center
  - PM Center
  - Fulfillment Center
  - RD & Technical Center
  - Manufacturing & Quality Center
  - Financial Management Center
  - Emerging Application Division
  - Global Purchasing Division
  - Administration Management Division

● Apacer's Sustainable Development History

2015
Established the CSR Committee and established a division of labor to implement corporate social responsibility, as well as obtaining ISO 14001, QC080000, and ISO 50001 certification

2016
Promoted Apacer's One-day Volunteer program, obtaining the updated version of ISO 14001: 2015 certification

2017
Joined the Responsible Business Alliance (RBA) and obtained Silver certification, and the 2016 Sustainability Report won the TCSA Taiwan Corporate Sustainability Report Award - Silver Award, for the first time

2018
Continued to respond to the United Nations Sustainable Development Goals (SDGs) with strategic actions.

2019
Set the sustainable development strategy based on the core brand value of "Becoming Better Partners"

2020
Passed ISO 45001 certification and re-acquired RBA Silver certification

2021
In response to the international trend, the CSR Committee was reorganized into the Sustainable Development Committee to include more units for cross-departmental collaboration to improve operational performance and impact.

2022
Obtained RBA silver certification and many domestic and foreign awards, and launched the corporate mascot APA

2023
Planned to obtain ISO 14064-1: 2018 verification and publish the 2022 sustainability report in accordance with the GRI 2021 standards

Stakeholder Engagement

● Stakeholder communication channels and issues

Stakeholders	Significance to Apacer and purpose of Collaboration	Effectiveness of discussion	Communication channel and frequency	Focus on major topics	Apacer's response
Employee	- Significance: Employees are one of our most important stakeholders, and their creativity and stable retention are fundamental to Apacer's continued industry leadership - Purpose: The annual dismissal rate of employees is less than 2.5%.	- External remuneration comparison P50 ↑ - The talent match between dual-track of 63% - Dual-track talent retention rate 98% - Employee dismissal rate: 1.6% - Number of occupational accidents: 0 - Obtained the certification of "1111 Happy Enterprises"	- Regularly hold review meetings of the Sustainable Development Committee, Strategy and Management Committee, Employee Welfare Committee, and Occupational Safety and Health Management Committee. - Promote relevant knowledge and activities through the Company's intranet from time to time - Internal employee whistleblowing channel	- Talent Attraction and Retention - Economic Performance - Operational Risk Management - Occupational Health and Safety	- Continue to promote A+ EAPs - Preparation for the Apacer Academy and development of the dual-track talent system
Customers	- Significance: We innovate new products and services based on customer needs to provide the best product user experience. Clients' demand for environmental and social responsibility enable Apacer to constantly improve its self-regulations. - Purpose： • Strengthen market competitiveness • Customer satisfaction maintained above 85 points	- Completed the customer satisfaction survey with a satisfaction score of 90.5 points - Completed satisfaction questionnaire from 82 key customers	- Customer Management System: CRM - After-Sales Service System: eRMA - Annual customer satisfaction survey - Customer service hotline and online consultation letter	- Governance - Economic Performance - Green Product Design - Operational Risk Management	- Correcting deficiencies through customer satisfaction surveys - By using surveys conducted by customers regarding suppliers, the Company aims to enhance its own competitiveness, such as planning to achieve ISO 14064-1: 2018 verification for organizational GHG inventory management systems

Stakeholders	Significance to Apacer and purpose of Collaboration	Effectiveness of discussion	Communication channel and frequency	Focus on major topics	Apacer's response
Shareholder/ corporate bodies	- Significance: Capital investment reflects the trust and support of investors/corporate bodies in the Company, enabling Apacer to continue innovating and moving forward in the direction of corporate sustainability. - Purpose: To strengthen investor/ corporate body relationship	- Held 3 investor conferences - Held 1 shareholders' meeting - 3 major event press releases - Received over 30 calls/letters from shareholders in 2023	- Investor/investor conferences - Media press release - The Company's official website - Investor relations contact - Market Observation Post System	- R&D and innovation - Operational Risk Management - Economic Performance	- Information transparency through public events such as shareholders' meetings and investor conferences - Strengthen information disclosure in Chinese and English on official websites - Reply shareholders' questions through shareholder phone calls to enhance investors' understanding of the Company's operations.
Suppliers	- Significance: Suppliers are important partners of Apacer in implementing green production. Through collaboration, communication, and audit guidance, we learn together with suppliers on sustainability issues. - Purpose： • Suppliers scoring over 85% on the "Becoming Better Partners" questionnaire • Improve the awareness of supply chain sustainability, and the regular assessment frequency is set according to the Supplier Management Regulations	- 113 copies of the "Becoming Better Partners" questionnaire for suppliers - Supplier satisfaction survey reached 92.7 points	- Supplier AGP (Apacer Green Product Web System) Platform - Annual supplier conference	- Sustainable Supply Chain Management - Raw Material Management - Operational Risk Management - Talent Cultivation	- Organize supplier evaluations (existing system combined with RBA audits), supplier conferences, and supplier guidance - Compliant with ISO 9001 and QC 080000

Stakeholders	Significance to Apacer and purpose of Collaboration	Effectiveness of discussion	Communication channel and frequency	Focus on major topics	Apacer's response
Government agencies	- Significance: We continue to pay attention to global sustainability trends and government regulations to proactively plan our corporate sustainability blueprints and strategies. - Purpose: To ensure compliance	- No major violation issues	- Communicate with cooperating government agencies in accordance with affiliated units	- Information security - GHG Management - Energy Management	- Corporate information is published on the Market Observation Post System and the official website based on its materiality. - Internal promotion of legal compliance
Industry Advocacy/ Public Associations and Organizations	- Significance: Organizations comprising enterprises, organizations, merchants, professionals, and other entities within the electronics semiconductor industry influence the direction and effectiveness of business operations and R&D - Purpose: To ensure smooth organizational engagement	- No withdrawal from initiatives or public associations and organizations	- Institution-designated channels	- Green Product Design - R&D and innovation - Raw Material Management - Hazardous Substance Management	- Continue to participate in organizational activities to ensure smooth information exchange
Social Inclusion and Communication	- Significance: Residents and organizations in the communities surrounding Apacer's technology plant zones, as well as media outlets committed to information dissemination while simultaneously monitoring Apacer's technological development - Purpose: To ensure a positive brand image and fulfill social care responsibilities.	- Community care projects: 3 cases - 20 press releases - No negative reports in the year	- From time to time	- Talent Cultivation - Talent Attraction and Retention	- Continue to promote community communication projects - Continue to provide brand/product information - Continue to maintain media relations

Significance analysis

In order to align information disclosure content more closely with stakeholders' expectations, in 2023, Apacer first identified stakeholders and adopted a stakeholder questionnaire method. Leveraging the Sustainable Development Committee, Apacer gathered insights from committee members to analyze and review extensively. These insights served as the foundation for report compilation, allowing stakeholders to gain a clear understanding of Apacer's sustainability efforts in operational governance, environmental protection, and social contribution.

● Materiality Analysis Method and Process

Phase 1

Understand the context of organizational sustainability

Step1 — Identification of Stakeholders

Taking into account industry characteristics and operational status, and following the AA1000 Stakeholders Engagement Standard's five principles (dependence, responsiveness, impact, diversity of perspectives, and accountability), stakeholders for Apacer are identified into 7 categories: Employees, investors/corporate bodies, suppliers, customers, government institutions, industry advocacy/public associations and organizations, social inclusion and communication.

7 Categories of Stakeholders

Step2 — Collection of corporate impact items

Taking into account the domestic and international industry issues, domestic policies, international ratings, whistleblowing mechanisms, as well as internal department opinions, impact factors are identified, along with their actual/potential, positive/negative effects on the enterprise.

66 Impact Factors

Risk identification	Legal facts
Trend initiative	Expert consultation

Phase 2

Evaluation of the actual and potential impacts of issue identification

Step3 — Integrate corporate impact items into sustainability issues

Following integration recommendations from the consulting team, impact items were organized into sustainability issues by theme. These were then reviewed and confirmed as sustainability issues for the current year by the Sustainable Development Committee.

25 sustainability issues

E	S	G
8	8	9

Step4 — Analysis and Ranking of Material Topics

Based on the material topics from the 2022 sustainability report, the Sustainable Development Committee and consultants confirmed the connection between material topics and operational risks in 2023, as well as the level of stakeholders' concern regarding sustainability issues. Reviewing and adjusting the alignment of material topics to establish the material topics for the current year.

● Materiality Analysis Method and Process

Phase 3

Evaluate the significance of impacts

Step5 **Issue Impact Evaluation and Discussion**

Use GRI 3 and the spirit of dual materiality analysis to measure the financial impact and probable high and medium issues. Subsequently, we align material topics with GRI thematic guidelines to identify 14 material topics.

14 Material Topics

E	S	G
6	5	3

Phase 4

Disclosure on topics of significant impact

Step6 **Establish material topics**

After analysis, 14 material topics are the focus of disclosure in this report, and the topic management policy will be formulated accordingly. In the future, we will continue to review the importance of various sustainability issues, respond to stakeholders' expectations, and ensure that the contents disclosed in the report are transparent, reasonable, and balanced.

Materiality Analysis Matrix

This year's materiality analysis was conducted through questionnaires to understand the level of concern among stakeholders and corporate executives regarding sustainability issues and climate change, as well as the impact of these issues on the Company. Based on this analysis, 14 material topics were identified as the focal points for this year's report disclosure.
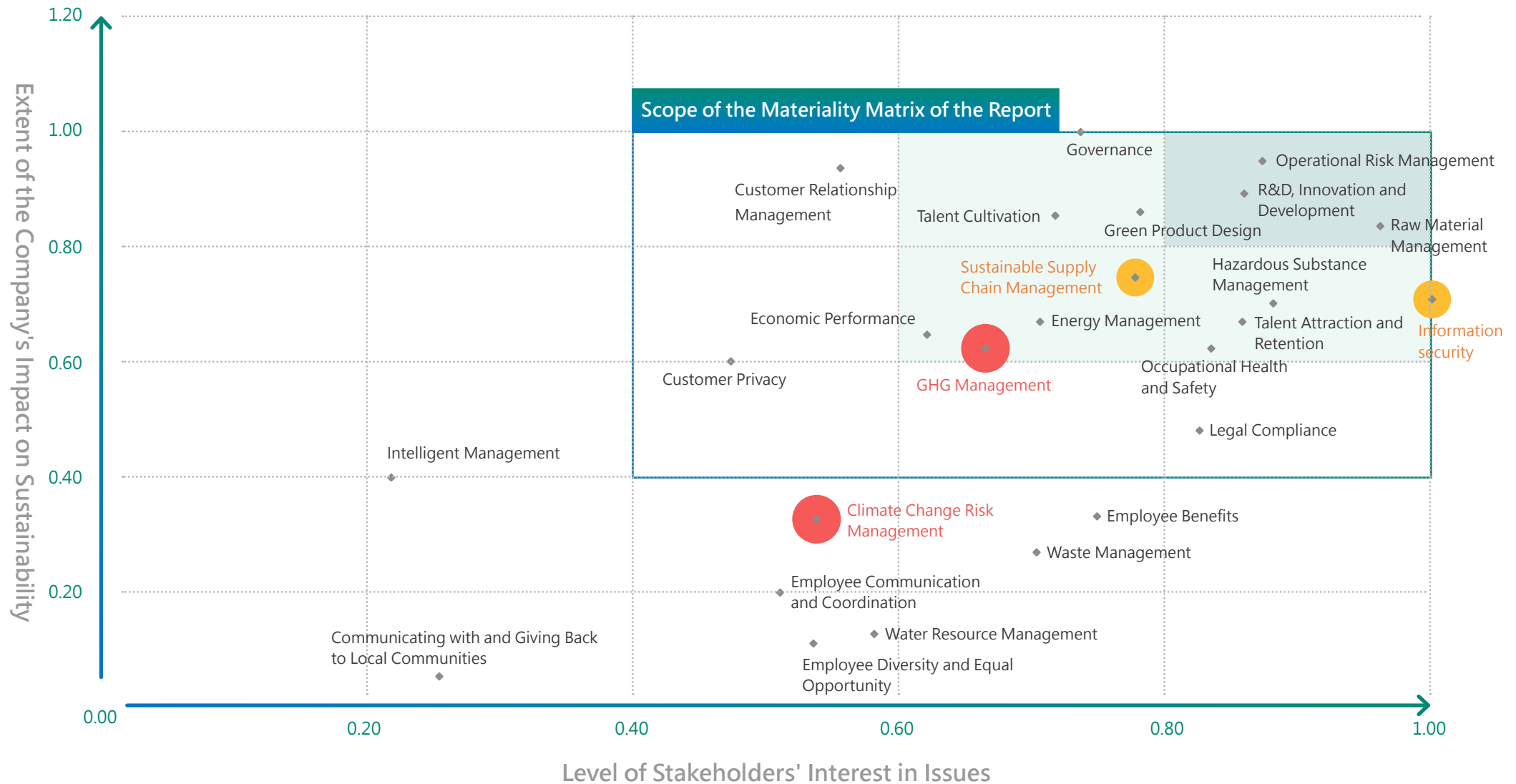
Management policy highly significant theme

Management policy medium major theme

Follow up low level issue

Follow up low level issue

High   medium   Low

Extent of the Company's Impact on Sustainability

1.20

1.00

Scope of the Materiality Matrix of the Report

Governance

Operational Risk Management

Customer Relationship Management

Talent Cultivation

R&D, Innovation and Development

0.80

Green Product Design

Raw Material Management

Sustainable Supply Chain Management

Hazardous Substance Management

Economic Performance

Energy Management

Talent Attraction and Retention

Information security

Customer Privacy

0.60

GHG Management

Occupational Health and Safety

Legal Compliance

Intelligent Management

0.40

Climate Change Risk Management

Employee Benefits

Waste Management

0.20

Employee Communication and Coordination

Communicating with and Giving Back to Local Communities

Water Resource Management

Employee Diversity and Equal Opportunity

0.00   0.20   0.40   0.60   0.80   1.00

Level of Stakeholders' Interest in Issues

List of material topics

Issues aspect	Material Topics	GRI Topic Guidelines (Remarks)	Importance and explanation for Apacer	Response Section	Page
Governance	R&D, Innovation and Development	Customized Material Topics	Continue to innovate in technology and products to enhance Apacer's brand value.	1.4 Innovative R&D	P.53
	Operational Risk Management	Customized Material Topics	The risk management process, management policies, and relevant actions are all designed to mitigate risks. Issues include financial risks and emerging risks such as regulatory risks, political risks, climate change risks, information security risks, etc.	1.2 Ethical Corporate Management and Corporate Governance	P.34
	Governance	Customized Material Topics	Apacer implemented various corporate management mechanisms to fulfill its managerial responsibilities, including enhancing the functionality of the Board of Directors, improving the quality of information disclosure, and prioritizing stakeholders' rights and interests.	1.2 Ethical Corporate Management and Corporate Governance	P.34
	Information security	Customized Material Topics	In response to the rise of global information security risks, Apacer Technology has implemented an information security management mechanism.	1.2 Ethical Corporate Management and Corporate Governance	P.34
	Sustainable Supply Chain Management	GRI 308 Supplier Environmental Evaluation GRI 414: Supplier Social Evaluation	Apacer's supplier management process and methods include screening and evaluating suppliers and contractors based on governance, environmental, and social standards.	3.1 Supplier sustainability management	P.91
	Economic Performance	GRI 201 Economic Performance	Apacer aims to create maximum value for shareholders and stakeholders by focusing on long-term overall operational performance, stable profitability, and growth.	1.3 Product Diversification and Operational Performance	P.49
Environment	Raw Material Management	GRI 301 Materials	The weight or volume of raw materials (recycled raw materials) used by the organization.	2.4 Green Products	P.82
	Green Product Design	GRI 301 Materials GRI 302 Energy	Apacer designs products based on the principles of resource conservation, improving energy efficiency, reducing environmental toxicity, ease of assembly and disassembly, and easy recycling of material resources.	2.4 Green Products	P.82

Issues aspect	Material Topics	GRI Topic Guidelines (Remarks)	Importance and explanation for Apacer	Response Section	Page
Environment	Energy Management	GRI 302 Energy	Status and demand for energy consumption within and outside the organization, including direct and indirect energy consumption, as well as energy management and energy-saving plans.	2.2 Climate Change Risk Management	P.71
	Hazardous Substance Management	Customized Material Topics	Apacer's products comply with the EU RoHS (Restriction of Hazardous Substances Directive) regulations and are certified with IECQ QC 080000 (Hazardous Substance Process Management for Electronics and Electrical Components and Products), ensuring the safety and health of product users and the environment.	2.4 Green Products	P.82
	GHG Management	GRI 305 Emissions	Apacer's implement management measures for GHG emissions during its operations and set targets related to carbon pricing, carbon sequestration, carbon capture, and other relevant carbon reduction targets.	2.2 Climate Change Risk Management	P.71
Crowd	Talent Cultivation	GRI 404 Training and Education	To continuously provide and cultivate high-quality talent, Apacer has designed a talent management and development framework, formulated a learning blueprint, and systematically enhanced the competence development of employees.	4.4 Talent Cultivation and Remuneration System	P.143
	Talent Attraction and Retention	GRI 401 Labor-employer relations	Enhance employee corporate identity, continuously attract talent, and retain employees to support the Company's long-term growth objectives.	4.3 Employee Benefits and Communication	P.130
	Occupational health and Safety	GRI 403 Occupational Safety and Health	Apacer's management practices regarding the working environment and health of employees and other workers.	4.2 Employee Safety and Health	P.124

Note: For detailed comparison with GRI standards, please refer to Appendix 1, the GRI Standards Disclosure Item Comparison Table

Changes in material topics

Material Topics	2023 Importance	2022 Importance	Change in ranking	Reasons for change	Response Section
R&D, Innovation and Development	High	Moderate	Increase ↑	Apacer responds to the needs of stakeholders and the expectations of global industry trends for product R&D and innovation, leading to an increase in the importance of these issues.	1.4 Innovative R&D
Talent Cultivation	Moderate	High	Decrease ↓	Apacer actively optimizes and improves the employment environment and enhances related policies and benefits for talent cultivation, so the importance of the issue slightly decreased.	4.4 Talent Cultivation and Remuneration System
Customer Relationship Management	Tracking	Moderate	Decrease ↓	The overall decrease is due to the changes in the level of stakeholder concern. Customers are one of Apacer's important stakeholders. We will continue to track changes in the topic and listen to customers' needs to maintain high-quality customer relationships.	3.2 Customer Relationship Management

Material Topic Boundary

After conducting materiality analysis to identify various material topics, and collecting data in accordance with GRI topics, Apacer explains how it manages and addresses the economic, environmental, and social impacts related to these material topics. We define the internal and external boundaries of information to ensure the transparency and integrity of data disclosure.

Type	Material Topics	Impacts and business relationships (Note)					Relevant stakeholders affected by the issue	Unit responsible for issue impact management	Response Section
		R&D and improvement	Raw material procurement	Manufacturing production	Product sales	After-sales service			
Governance	R&D and innovation	▲	▲	▲	▲	▲	Employees and customers	RD & Technical Center	1.4 Innovative R&D
	Operational Risk Management	●	●	●	●	●	Employees, customers, suppliers, investors/ corporate bodies	Sustainable Development Committee	1.2 Ethical Corporate Management and Corporate Governance
	Governance	●	●	●	●	●	Employees, customers, investors/corporate bodies	Sustainable Development Committee	1.2 Ethical Corporate Management and Corporate Governance
	Information security	■		■			Employees, customers, suppliers	Information Service Department	1.2 Ethical Corporate Management and Corporate Governance

Type	Material Topics	Impacts and business relationships (Note)					Relevant stakeholders affected by the issue	Unit responsible for issue impact management	Response Section
		R&D and improvement	Raw material procurement	Manufacturing production	Product sales	After-sales service			
Governance	Sustainable Supply Chain Management		●	■	■		Employees, customers, suppliers	Purchasing Division	3.1 Sustainable Supply Chain Management
	Economic Performance	●	●	▲	▲	■	Employees, investors/corporate bodies	Management and Administration Committee	1.3 Product Diversification and Operational Performance
Environment	Raw Material Management			●	●	●	Customers and suppliers	Procurement Division/Manufacturing and Quality Center	2.4 Green Products
	Green Product Design	■	■	■	●	●	Customers and suppliers	R&D Center	2.4 Green Products
	Energy Management		●	●	●		Employees, customers, suppliers	Sustainable Development Committee	2.2 Climate Change Risk Management
	Hazardous Substance Management	●	●	●			Customers and suppliers	Manufacturing & Quality Center	2.4 Green Products
	GHG Management		●	●	●	●	Employees, customers, suppliers	Sustainable Development Committee	2.2 Climate Change Risk Management
Crowd	Talent Cultivation	▲		▲	▲		Employees	Administration Management Division	4.4 Talent Cultivation and Remuneration System
	Talent Attraction and Retention	▲		▲	▲		Employees	Administration Management Division	4.4 Talent Cultivation and Remuneration System
	Occupational Health and Safety	▲		▲	▲		Employees	Administration Management Division	4.2 Employee Safety and Health

Note: The impacts of the organization's business activities on material topics are indicated with the following symbols:

▲ indicates "cause" impact: The organization causes an impact through its own activities

● indicates "contribute to" impact: The organization's activities lead to, facilitate, or induce another entity to cause impact

■ indicates "directly linked to": The organization does not cause or contribute to negative impacts, but its operations, products, or services may result in negative impacts due to its business relationships

Chapter I

A Partner that Leads to Innovation

Vision

Apacer's vision is to "become a leader in technological information service integration with the core of digital storage." We aim to create a fast, stable, and trustworthy smart storage application environment, becoming a trusted added-value service integrator, and providing an exceptional product/service user experience.

Policies and Commitments

Apacer's brand promise "Access the best, share memories," underscores our commitment to continuous innovation and R&D across diverse product domains. We position ourselves as a technology-integrated information service integrator, outlining a blueprint for future development. We promise to operate with integrity as the foundation while continuously pursuing growth and breakthroughs. We consider sustainable development as the core goal of business operations, continuously creating value for stakeholders.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Governance	Cautiously review potential internal and external risks from the perspective of corporate sustainability, implement the operation of the risk management mechanism, and improve the efficiency of risk management and division of labor to reasonably ensure the achievement of the Company's strategic goals	Customized Material Topics

Impact Description

Apacer implements corporate management mechanisms to fulfill its responsibilities as a business operator. This includes optimizing the functions of the Board of Directors, enhancing the quality of information disclosure, prioritizing the interests of stakeholders, adhering to regulations, ensuring transparency in information disclosure, and maintaining integrity in business operations. We are committed to being accountable to all stakeholders and achieving steady growth.

Actual	Potential	Positive	Negative
	V	V	

Management actions/ preventive and remedial measures	Actual Plans	2023 Targets	2023 Performance	Result Tracking
	Executing corporate governance evaluation as planned	Corporate Governance Evaluation 6% to 20%	Achieved	Corporate Governance Evaluation 6% to 20%
	Appointment of a Head of Information Security	Established during Q4	Achieved	The head of information security was announced on November 1, 2023. Responsible for the protection of corporate cybersecurity, future efforts will focus on formulating and implementing cybersecurity strategies to ensure effective protection of organizational cybersecurity.

Stakeholder Engagement	Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
	Investors	- Ethics and Legal Compliance - Occupational Health and Safety - Performance evaluation	- Yearly - Yearly - Twice a year	- Conduct legal compliance advocacy - Conduct annual education and training - Conduct performance evaluation and communication

Stakeholder Engagement	Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method

	Investors	- Hold investor conferences
		- Shareholders' meeting
		- Company website
		- Press Release
		
		- Issuance of the ESG Report
			- Every six months
			- Yearly
			- From time to time
			- From time to time
			
			- Yearly
				- Describe operational performance and market outlook
				- Company business report and discussion
				- Set up dedicated contacts and emails
				  Contact person: Mei Lin, Project Manager
				  mei_lin@apacer.com

Sustainability targets	Method of evaluation
Short-term targets (2024)	- Maintain a corporate governance rating of 6% to 20%
Mid-term targets (2024 - 2026)	- Following the blueprint of corporate governance 3.0, we aim to enhance corporate risk management and improve transparency of company information. This will help maintain our corporate governance evaluation performance within the 6% to 20% range.
Long-term targets (2027)	- Continue to strengthen corporate governance performance, regularly review the corporate governance system, enhancing information transparency, and protecting the rights and interests of shareholders and stakeholders.

United Nations Sustainable Development Goals (SDGs)

8.2 Enhance the productivity of economies through diversification, technological upgrading, and innovation, with a focus on high-added-value and labor-intensive sectors.
16.5 Significantly reduce all forms of corruption and bribery.
16.6 Develop effective, accountable, and transparent systems at all levels.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Operational Risk Management	Cautiously review potential internal and external risks from the perspective of corporate sustainability, implement the operation of the risk management mechanism, and improve the efficiency of risk management and division of labor to reasonably ensure the achievement of the Company's strategic goals.	Customized Material Topics

Impact Description

Cautiously review potential internal and external risks, and implement a robust risk management mechanism. Effectively implement risk management by enhancing the risk management division of labor, and seeking solutions to reduce the impact of operational risks.

Actual	Potential	Positive	Negative
V		V	

Management actions/preventive and remedial measures

Actual Plans	2023 Targets	2023 Performance	Result Tracking
Reduce the risk of sluggish materials	Quarterly obsolete goods reduced by 30%	Achieved the goal	The average quarterly clearance rate is 51%
Reduce information security risks	Improvement of information security protection technology	Achieved the goal	Completed the upgrade of 4 protection technologies
Enhance capacity utilization	- Redeploy resources to maintain basic operations through strategic outsourcing - Readjust the product structure at production sites	Achieved the goal	- Reallocate manpower and adjust working hours for product testing at the factory site to maintain a stable utilization rate of over 95%. - Adjustment of strategic outsourcing, to achieve a production capacity utilization rate of over 80%.

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Investors	- Disclosure on official website/in annual report - Risk management report - Issuance of the ESG Report	Yearly	- Description of risk management evaluation - Set up dedicated contacts and emails Contact person: Mei Lin, Project Manager mei_lin@apacer.com

Sustainability targets		Method of evaluation
Short-term targets (2024)	Continuously reduce operational risk to below moderate	Regular risk evaluation
Mid-term targets (2024 - 2026)	Continuously reduce operational risk to below moderate	Regular risk evaluation
Long-term targets (2027)	Continuously reduce operational risk to 0	Regular risk evaluation

United Nations Sustainable Development Goals (SDGs)	8.2 Enhance the productivity of economies through diversification, technological upgrading, and innovation, with a focus on high-added-value and labor-intensive sectors. 16.5 Significantly reduce all forms of corruption and bribery. 16.6 Develop effective, accountable, and transparent systems at all levels.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Information security	Continue to strengthen information security defenses and standardize processes. To ensure continuous business operation, uninterrupted information services, and data protection, we continually improve and enhance our information security systems and management strategies. We integrate international information security standards such as ISO27001 and NIST SP800-171 to establish an information security management framework.	Customized Material Topics

Impact Description

In response to the rising of global information security risks, Apacer has proactively implemented advanced information security management mechanisms. This not only enhances operational readiness but also strengthens the interests of stakeholders such as customers, suppliers, and shareholders.

Actual	Potential	Positive	Negative
	V	V	

Management actions/preventive and remedial measures

Actual Plans	2023 Targets	2023 Performance	Result Tracking
Protection technology upgrade	- Introduce OTP two-factor authentication for external connections - Expand MDR protection coverage to all RSOs - Control of illegal equipment connections for OA - Backup software conversion and upgrade (60% increase in backup efficiency and resource utilization)	Achieved	- Completed the introduction of OTP two-factor authentication for external connections - Completed the expansion of MDR protection coverage to all RSOs - Completed the control of illegal equipment connections for OA - Achieved backup software conversion and upgrade (60% increase in backup performance and resource utilization)
Information Security Self-Assessment	- United States DoD military-grade product information security self-assessment NIST 800-171: 110 points	Achieved	Achieved the United States DoD military-grade product information security self-assessment NIST 800-171: 110 points

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Employee	- Annual achievement report - Project communication review - Email - Education and training	- Yearly - Quarterly - From time to time	Internal hotline 5300

| Stakeholder Engagement | Customers | - Customer Relationship Management | - Yearly from time to time | - Overall Customer Satisfaction Survey
- Customer service hotline and online contact methods are available
0800-668-699
https://www.apacer.com/zh-tw/form/contact-us |
| | Suppliers | - Supplier evaluation
- Supplier Conference
- Quality improvement meeting | - Periodically
- Once a year
- Material quality incidents from time to time | - Supplier satisfaction survey
- Supplier evaluation |

	Sustainability targets	Method of evaluation
Short-term targets (2024)	Strengthen the resilience of business operations by upgrading the backup mechanism and conduct disaster drills.	- Target to obtain international information security certification (ISO27001: 2022) by the end of 2024 to verify asset protection levels. - Continue to expand information security defenses in accordance with changes in the external environment and international information security standards.
Mid-term targets (2024 - 2026)	Comprehensively defend enterprise information assets, adhering to international information security protection frameworks.	
Long-term targets (2027)	Continuously improve and expand enterprise information security defense in a circular manner.	

United Nations Sustainable Development Goals (SDGs)

8.2 Enhance the productivity of economies through diversification, technological upgrading, and innovation, with a focus on high-added-value and labor-intensive sectors.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Economic Performance	Develop better business strategies and business plans with an effective risk management mechanism, commit to achieving operational goals, and create sustainable business growth to enhance economic value for the enterprise.	201-1 201-3

Impact Description	Given the dynamic nature of the memory industry, staying ahead of international trends to promptly adjust operational strategies is a critical factor influencing economic performance. Additionally, fulfilling corporate social responsibilities and implementing good corporate governance practices can also impact economic performance.		
	Actual	Potential	Positive	Negative
	V		V	

Management actions/preventive and remedial measures	Actual Plans	2023 Targets	2023 Performance	Result Tracking
	Revenue contribution from new customers	3%	Target achieved	4%
	Contributions of strategic collaboration	5%	Target not met	4.5%

Stakeholder Engagement	Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
	Investor/corporate bodies	- Investor conference - Shareholders' meeting - Identify and manage operational risks - Issuance of the ESG Report	- Every six months - Yearly - From time to time	- Describe operational performance and market outlook - Company business report and discussion - Set up dedicated contacts and emails Contact person: Mei Lin, Project Manager mei_lin@apacer.com
	Customers	Customer Relationship Management	- Yearly - From time to time	- Overall Customer Satisfaction Survey - Customer service hotline and online contact methods are available 0800-668-699 https://www.apacer.com/zh-tw/form/contact-us

Sustainability targets

Short-term targets (2023)	Develop more operational momentum to improve operational efficiency.
Mid-term targets (2023 - 2025)	A leading brand that provides integrated services and innovative value.
Long-term targets (2026)	Become a leading brand integrating the value ecosystem.

Method of evaluation

Financial performance indicators in the annual financial report

Item	Profit in the past two years	
	2022	2023
Operating revenue (NTD)	8.8 billion	7.6 billion
Gross profit margin	19%	23%
Earnings per share (NTD)	5.23	4.51

United Nations Sustainable Development Goals (SDGs)

8.2 Enhance the productivity of economies through diversification, technological upgrading, and innovation, with a focus on high-added-value and labor-intensive sectors.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
R&D, Innovation and Development	Innovative R&D: Focus on investment in innovative R&D, delve into solutions for industry, social development, and sustainability needs Leading technology: Continue to invest in the research and development in both core business and new ventures to maintain a leading position in the industry Patent development: Expand the depth of innovation, maintain the momentum of innovation, and develop core patented technologies with equal emphasis on quality.	Customized Material Topics

Impact Description

We have established a Patent Development Committee and a Patent Review Team to monitor external patent development, facilitate internal patent sharing, review successful cases and plan business opportunities. Through R&D innovation, the aim is to create high-quality products and value-added technologies, thus enhancing the brand value of Apacer. Additionally, the Company continues to obtain ISO 9001 and ISO 14001 verifications. The competitiveness of an enterprise is essential for maintaining market share.

	Actual	Potential	Positive	Negative
	V		V	

Management actions/preventive and remedial measures	Actual Plans	2023 Targets	2023 Performance	Result Tracking
	Innovative project development	8 cases	Target achieved	8 cases
	Patent technology development	12 cases	Target achieved	12 cases

Stakeholder Engagement	Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
	Customers	- Product Specification - Seminar - Company website	- From time to time	- Onsite visit/telephone visit - Email - Satisfaction Survey
	Suppliers	- Product Approval Sheet - Update of quality documents - Supplier Conference	- From time to time - Yearly	- Onsite Audit - Telephone, email communication

	Sustainability targets	Method of evaluation
Short-term targets (2024)	R&D of innovative products, deep cultivation of technology development, continuous innovation and R&D, and provision of customized services.	
Mid-term targets (2024 - 2026)	Patented innovative technology transformed into substantial operating benefits.	- Patent target: 8 patent applications - Project goals: 12 innovative solutions and products
Long-term targets (2027)	Drive the growth of R&D momentum and maintain sustainable operations.	

United Nations Sustainable Development Goals (SDGs)

8.2 Enhance the productivity of economies through diversification, technological upgrading, and innovation, with a focus on high-added-value and labor-intensive sectors.

Major Topic 1.1 **About Apacer**

Founded in 1997, Apacer has been operating for more than 26 years, In 2010, Apacer was listed on the Taiwan Stock Exchange (stock code: 8271) The scope of operations includes our core businesses: industrial control memory modules and value-added digital storage technology, consumer memory products, gaming memory and peripheral products, as well as smart applications. These mainly provide integration of ICT and OT, promoting IIoT automated optical inspection total solutions.

*Apacer owns 68.54% of the shares of UD Info.

Apacer Memory America,Inc.
Global Presence - America

Apacer Technology B.V
Global Presence - Netherlands

Apacer Technology Corp.
Global Presence - Japan

Apacer Technology Inc.
Headquarters - Taiwan

UD Info

Apacer Technologies Pvt Ltd.
Global Presence - India

Apacer Electronic (Shanghai) Co.,Ltd
Global Presence - China
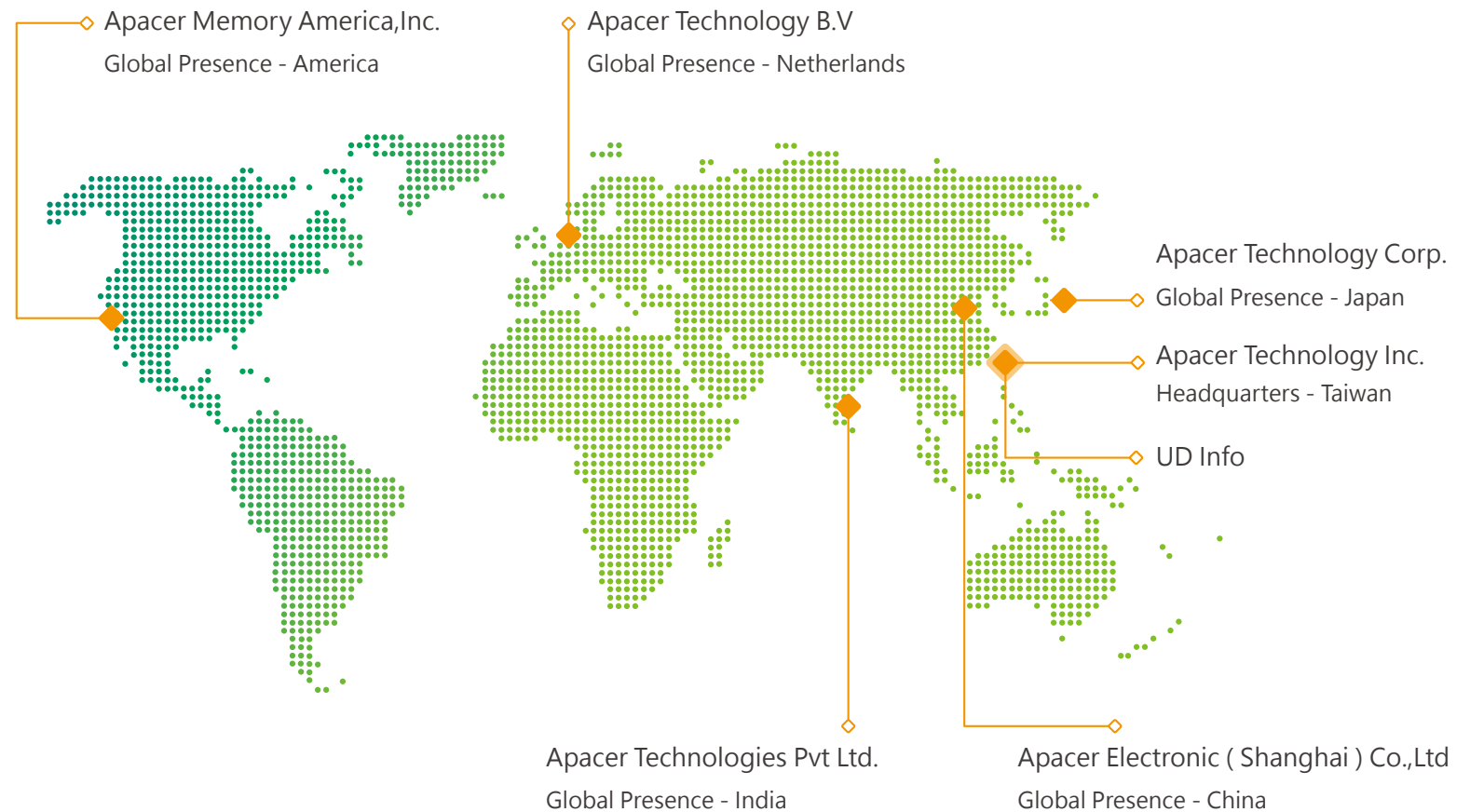
Products won the 32nd Taiwan Excellence Award

Our technology was recognized by the EE Award Asia Gold Selection Award

Won the "1111 Happy Enterprise Award"

Awarded Taiwan's Best International Brand - Rising Star Potential recognition

The 2022 Sustainability Report won the TCSA Taiwan Sustainability Report Gold Award

Top 5% among the groups with a market value of NTD 5 billion to NTD 10 billion in the 10th Corporate Governance Evaluation

For more information on past awards
https://www.apacer.com/zh-tw/awards/awards

Apacer is capable of integrating R&D, design, manufacturing, and marketing. To provide professional international services, we established our global operational HQ in New Taipei City, Taiwan. We have subsidiaries in China, the United States, the Netherlands, Japan, and India. Furthermore, in 2022, we expanded our operational footprint by exchanging shares with UD Info, incorporating it as the sixth subsidiary located in Sanchong Dist., New Taipei City. At present, the main business scope is all over the world, and the types of customers include prominent distributors, equipment manufacturers, system integrators, and retail customers.

Name of Company	Apacer Technology Inc.
Company address	1F., No. 32, Zhongcheng Rd., Tucheng Dist., New Taipei City, 236
Date of establishment	April 16, 1997
Listing information	TWSE stock code: 8271
Capital amount	NTD 1.23 billion
Industry category	Semiconductor Industry
Main products	- Industrial Solid State Drives - Memory module - Value-added technology - Consumer digital products - USB flash drive/external hard drive - Smart IoT Integrated Solution - AI+AOI Optical Inspection and Spectral Luminance Measurement System - ODM design and manufacturing services for intelligent automation testing equipment
Total number of employees[1]	605 people

Note 1: Total number of employees at operating locations worldwide as of December 31, 2023

● Brand Promise, Core Value and Mascot

Apacer's development vision is to "become a leader in technological information service integration with digital storage as the core". Apacer has been established for many years, accumulating rich technology and experience, and adhering to the brand promise of "Access the best and Share Memories" to provide quality products and services to meet customer needs. We further insist on upholding our brand's core value of "Deliver on promises, strive to be better, advance together" internalizing the three words "Becoming Better Partners" as the foundation of our corporate culture, has become the core driving force for promoting sustainable business operations.

To quickly establish a good impression of Apacer among all stakeholders, we have introduced the mascot known as APA. The applications in 2023 included APA's PCB ruler, pour-over coffee pot, baseball cap, suitcase strap, "A Dollar of Renewal Card Set", etc. Our goal is to promote our brand image and continue to accumulate and internalize sustainable brand value externally and internally.

Brand Promise

Brand Core Value

Brand Mascot - APA
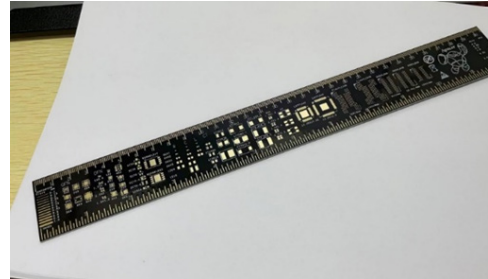

Overview of the applications of the mascot APA

APA PCB ruler

APA pour-over coffee pot

APA baseball cap

APA suitcase strap

APA "A Dollar of Renewal Card Set"

Family Day Promotion

● Corporate organization and culture - Putting people first, building a friendly and healthy workplace

To embrace the era of the rapid economy, Apacer has harnessed various business innovation models and exerted operational synergy to pursue corporate performance growth. Currently, under the leadership of the President, Apacer has established six major functional centers and four new business/supporting departments.

(Note: This is the organization chart that took effect on 2024/1)

- Shareholders' Meeting
- Board of Directors
  - Audit Committee
  - Remuneration Committee
- Internal Audit Office
- Chairman & CSO
- Chairman and CSO's Office
- Sustainable Development Committee
- President
- President's Office
- Occupational Safety & Health Office
- Executives Management Committee
- RBA Committee
- RD & Technical Center
- PM Center
- Business Development Center
- Fulfillment Center
- Manufacturing & Quality Center
- Finance Management Center
- Emerging Application Division
- Global Marketing Division
- Global Purchasing Division
- Administration Management Division

● Focus on the development of the "Apacer" brand

Apacer's self-owned brand accounts for up to 87% of the total revenue from its main business scope, the main product lines are described as follows:

Vertical market application

Provide the most reliable and diversified SSD and DRAM solutions to meet the needs of industrial applications such as IIoT, 5G and Netcom, defense, factory automation, gaming, healthcare, and transportation.

Consumer products and high-end gaming applications

Develop various innovative and trustworthy products and services, providing high-performance, high-stability, and high-value memory modules and storage devices, enabling consumers to easily record, store, and share digital data in their daily lives.
The consumer gaming brand ZADAK is committed to original design, solid craftsmanship, and pushing boundaries, aiming to provide consumers with high-end gaming storage solutions.

Smart IoT application

Integrate ICT and OT to provide basic AIoT planning and intelligent automation construction services with a total solution business model. We apply IoT technology to provide proactive smart disaster prevention and ESG machine networking system planning and implementation. Deepen the development of AI+AOI optical inspection systems, and provide ODM design and manufacturing services for intelligent automation equipment. From optical inspection to mechanical design and manufacturing of automated equipment, all are independently developed. Our one-stop service assists industries in quickly implementing smart manufacturing.

Major Topic 1.2

Ethical Corporate Management and Corporate Governance

"Enhancing corporate governance" is a core value of Apacer's corporate governance. Apacer continues to actively participate in corporate governance evaluations through specific actions, aiming for continuous improvement. From ranking 36 to 50% in the 3rd term in 2016 to 21 to 35% in the 4th term in 2017, we have achieved excellent results in the top 5% for two consecutive years. Between 2020 to 2021, our performance also exceeded industry peers, maintaining a ranking of 6% to 20%. In the tenth term, the Company was honored with a top 5% ranking in the category with a market value ranging from over NTD 5 billion to 10 billion.

● Apacer's corporate governance implementation in 2023

Apacer has appointed Lai Tzu-Wen, CFO and spokesperson, as the Head of Corporate Governance, responsible for overseeing corporate governance-related matters. The scope of responsibilities includes:

1. Regular arrangement of further education for directors and provision of information required for directors to perform their duties and related to the latest legal development relevant to operation of the Company to help directors observe laws and regulations.
2. Assisting with the meeting procedure of the Board of Directors and the shareholders and compliance matters of the resolutions.
3. Assisting in the communication between the independent directors, chief internal auditor and CPAs at Audit Committee meetings.
4. Maintaining investor relations.
5. Publishing important information related to the material resolutions of the Board of Directors and shareholders' meetings in accordance with the relevant laws.
6. On December 14, 2023, the "Ethical Corporate Management Execution Unit" was scheduled to report to the Board of Directors regarding the implementation and plans for promoting ethical corporate management within the Company for the current year, ensuring the adherence to the Ethical Corporate Management Best Practice Principles.
7. On December 14, 2023, the "Sustainable Development Committee" was scheduled to report to the Board of Directors regarding the implementation results of the sustainability practices and communication with stakeholders for the current year, ensuring the adherence to the Sustainable Development Best Practice Principles.
8. On December 14, 2023, a report was presented to the Board of Directors regarding the suitability of independent directors during their tenure.
9. Reviewing the implementation of the corporate governance evaluation on a quarterly basis.
10. Other matters stipulated in the Company's Articles of Incorporation or contracts.

● Corporate Governance Structure

Election and nomination

Apacer's Board of Directors adopts a candidate nomination system that takes into account the diversity and independence of its members. This is in accordance with the Company's "Corporate Governance Practices Guidelines", Chapter 3, "Strengthening Board Functions", Section 1, "Structure of the Board of Directors". In the future, candidates' corresponding ESG impact management ability will be included in the selection criteria. The Board of Directors consists of nine directors with extensive experience in various professional fields, including three independent directors (accounting for 33.33%). The number of independent directors seats exceeds regulatory requirements, and one of the independent directors is female. The term of the directors is three years, and reelection is held at the Annual General Shareholders'meeting. The current term was elected on July 14, 2021, and will expire on July 14, 2024. For more details, please refer to: Corporate Governance Best-Practice Principles.

Self-evaluation of the Board of Directors

The Company conducts the annual self-evaluation of the Board of Directors according to the provisions of the "Board of Directors Performance Evaluation Procedures", and there is no independent third-party evaluation. The self-evaluation covers the scope, methods, and indicators. Aspects including the performance evaluation of the Board of Directors, board members (self-evaluation or peer evaluation), and functional committees. In order to enhance the Company's resilience for sustainable operations, ESG impact management capabilities will be added to the evaluation. Please refer to Article 8 of the Company's "Board of Directors Performance Evaluation Procedures". The performance evaluation results are divided into three levels: Exceeding standards, meeting standards, and needing improvement. Refer to the detailed results **Report on the Implementation Results of the Board of Directors Performance Evaluation Procedures in 2023.**

Item for evaluation	Evaluation results
Board of Directors performance evaluation (overall)	Exceeding Standards
(Self) Performance Evaluation of Directors	Exceeding Standards
Evaluation of the performance of functional committees	Exceeding Standards

● Functions of the Board of Directors

In addition to supervising the Company's operations and providing operational recommendations, discussions on corporate sustainability-related matters are conducted, and the execution is entrusted to the Secretariat of the Sustainable Development Committee. The current term of the Board of Directors will expire in July 2024, and the election of new directors will take place on May 31, 2024. Relevant Board of Directors education and training, see page 37 to 38 of the annual report for details.

Title	Name	Organizer	Course	Education hours	Corresponding ESG aspects
Chairman & CSO	Austin Chen	Taiwan Corporate Governance Association	Corporate Goodwill Risk Management	3	G
		Taiwan Corporate Governance Association	Impact and Effect of Climate Change Risk on Corporate Financial Disclosures	3	EG
Director	Chang Chia-Kun	Taiwan Corporate Governance Association	Explosion of Artificial Intelligence: Technological Development and Application opportunities of ChatGPT	3	G
		Taiwan Independent Director Association	ESG As Sustainable Development Action Plan and Strategic Planning Required for the Board of Directors	3	ESG
Director	Teddy Lu	Taiwan Corporate Governance Association	Carbon Credit Trading System and Corporate Management Applications	3	EG
		Taiwan Corporate Governance Association	Litigation and Beyond Litigation - How to Write a Good Dispute Resolution Clause in a Contract	3	G
Representative of legal person as director	Weng Wen-Jie	Taiwan Corporate Governance Association	Legal Risks and Responses to Corporate Investment and Financing---from the Perspective of Corporate Directors' Responsibilities	3	G
		Taiwan Corporate Governance Association	AI Applications, Law and Audit	3	G
Director	George Huang	Taiwan Corporate Governance Association	Awareness of Listed Company's Directors and Senior Executives of Current Supervision by Competent Authorities	3	G
		Taiwan Corporate Governance Association	Practical Analysis on Criminal Liabilities in Illegal Securities Cases	3	G
Director	Haydn Hsieh	Taiwan Corporate Governance Association	The Key to Improving Board Effectiveness	3	G
		Taiwan Corporate Governance Association	Key Global ESG Trends and Practical Cases to Win the Future	3	ESG

Title	Name	Organizer	Course	Education hours	Corresponding ESG aspects
Independent Director	Max Wu	Taiwan Corporate Governance Association	Sustainability Performance and Remuneration to Senior Executives	3	ESG
		Taiwan Corporate Governance Association	Corporate Risk Management Structure and Sharing of Practices	3	G
Independent Director	Philip Peng	Chinese National Association of Industry and Commerce	Generative AI War Room - Anticipation and Opportunity	3	G
		Taiwan Stock Exchange	2023 Cathay Sustainable Finance and Climate Change Summit	6	ESG
		Taiwan Corporate Governance Association	Corporate Goodwill Risk Management	3	G
		Taiwan Corporate Governance Association	Key Global ESG Trends and Practical Cases to Win the Future	3	ESG
		Taiwan Corporate Governance Association	The Key to Improving Board Effectiveness	3	G
Independent Director	Cathy Han	Taiwan Corporate Governance Association	Innovation, Digital Technology and Competitive Advantages	3	G
		Taiwan Corporate Governance Association	Corporate Goodwill Risk Management	3	G
		Taiwan Corporate Governance Association	Impact and Effect of Climate Change Risk on Corporate Financial Disclosures	3	EG
		Taiwan Corporate Governance Association	The Key to Improving Board Effectiveness	3	G
		Taiwan Corporate Governance Association	Key Global ESG Trends and Practical Cases to Win the Future	3	ESG

● Diverse background

The members of the Board of Directors have professional backgrounds in business management, accounting and finance, and engineering technology. Each of them brings expertise in financial analysis, business management, venture capital, engineering technology, and leadership and decision-making, showcasing a diverse and complementary effect. The professional backgrounds and industry experience of the directors enable the Company to accurately implement the business and future development strategies. In 2023, the directors continued to take 75 hours of ESG-related courses to enhance the sustainability knowledge of the Board of Directors, facilitating the timely update of corporate governance policies and planning.

● Recusal principle

The current Board of Directors held a total of five meetings in 2023, and the recusal principle was enforced twice in total. The average attendance rate was 96%. Apacer values the transparency, professionalism, and efficiency of the Board of Directors' operations to strengthen corporate governance effectiveness. The Board of Directors supervises the Company's major decisions based on the international situation, market observations, and financial evaluations. We will continue to strengthen the ESG awareness and capabilities of the Board of Directors to protect the rights and interests of shareholders, improve operational performance, leverage the functions of independent directors, strengthen risk management, and ensure information transparency, effectively protecting the interests of all stakeholders.

Title	Name	Gender	Professional background	Industrial experience							Board of Directors meetings attended	Attendance rate
				Accounting and financial analysis	Business management	Venture investment	Engineering technology	Leadership and decision-making skills	Net Zero Pathway	Social and human rights impacts		
				G	ESG	G	EG	G	EG	SG		
Chairman & CSO	Austin Chen	Male	Management		V			V		V	5	100%
Director	Teddy Lu	Male	Management, Engineering		V	V	V	V		V	4	80%
Director	Chang Chia-Kun	Male	Management, Engineering		V			V	V		5	100%
Director	Haydn Hsieh	Male	Management, Engineering		V			V	V		5	100%
Director	George Huang	Male	Engineering, finance	V	V	V	V	V		V	4	80%
Director	Representative of Phison Electronics Corporation - Weng Wen Chieh	Male	Accounting	V				V		V	5	100%
Independent Director	Max Wu	Male	Engineering		V	V	V	V	V		5	100%
Independent Director	Philip Peng	Male	Management, finance	V	V	V	V	V		V	5	100%
Independent Director	Cathy Han	Female	Management, finance	V	V			V		V	5	100%

Note:
- For the concurrent positions of Board members and the existence of controlling shareholders (shareholdings by directors), refer to P10 to 11 of the 2023 Annual Report.
- For the cross-shareholding status of suppliers and other stakeholders, please refer to P63 of the 2023 Annual Report
- For a list of stakeholder groups and their related parties, transactions, and outstanding balances, please refer to P197 to 199 of the 2023 Annual Report
- Download URL: https://www.apacer.com/zh/Investor/Financial

● Remuneration policy

Remuneration policies of the relevant highest governance unit and senior management include fixed salary, variable bonuses, and a signing bonus, etc. Currently, the remuneration policies of the highest governance unit and senior management is not linked to the organization's economic, environmental, and social impact goals and performance.

● Functional Committee

Remuneration Committee

Date of establishment: August 2011
Functions: The Remuneration Committee is mainly responsible for performing the following duties faithfully with the attention of good administrators and submitting its recommendations to the Board of Directors for discussion.
- Establish and regularly review the organizational regulations of the Remuneration Committee Charter and propose amendments as necessary.
- Establish and annually review the annual and long-term performance goals for directors and managers, along with the policies, systems, standards, and structures of remuneration.
- Regularly evaluate the achievement of performance goals for directors and managers each year, and establish the content and amount of their individual remuneration accordingly.

Committee meeting attendance[1] ratio:

Title	Name	Actual attendance in person	Attendance[2] rate (%)
Convener	Max Wu	9	100%
Member	Philip Peng	9	100%
Member	Cathy Han	9	100%

Note 1: The current term of committee members is from July 14, 2021 to July 13, 2024.
Note 2: Attendance rate=number of actual attendance / total meetings held

Audit Committee

Founded: May 2018
Functions: To review and supervise the following matters

- Fair presentation of the Company's financial statements
- Appointment (dismissal) and remuneration of attesting CPAs
- Independence of attesting CPAs
- Effective implementation of the Company's internal control
- Compliance to relevant laws and regulations to control existing potential risks

Committee meeting attendance[1] ratio:

Title	Name	Actual attendance in person	Attendance[2] rate (%)
Convener	Max Wu	4	100%
Member	Philip Peng	4	100%
Member	Cathy Han	4	100%

Note 1: The current term of committee members is from July 14, 2021 to July 13, 2024.
Note 2: Attendance rate=number of actual attendance / total meetings held

● Cornerstone of Corporate Sustainability - Ethical Corporate Management

Apacer's integrity management policy	Apacer's Ethical Corporate Management Policy: Implement Ethical Corporate Management, prohibit improper gains, ensure transparent information disclosure, respect intellectual property rights, promote fair trade competition, maintain confidentiality, and prohibit retaliation.

Apacer makes legal compliance the basic premise of its Ethical Corporate Management. All global operational bases adhere to local regulations to ensure compliance and avoidance of conflicts of interest. To uphold compliance with laws and practices of Ethical Corporate Management, Apacer has formulated an Ethical Corporate Management policy, along with related guidelines and procedures such as "Code of Conduct of Ethical Corporate Management" and "Procedures of Ethical Corporate Management", which have been approved by the Board of Directors. These measures strictly require employees to refrain from personal interests that may interfere with or have the potential to interfere with the Company's overall interests. Additionally, an annual report on the operation of Ethical Corporate Management is submitted to the Board of Directors. The Company designates the HR and Administration Department to concurrently manage Ethical Corporate Management, ensuring the effective and reasonable implementation of the internal control systems.

To proactively prevent unethical behavior in corporate management, Apacer has implemented a whistleblowing system to report violations of corporate finance, laws and regulations, policies, and ethical standards, as well as any form of fraudulent behavior. For details, please refer to the Apacer website "Significant Internal Regulations" Code of Conduct of Ethical Corporate Management.

● Ethical Corporate Management Best Practice Principles

Education and Training of Ethical Corporate Management

The code of conduct related to Ethical Corporate Management is also published on the intranet for promotion and advocacy among the employees of the Group. In 2023, an annual education and training of Ethical Corporate Management was held, covering topics such as labor, health and safety, environmental hygiene, ethical standards, and management systems related to the RBA. A total of 515 hours per person were allocated for this training, achieving a 100% employee training rate.

Number of employees trained in ethical corporate management
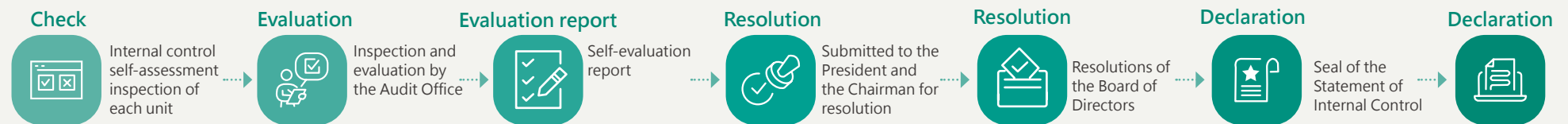

Year	2018	2019	2020	2021	2022	2023
No. of person(s)	438	491	500	453	498	515
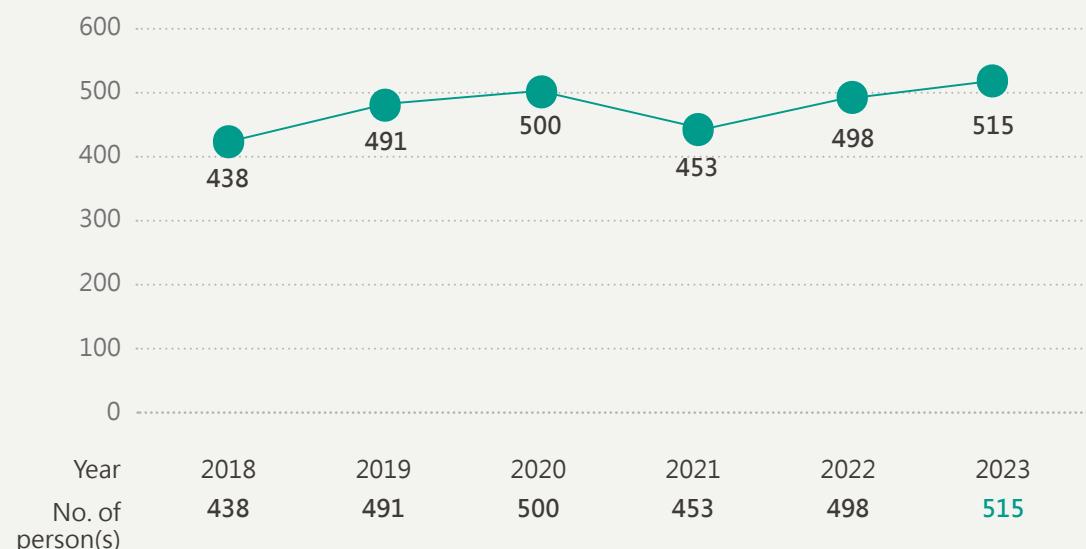
Note: The above data already includes the subsidiary UD Info

Internal audit

Apacer has established the Audit Office under the Board of Directors in accordance with laws and regulations, and has two full-time personnel to perform internal audit services. The internal auditors formulate the annual audit plan (including self-evaluation) based on the risk assessment and legal regulations. Through the execution of the audit plan and self-inspection operations, they continuously inspect risk items and regularly report the results to the Audit Committee and the Board of Directors. Apacer conducts self-evaluation of internal control through 7 procedures to comply with legal regulations and strengthen internal risk management and control:

Check	**Evaluation**	**Evaluation report**	**Resolution**	**Resolution**	**Declaration**	**Declaration**
Internal control self-assessment inspection of each unit	Inspection and evaluation by the Audit Office	Self-evaluation report	Submitted to the President and the Chairman for resolution	Resolutions of the Board of Directors	Seal of the Statement of Internal Control	

Note: Organization and operation of internal audit: Click here for details

Rules Governing the Whistleblowing System

Apacer places great emphasis on combating corruption, fraud, or any other violations of the Company's Ethical Corporate Management. To address this, the Company has established a whistleblowing system with procedural regulations. When suspicious behavior is identified, individuals can report any improper conduct through dedicated channels. These reports are then investigated and handled by relevant designated personnel.

The Company ensures confidentiality of the whistleblower's identity and the content of the report and protects both the whistleblower and the employees involved in the investigation from retaliation or unfair treatment. The designated contact for reporting and complaints is the "Whistleblower Committee". During the disclosure period of 2023, no related incidents occurred.

Contact for Reporting Violations of Professional Ethics

- Whistleblowing hotline:
  (02) 2267-8000 #5980, Ms. Hsu

- Whistleblowing mailbox:
  whistleblower@apacer.com

- Address:
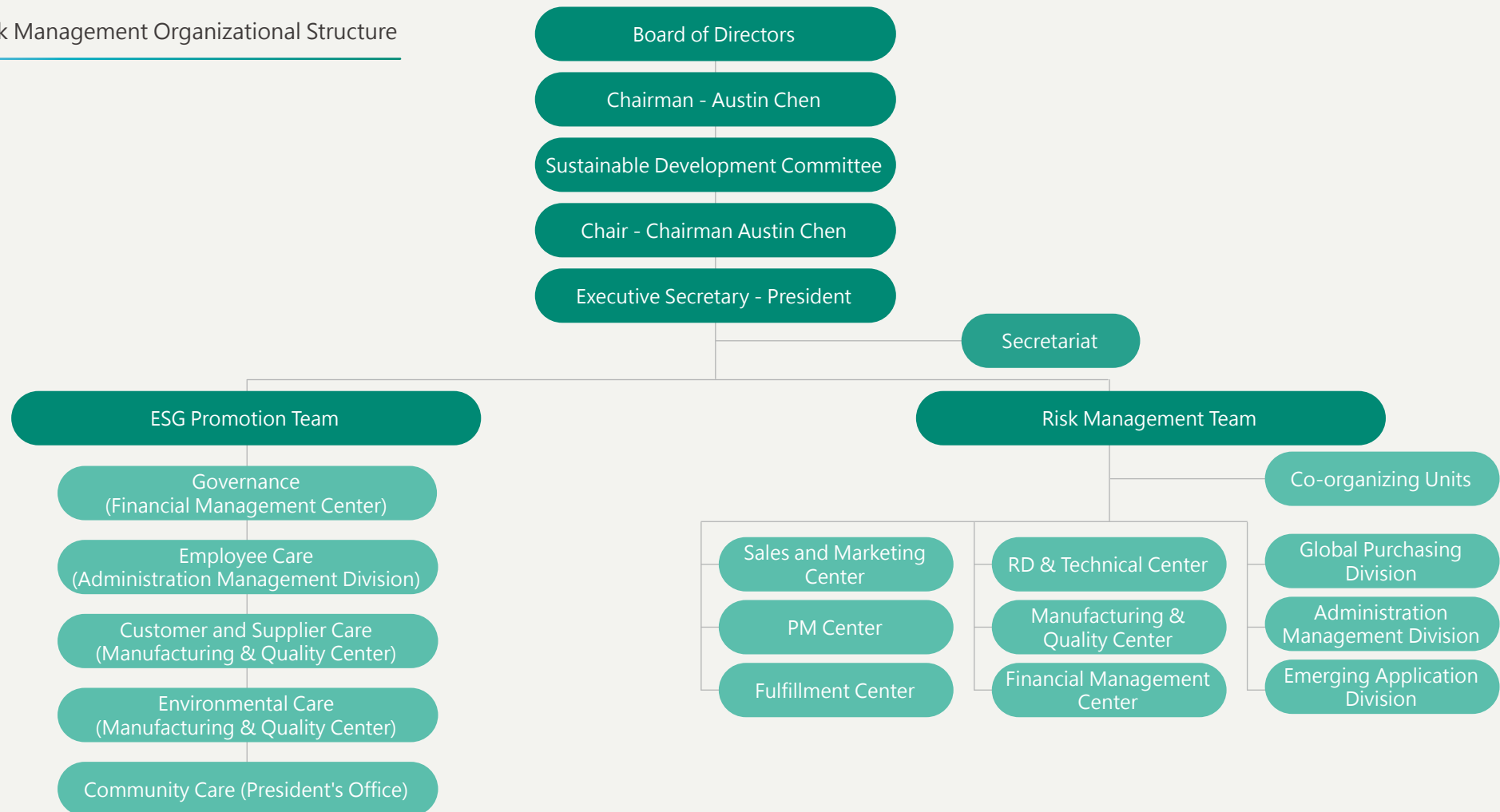 Whistleblowing Committee, 6F., No. 32, Zhongcheng Rd., Tucheng Dist., New Taipei City, 236
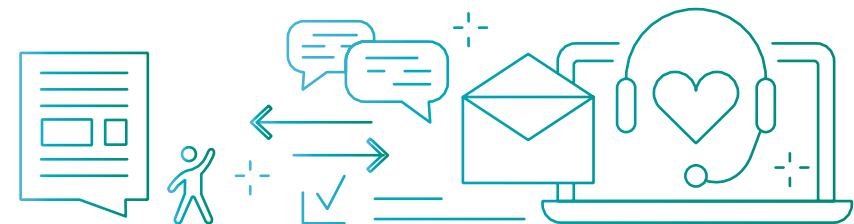
Note: Whistleblowing system: Click here for details

● Operational Risk Management (Material Topic)

To promote sound operations and sustainable corporate development, Apacer has established the "Risk Management Policy and Procedures". When conducting business activities, the Company carefully reviews potential risks from both internal and external perspectives through the lens of sustainable business operations. The Company implements risk management mechanisms to enhance the effectiveness of risk management division of labor, aiming to ensure the reasonable achievement of the Company's strategic objectives.

Risk Management Organizational Structure

- Board of Directors
- Chairman - Austin Chen
- Sustainable Development Committee
- Chair - Chairman Austin Chen
- Executive Secretary - President
- Secretariat

ESG Promotion Team
- Governance (Financial Management Center)
- Employee Care (Administration Management Division)
- Customer and Supplier Care (Manufacturing & Quality Center)
- Environmental Care (Manufacturing & Quality Center)
- Community Care (President's Office)

Risk Management Team
- Co-organizing Units
- Sales and Marketing Center
- PM Center
- Fulfillment Center
- RD & Technical Center
- Manufacturing & Quality Center
- Financial Management Center
- Global Purchasing Division
- Administration Management Division
- Emerging Application Division

Board of Directors:

Serving as the highest decision-making unit for corporate risk management, the Company's Board of Directors is responsible for approving risk management policies and relevant bylaws, overseeing the implementation of all risk management systems, and ensuring the effective operation of the management mechanism.

Sustainable Development Committee:

The Company has established the Sustainable Development Committee under the leadership of the Chairman. The Sustainable Development Committee is the unit for risk management policy implementation and is responsible for promoting the Company's risk management operations:

- Formulate risk management policies and related procedures
- Implement the risk management policy approved by the Board of Directors
- Review issues related to the Company's risk control
- Supervise the overall implementation and coordination of the operation
- Overall risk identification, prevention, and monitoring or major risk control issues
- Quarterly reports were submitted to the Board of Directors, totaling four times in 2023. The reports covered the progress of carbon footprint assessments and the execution status of sustainability initiatives. There were no material topics discussed during these reports.

Motion Item	ESG aspect	Motion result
Key ESG awards	G	No objection to the report
Risk Management Team - Risk reporting	G	No objection to the report
Intellectual property management plan and implementation	G	No objection to the report
Report on information security control progress	G	No objection to the report
Report on greenhouse gas inventory progress	E	No objection to the report
Report on the implementation of annual ESG goals	ESG	No objection to the report

Risk Management Team:

Belonging to the Sustainable Development Committee, the risk management team is composed of representatives appointed from various departments and divisions within the Company. They are responsible for executing risk management operations. including the fundamental risk identification in all company operational dimensions, proposals of improvement/response strategies and control plans, and implementation of routine risk management.

ESG internal training

To promote employees' awareness and internalization of sustainability affairs, relevant courses have been planned since 2020. The following is a list of courses over the years:

Year	Course	Unit/Participants
2020	ESG Introduction	Middle and senior executives
2021	Understanding ESG	Department-level executive
2022	Sustainability Cycle and Design	R&D, PM
2023	Sustainable Supply Chain	Procurement, Import/Export
	ESG and carbon emissions	Emerging Application Division
	Climate Change Risks and Opportunities Workshop	ESG Promotion Team

Climate Change Risks and Opportunities Workshop

Risk management scope

The Company implements risk management based on the following risk categories:

Members of the risk management team identify, measure and respond to the risks observed by the unit internally and externally. They also conduct follow-up operations to improve identified risk items to effectively control risks within manageable boundaries.

ESG Type	Risk Category	Definition
G	Operational risk	Also known as business risk, it refers to the impact of uncertainty factors in various stages of supply, production, and sales process during a company's production and operation.
G	Market risk	Market risks can be divided into interest rate risk, exchange rate risk, stock price risk, raw material price risk, etc.
E、S	Environmental Health and Safety Risks	Occupational disaster/environment, self-pollution/public health incident (e.g. pandemic) risk.
G	Financial risk	The inability of a company to repay interest or principal on debt financing as scheduled, leading to the possibility of bankruptcy, is known as default risk.
S	Human resource risk	Risks related to labor encompass various aspects such as recruitment, job analysis, career planning, performance evaluation, salary management, benefits/incentives, employee training, and personnel management.
G	Information security risk	The Company's information assets are vulnerable to various threats from both internal and external sources, which could lead to operational disruptions and losses.
E、S	Emerging risks	Emerging risks refer to new types of business or risks that may have an adverse impact on future business operations due to lack of risk identification and evaluation, such as climate change risks, etc.

Contents of risk management operations

Content	Description
Confirm goals	Confirm each unit's annual target
Risk identification	Review risks that prevent goal achievement involves categorizing and explaining the sources of risk and confirming their impact
Risk measurement	Establish risk assessment criteria: Determine the probability and impact level Establish risk baselines: Make risk distribution chart based on the probability (x-axis) and the degree of impact (y-axis)
Risk response	For highly severe and certain risk issues: Evaluate whether existing control mechanisms can manage the risk. Develop response strategies (transfer/accept/eliminate, etc.) for risks that can be avoided
Improvement tracking	Track whether the above measures are effective in reducing risks.

Implementation status of risk management

The Company actively promotes the implementation of the risk management mechanisms. The "Risk Management Policy and Procedures" was established on August 4, 2021 and was approved by the Board of Directors. In October 2021, the "Corporate Social Responsibility Committee" was reorganized into the "Sustainable Development Committee". In addition to the ESG Implementation Team, the "Sustainable Development Committee" added a "Risk Management Team" responsible for conducting operational risk management tasks such as risk evaluation and response.

The operation of the Company's Risk Management Team in 2023 was as follows: Regular meetings were convened

1. Quarterly meetings of the Risk Management Team:

The Company identifies, measures, responds to, and tracks the improvements for the Company's overall risks on a quarterly basis. This process involves senior managers and members of the Risk Management Team identifying, assessing, responding to, and tracking improvements in the internal operational activities of the Company, identifying potential risks events that may lead to failure to achieve company objectives, losses, or negative impacts. Based on the Company's strategic objectives, perspectives of internal and external stakeholders, tolerance for risks impacts, and available resources, risk response strategies or risks mitigation plans are selected. These are then implemented, with continuous monitoring by members of the Risk Management Team and relevant personnel from operating units. Timely reporting to the Risk Management Team is done, and relevant records are maintained.

The Company's risk identification includes, but is not limited to, operational risk, market risk, safety and health risk, financial risk, human resource risk, information security risk, environmental risk, and emerging risks (e.g., climate change risk) related to our operations.

2. Periodic reporting to the Board of Directors
The Risk Management Team compiles quarterly reports on risk management implementation and evaluation. These reports include risk assessment results for various aspects and provide details on control and supervision procedures for higher-risk areas. The Sustainable Development Committee consolidates these reports and regularly submits them to the Board of Directors to report on the results of risks management execution.
The latest report was submitted by the Sustainable Development Committee to the Board of Directors on December 14, 2023.

2023 Corporate Risk Matrix

Based on the materiality principle and risk classification, the Company's internal risks are identified and assessed by senior managers and members of the Risk Management Team, then consolidated into the following risk matrix.

	Very low	Low	Medium	High	Very High
Very High					
High					
Medium		1.Obsolete materials			
Low	19.Legal compliance risk - money laundering prevention	18.Market risk-exchange rate/interest rate	2.Information security 3.Overcapacity		
Very low		17.Lack of materials+ Tight production capacity	12.Inventory loss 13.Material shortage-supply chain management 14.Contractual risk 15.Long and short goods-Inventory management 16.Loss of orders for customized products	10.Information security risk-Leakage of program source code 11.Declining market share	4.Legal compliance risk-U.S. Entity List 5.Information security risk-Software licensing 6.Legal compliance risk-GHG inventory 7.Legal Compliance Risk-Waste Disposal 8.Legal Compliance Risk-Overtime 9.Intellectual property rights infringement
Occurrence rate/ Impact Level	Very low	Low	Medium	High	Very High

Response measures to Material Issues in 2023

In 2023, the Company identified the risk items in the table above and responded to the top three items with the highest occurrence rates and greatest impact as follows:

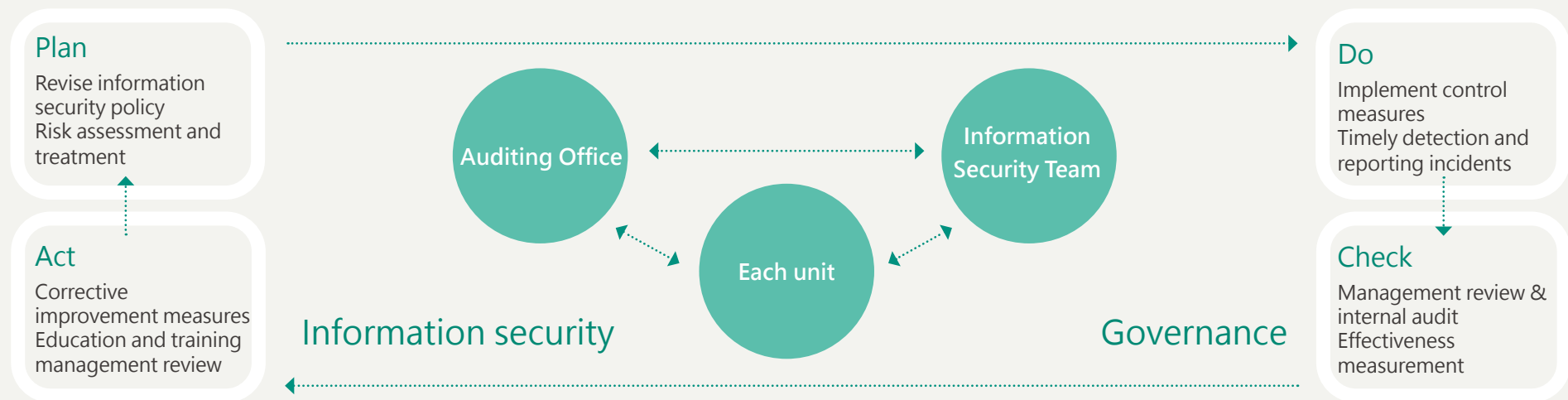| ESG Type	Risk type	Key issues	Problem description/background description	Likely to affect	Countermeasures	Response strategies
G	Operational risk	Supply chain risk Obsolete materials	High uncertainty in orders led to high material inventories and low demand, causing a slowdown in turnover	This impacts the Company's capital utilization, leads to inventory value losses, and effects the Company's financial performance	Mitigate risks	A. Long-term unsold materials are either resold through procurement or used as substitute materials, increasing versatility to reduce inventory B. Update order information promptly and adjust procurement orders or quantities as needed, or delay incoming shipments to reduce inventory
G	Operational risk	Information security	Major information security incidents may cause serious impact to corporate operations	Impact the Company's operations and cause leakage of confidential information, damage to reputation, and operational interruption	Mitigate risks	A. Strengthening of information security controls B. Enhancement of protection technology
G	Operational risk	Overcapacity	The demand for orders is lower than the prepared production capacity, making it impossible to maintain the basic operation of production sites	Increased product costs undermines product competitiveness	Mitigate risks	A. Redeploy resources to maintain basic operations through strategic outsourcing B. Readjust the product structure at production sites

Information security (material topic)

Apacer's Information Security Policy

The Company implements various control measures for information security concerning information assets, including: information security management systems, employee information security management, asset classification management, system development and maintenance, system security management, communication network management, access control security, vulnerability detection management, incident response management, and operational continuity management. We continuously adapt to new risks and information security framework requirements by updating and adding relevant policies, ensuring consistency with disclosed information on our official website. These major categories undergo continuous PDCA cycles, including:

1. Planning stage:	Information asset classification, risk assessment, and risk handling plan
2. Operational stage:	Implementing defense in depth including physical security measures, system/device security measures, account privilege management, and information security monitoring and maintenance
3. Review stage:	Internal audit, IT asset sampling review, technical defense effectiveness measurement
4. Improvement stage:	Corrective action and management review meeting
5. Information security awareness:	Announcement and promotion, new employee information security education and training

We also review the content of the information security policy every year to continuously strengthen the information security awareness of employees. Through employee information security education and training and announcements and promotions, our correct understanding and knowledge are enhanced to achieve the goal of information security protection. For details, see "**Information Security Management**" on the Apacer website .

Plan
Revise information security policy
Risk assessment and treatment

Act
Corrective improvement measures
Education and training management review

Information security

Auditing Office

Each unit

Information Security Team

Governance

Do
Implement control measures
Timely detection and reporting incidents

Check
Management review & internal audit
Effectiveness measurement

Information security goal:

Ensure that information operations are correct, complete, and usable for the continual operations

Information security management unit:

Establish an information security team to confirm the effectiveness of information security management operations.

Information security control measures:

Privilege Management	Personnel account management and review.
Access control	Personnel access control management, data breach management, remote personnel access behavior restriction, external storage device control.
External threats	Regular virus scanning and detection of malicious software, setting up network firewalls.
Operational continuity	Monitoring system operations for abnormal alerts, regular data backups and offsite tape storage, remote server room backups, regular disaster recovery drills.
Information Security Promotion	Education and training courses for new employees, and periodic announcements of information security-related information.

Effectiveness of Information Security Management in 2023:

Annual inventory of information security incidents and risk assessment: There were no material information security incidents in 2023.
Risk management planning in advance: Conduct internal inventory in response to material domestic and foreign information security incidents, and plan risk mitigation measures accordingly.
Apacer's continuous improvement helps reduce external threat risks.

Implementation Outcome of Information Security Promotion

Effectiveness in 2022	Effectiveness in 2023	Plans for 2024

1. Information security control
   *Upgraded 3 protection technologies (introduced MDR, upgraded VM platforms, increased backbone bandwidth)
   *Addition of 6 items to the control measures
   *2 information security courses (CEH, ISC)
 	
2. Backup/disaster recovery efficiency tripled
   *Major service 8 hours (formerly 24)
   *Secondary service 16 hours (formerly 48)
	1. Information security control
	 *4 protection technology upgrades
	   <1> Achieved the introduction of external connection OTP two-factor authentication
	   <2> Achieved MDR protection by expanding coverage to all RSOs
	   <3> Achieved the control over illegal device connections to the OA system
	   <4> Achieved backup software conversion and upgrade (60% increase in backup performance and resource utilization)
	 *1 information security self-evaluation
	   <1> Achieved the United States DoD military-grade product information security self-assessment NIST 800-171: 110 points
		1. Information security certification - ISO 27001 [IT server room + T100 core system] certification
		2. Information security control
		 *4 protection technology upgrades
		   <1> Control measures for illegal device connections to the Fab system
		   <2> Replacement of network firewall equipment
		   <3> Replacement of spam email gateways
		   <4> Establishment of the external service access DMZ to strengthen the protection framework

Internal audit: The Company passed information security-related audits and no significant deficiencies were found. There were also no serious information security incidents leading to the violation of the information security policy, leakage of customer information, or penalties.
Annual report of Senior Management: Presenting the execution status to the Board of Directors on December 14, 2023

Major Topic 1.3

Product Diversification and Operational Performance

Operational strategy planning

Apacer specializes in the R&D and manufacturing of memory modules and value-added technologies. Its product lines are divided into industrial and consumer products. Unlike other competitors that choose to focus exclusively on industrial or consumer markets, Apacer has learned from the past and chose this concurrent model. This decision stems from the memory industry's susceptibility to external factors, leading to significant price fluctuations. To ensure operational performance, we combine industrial products, which are more resistant to price drops, with consumer products that can quickly respond to price differentials. This strategy allows for price adjustment and profit stability. Direct communication with consumers through consumer products helps to accumulate brand value and create more collaboration opportunities. Recognizing the need to inject more momentum into sustainable business operations, we have been laying out three major operational drivers since 2021 (focused on key areas, future technology deployment, and digital transformation). In 2022, we added a fourth major operational driver - strategic alliances. Joining hands with UD Info and Acer Corporation, we continue to collaborate with them in 2023 to further energize our operations.

Short-term Operational Strategy

Focus on core industries and actively develop the smart IoT market

Apacer continues to focus on its core business - the development of digital storage. Through deepening core products and R&D technologies, we cultivate key markets while continuously developing smart IoT application fields. By staying abreast of market trends, we further bring added value benefits to customers and partners, and creating operational performance together.

Long-term Operational Strategy

With the vision of "becoming a leader in technological information service integration at the core of digital storage", Apacer not only continues to invest in sustainability affairs in response to the ESG trend but also actively lays out four major operational growth drivers.

Key areas of focus: Focus on special application markets with high value and high customization
Planning for future technology: Integrating value-added services, 5G, cloud applications, and cloud-based remote intelligent management
Digital transformation of operations: Improve decision-making efficiency to optimize operational capacity and create competitive advantages
Strategic alliances: Look for quality partners to expand operational efficiency.
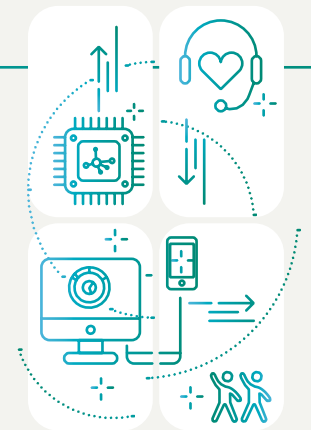
Products and Services

Product Types

Apacer's products and services are divided into three categories, namely "B2B industrial control products", "B2C consumer products", and "smart IoT applications".

B2B Industrial Products	B2C Consumer Products	B2B Smart IoT Applications

A series of stable and durable digital storage solutions designed specifically for vertical application markets such as industrial, cloud data center, automotive, military, gaming, healthcare, etc.
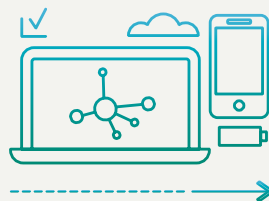
Based on the consumers' life experience, we design a full range of digital storage and mobile peripherals, such as SSDs and memory modules. We also have a high-end gaming product line to meet the needs of data storage and protection.

We also provide IoT environmental control system design, integration, and implementation, as well as optical instrument sales and OEM services, to accompany you on the first mile of smart IoT innovation.
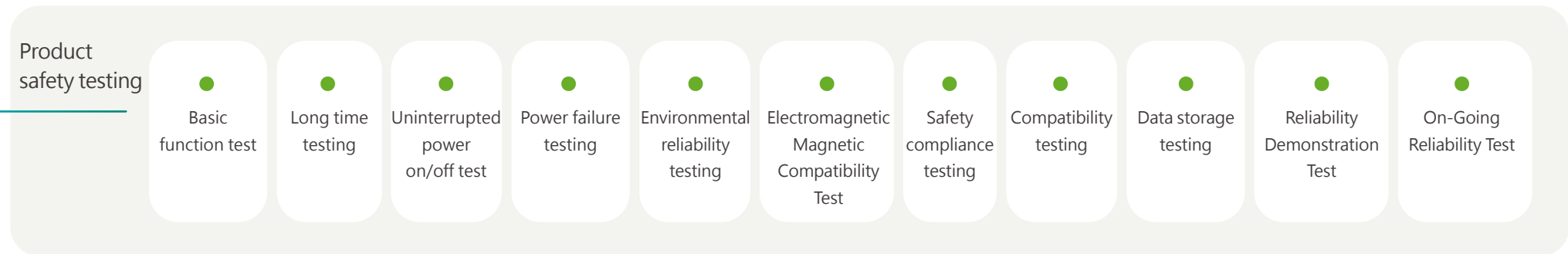
Provide integrated solutions for problem-solving

Serving thousands of customers worldwide, Apacer has rich experience in industrial products and R&D. With our integration and technical capabilities, we help customers solve problems and provide trustworthy products and services. We are committed to working with partners to provide customers with complete solutions, and to establish profound partnerships with customers. We have been ranked as the number one global individual SSD supplier for five consecutive years.

Meeting Consumer Needs

With years of experience, Apacer develops digital storage products ranging from memory modules for computers, flash drives or memory cards, and SSDs to military-grade external storage devices. Additionally, Apacer offers the ZADAK line for high-end gaming enthusiasts. By providing highly recognizable gaming products and full machine components, ZADAK builds a premium brand image and meets consumers' digital storage needs with diverse product designs.

Smart IoT Partners

Integrate ICT and OT to provide comprehensive AIoT planning and intelligent automation deployment services through a total solution business model. In addition to actively promoting the IIoT proactive disaster prevention systems, we further develop AI+AOI automated optical inspection total solutions. This one-stop service assists customers in shortening the development timeline for smart IoT.

● Product Quality Assurance

Product safety testing	Basic function test	Long time testing	Uninterrupted power on/off test	Power failure testing	Environmental reliability testing	Electromagnetic Magnetic Compatibility Test	Safety compliance testing	Compatibility testing	Data storage testing	Reliability Demonstration Test	On-Going Reliability Test

We believe that quality assurance is the most fundamental commitment to customers. Apacer demands the highest standards for product quality, and everything from product R&D, design, lifespan to after-sales service. Every stage undergoes rigorous and meticulous design and testing, with multiple safety and checkpoints arranged to ensure that the products deliver high efficiency and stable performance.

All Apacer products comply with the EU RoHS and REACH hazardous substances restriction, as well as the WEEE (EU Waste Electrical and Electronic Equipment Directive) recycling regulations, to provide consumers with products of low hazard and toxicity. We are also committed to adhering to international conventions, domestic environmental protection, safety, health, and related regulations.

Complete design review and verification

Design verification in the R&D stage
Design testing in the mass production stage

→

Quality Policy

Deliver competitive, defect-free, and hazardous-free products and services on time to customers

→

International quality certification

Compliant with ISO 9001:2015, ISO 14001:2015 and IECQ QC 080000:2017

● Product Labeling

Apacer's products are compliant with regulations in various countries, marked with conformity labels, and accompanied by complete product information including manufacturer details, contents, usage instructions, international certification marks, etc., ensuring transparency and protecting consumer rights.

Apacer also conducts electromagnetic compatibility (EMC) tests to regional requirements. Only after passing these tests are the products allowed to be sold in various countries, ensuring the stability and safety of product usage. The test contents include Taiwan BSMI, U.S. FCC, EU CE, New Zealand and Australia RCM, and Japan VCCI., and the regulatory symbols are marked on the product body.

EU RoHS Hazardous Substances Restriction Label

RoHS

EU WEEE Recycling Label

D33466 Taiwan BSMI

FC U.S. FCC

CE EU CE

New Zealand and Australia RCM

VCI Japan VCCI

UK CA UK UKCA

Financial performance (material topics)

Apacer focuses on key areas of operation and promotes digital transformation to adapt to the rapidly changing industry landscape, making real-time strategic adjustments to maximize company benefits. In 2023, due to the political and economic situation and the impact of inflation, product demand has been delayed and prices have dropped, resulting in a decrease of 13.25% in the overall revenue growth compared to 2022. As a result of adjustments to the sales mix and inventory clearance within the Company, the overall gross profit margin of the Group increased by approximately 4.12% compared to 2022.

NTD thousand

Item	2020	2021	2022	2023
Operating revenue	7,152,222	8,682,393	8,797,035	7,631,446
Operating cost	(6,026,320)	(7,229,509)	(7,108,621)	(5,852,804)
Gross operating profit	1,125,902	1,452,884	1,688,414	1,778,642
Operating income	345,419	573,060	694,122	710,534
Net profit after tax	290,460	485,781	576,991	604,711
Earnings per share (NTD)	2.88	4.81	5.23	4.51

Note 1: Financial figures are derived from the annual consolidated financial statement, and have been audited and certified by CPAs. Operating revenue refers to sales revenues within the industry.
Note 2: Data from 2022 onwards includes subsidiary UD Info.

● Based in Taiwan with a Global Vision

Apacer's customer base includes global distributors, IT equipment manufacturers, system integrators, and retail customers, with sales network covering all five continents. Through a robust distributor network and deep collaboration with partners around the world, we provide high-performance, high-stability, and high-value digital storage application products and integrated services, driven by a commitment to perfection, to share memories with the world.

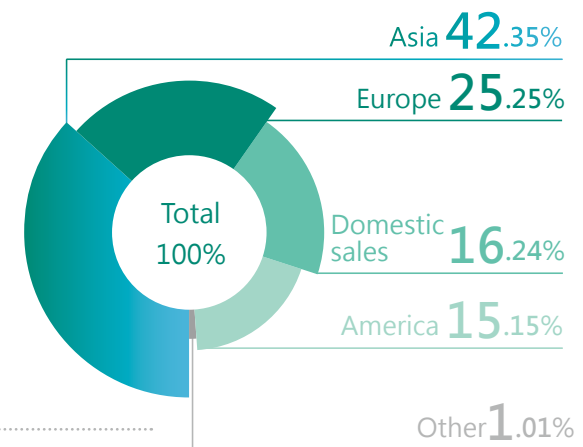Regional Sales Ratio of Main Products 2023

Note: The above data includes all subsidiaries

Asia 42.35%
Europe 25.25%
Total 100%
Domestic sales 16.24%
America 15.15%
Other 1.01%

Innovation and R&D

Major Topic 1.4

With innovative leadership as a competitive advantage, Apacer recruits outstanding talent in the industry and actively plans on-the-job training to develop the team's ability for innovative thinking, and demonstrate their potential and value. The R&D Technology Center leads innovative brand value projects as well as strategic partner cooperation projects, employing diverse thinking to create mutually beneficial outcomes for both partners, achieving the goal of progressing together with partners.

"Become a leader in technological information service integration with the core of digital storage", is the corporate vision of Apacer. With this vision in mind, Apacer focuses on the development of digital storage, continuously accumulating product and technological R&D capabilities, thereby establishing a competitive advantage in business operations.

● R&D Accumulates Sustainability Momentum

Apacer is committed to "Deliver on promises, strive to be better, advance together" through the core value of "Becoming Better Partners." Apacer continues to develop innovative and diverse storage solutions, as well as integrate software, hardware, and firmware designs and technological research across various fields. The goal is to become the industry's best collaborative ally within the ecosystem, creating mutual benefits through value-added services. The R&D Technical Center is a complete R&D unit equipped with firmware development, hardware development, software development, engineering development, testing development, industrial design, mechanism design, technical support, application engineering, product verification, and other advanced technologies. Leveraging years of accumulated digital storage patent technology and successful R&D experiences, it enhances the competitiveness of products and services. The R&D team not only ensures a diverse product line but also meets the customized development and requirement of customers across various solutions, including memory modules, industrial SSDs, consumer digital storage products, and IoT integrated applications.

Apacer has been strategically planning for sustainable development, allocating and scrutinizing annual budgets to R&D needs. The investment in R&D can be observed from the trend of R&D expenditure, as shown in the following chart analysis. In 2023, R&D expenditure increased by 13.94% compared to 2022, and if compared to 2022, it increased even higher by 53.72%. The ratio of R&D expenditure to operating revenue has also increased from 1.72% in 2020 to 2.47% in 2023, making a growth of 0.87% from 2021. This shows successful deepening of R&D capabilities. As of 2023, the total number of patent applications and grants reached 235, including 191 granted patents and 44 pending applications. Apacer will continue to invest resources in R&D and innovative design based on this successful model, aiming to become a solid cornerstone for sustainable operation.

● Innovation Value Competitiveness

Apacer's R&D Technology Center serves as a full-equipped R&D unit that aims to transform patented technology into value-added technical services, leading to competitive products. With the goal of increasing market share annually, Apacer focuses on leveraging innovative product differentiation as its strongest competitive advantage.

R&D Expenditures over the years
(Unit: NTD thousand)

- R&D expenses
- Linearity (R&D expenses)
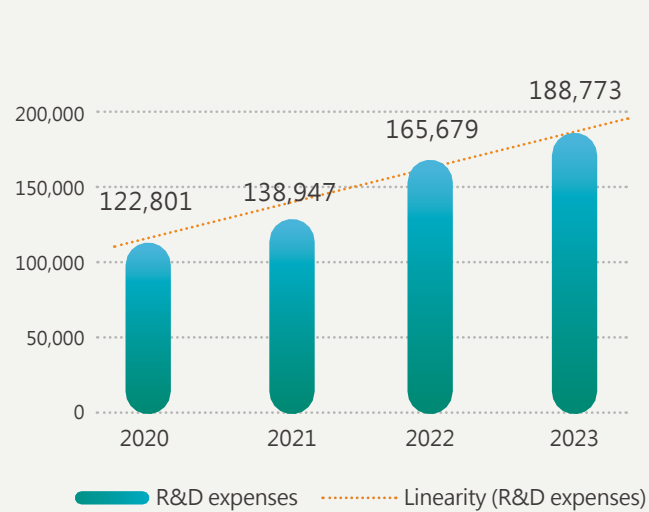
Proportion of R&D expenditure over the years

- R&D expenses
- Linearity (R&D expenses)
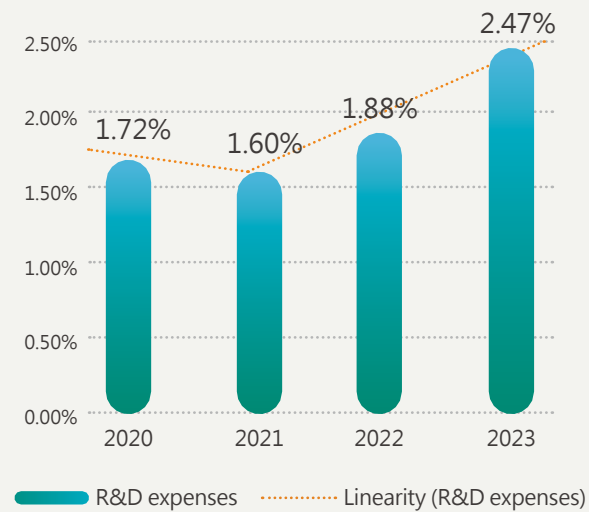
Year	2020	2021	2022	2023
R&D expenses (NTD thousand)	122,801	138,947	165,679	188,773
Operating revenue (NTD thousand)	7,152,222	8,682,393	8,797,035	7,631,446
R&D ratio (%)	1.72%	1.60%	1.88%	2.47%

Year	2020	2021	2022	2023
R&D expenses	122,801	138,947	165,679	188,773
Operating revenue	7,152,222	8,682,393	8,797,035	7,631,446
R&D ratio	1.72%	1.60%	1.88%	2.47%

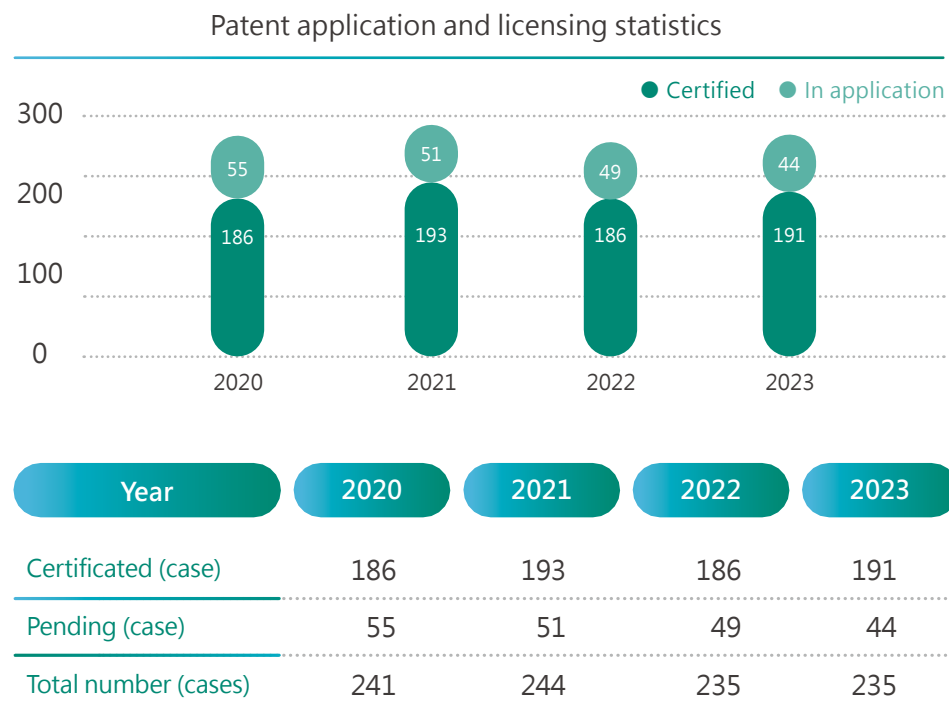Note: Data from 2022 onwards includes subsidiary UD Info.

(NTD thousand)

Patent deployment for future technology

Apacer established the Patent Development Committee in 2017 to strengthen its R&D capabilities. Chaired by the General Manager, this Committee includes a patent review team responsible for conducting internal reviews of invention patents. In addition to including the number of patents developed in the performance evaluation, the Patent Output Reward System has been promulgated to encourage colleagues to develop toward the patent commercialization. Apacer hires patent engineers internally to manage, apply for, and maintain patents. These engineers also provide advice on potential infringement issues for developing products and devise strategies for avoidance designs. Additionally, Apacer creates patent maps and provides information on competitors' patent applications to fully understand the development and patent application trend in competitors' technological fields.
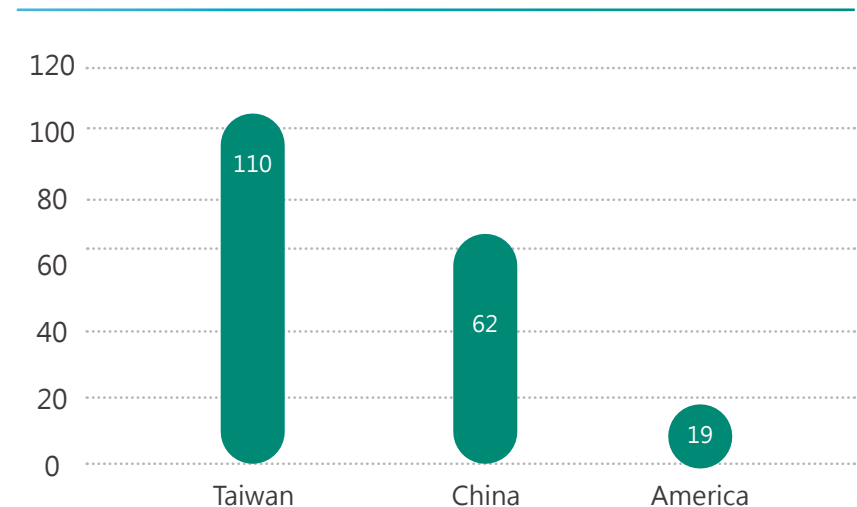
R&D achievements

Statistics of patent applications and approvals over the years

Patent application and licensing statistics

Classification of patents granted in 2023

Year	2020	2021	2022	2023
Certificated (case)	186	193	186	191
Pending (case)	55	51	49	44
Total number (cases)	241	244	235	235

Note: Data of 2023 does not included in the subsidiary UD Info.

As of the end of December 2023, Apacer received a total of 235 patents, of which 44 are pending and 191 patents granted and actively maintained. In recent years, the number of granted patents for Apacer has shown an overall trend of stability. On the other hand, in 2023, Apacer's patent classification by country shows that the number of patents granted in Taiwan is relatively higher, followed by China and the United States. This is largely consistent with the situation in the previous year.

Patent Innovation Performance

- Storage device with automatic backup and restoration mechanism (Taiwan, China)

- Solid-state drive fastening structure (Taiwan, China)

- Thermal modules and electronic devices (Taiwan, China)

- Automatic bottle loading equipment and its unloading mechanism and bottle pushing mechanism (Taiwan, China)

- Method for firmware used in solid-state drives (Taiwan, China)

- Storage device (Taiwan, China)

- New memory module power protection design (Taiwan)

- Modular stacked heat dissipation structure (Taiwan, China)

- Encapsulated stacked graphene heat sinks (Taiwan, China)

- Memory Fragrance Module (Taiwan, China)

Product and Technology R&D Innovation Performance

- 100K erasable 3D NAND SSD

- DataDefender ™ PCIe Gen4 x4 SSD

- Smart upgrade in the nursing/environmental safety dual domains

- ZADAK SPARK RGB DDR5

- JEDEC Raw Card Revision 1.0

- Video/gaming M.2 PCIe SSD

- Apacer collaborates with Asus to build cloud IPC information security

- Smart IoT Nursing Field Solutions

- CoreAnalyzer2 robust edge computing

- PANTHER RGB DDR5

- Rugged Industrial SSD

- FIPS140-2 Data Encryption Certified SSD

- Rugged military-grade SSD

- iKeeP Smart Vocabulary Device

- 4TB Gen 4 x 4 SSD

- Automated Optical Inspection System Solution

● Relevant Industry Association

To enhance sensitivity to market fluctuations and trends, Apacer has joined the industry-related associations as listed in the table below, aiming to maintain industry relevance and expand business opportunities.

Participating Associations	Participation Form
Taiwan Stock Affairs Association	Member, representatives are sent to attend association meetings and seminars periodically
Responsible Business Alliance	Members
GSI Taiwan	Members
SATA-IO (The Serial ATA International Organization)	Members
JEDEC (Global Standard for Microelectronics Industry)	Members
SDA (SD Association)	Members
CFA (CompactFlash Association)	Members
PCI-SIG (Peripheral Component Interconnect Special Interest Group)	Members
DRAM EXCHANGE	Members
INSPECTRUM	Members
Taipei Computer Association	Members
Taiwan External Trade Development Council - Taiwan Trade	Members
Intelligent Computer & AIoT Association	Members

Chapter 2

A Good Partner for a Green Environment

Vision

To fulfill our social responsibilities and protect the global environment, Apacer has implemented an environmental management system, formulated supplier management regulations, promoted green product design, and conducted internal environmental protection education within the Company. These efforts integrate environmental protection principles into the overall value chain of the enterprise, from top-down policies to bottom-up actions, embodying a corporate philosophy of green sustainability.

Policies and Commitments

Apacer has formulated the following environmental, safety, and health, and energy policy: "Compliance with laws and regulations, pollution prevention, participation in consultation, risk control, green design, continuous improvement, and environmental friendliness". Adhering to this policy, Apacer ensures the timely delivery of competitive, defect-free, and environmentally safe products and services to satisfy customers.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Energy Management	To reduce operational energy consumption and enhance process energy efficiency, we adhere to domestic energy management laws. while striving to comply with them	302-1、302-3、302-4

Impact Description

More than 99% of the energy consumption within the organization mainly relies on externally purchased electricity. Power shortages or abnormal power outages could significantly impact business operations. We're committed to continuously improving energy efficiency, reducing energy use in the Company's production or operations, increasing product competitiveness, and implementing the following commitments:
• Comply with energy-related laws and regulations, monitor power supply status and power outage information on a regular basis, and adjust operations to avoid operational impacts.
• Improve production energy efficiency and prioritize the procurement of energy-efficient products.
• Enhance product energy-efficient design to meet customer energy requirements.

Actual	Potential	Positive	Negative
V		V	
	V		V

Actual Plans		2023 Targets	2023 Performance	Result Tracking
Management actions/preventive and remedial measures	Replacement of old production equipment with new ones with low-energy consumption production equipment.	Production electricity saved by 9K kWh	Achieved	To save production electricity by 9.88K kWh
	Complete replacement with LED lighting fixtures	To replace 960 lighting fixtures	Achieved	To replace 960 lighting fixtures
	To reduce air conditioning operating time by one hour	Reduced set operating time by one hour	Achieved	Reduce operating time by one hour
	Complete the 2022 ISO 14064-1:2018 GHG verification	Completed in December	Achieved	Completed in December
	Track keeping of Taipower's power supply information monthly and implementing contingency plans for abnormality, adjusting operations according to power notifications	Implementing the plan, the power outage notification time was changed on June 10, 2023, and working hours were arranged and adjusted in advance on June 8	Achieved	Adjust working hours according to the power outage schedule, and implement according to the plan, with 0 abnormal incidents

Material Topics in This Chapter

Material Topics	Material Topic Management Policy		Comparison with International Frameworks and Indicators

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Employee	Energy Saving Promotion Documents	From time to time	Employee feedback box
Suppliers	Supplier Conference	Once a year	Corporate Procurement Personnel
Customers	-GHG Inventory Verification Statement -Sustainability Report	-Once a year -Once a year	-Sales Personnel -Customer Satisfaction Survey

Sustainability targets

Sustainability targets		Method of evaluation
Short-term goals (2024 to 2025)	- Full introduction of LED lighting fixtures - Compliance with regulatory requirements	
Mid-term targets (2026 - 2030)	- Compliance with regulatory requirements - Evaluate solar panels or green renewable energy.	- Quarterly Review Meeting of the Sustainable Development Committee - Number of legal penalties were 0 - External audit of GHG inventory
Long-term targets (2050)	- Comply with the requirements of the Energy Administration Act - Comply with the requirements of the "Climate Change Response Act", aiming for net-zero emissions.	

United Nations Sustainable Development Goals (SDGs)

13.3 Improve education, raise awareness, and enhance the capacity of individuals and institutions in climate change risk reduction, adaptation, impact mitigation, and early warning.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
GHG Management	Comply with the "Greenhouse Gas Reduction and Management Act" in Taiwan, conduct organizational GHG inventory according to ISO 14064-1: 2018 and obtain the Inspection Declaration.	305-1~305-5

Impact Description

	Actual	Potential	Positive	Negative
Excessive GHG emissions causing global warming, climate change, and environmental changes, which may lead to changes in the supply chain and impacts of operational locations.	V			V

Actual Plans

		2023 Targets	2023 Performance	Result Tracking
Management actions/ preventive and remedial measures	Organize supplier conferences to promote supplier GHG inventory among suppliers	Supplier attendance rate of 80%	Achieved	Supplier attendance rate reached 99%
	Customer Satisfaction Survey	Satisfaction survey of 80 points	Achieved	Satisfaction Survey of 88.85 points
	ISO 14064-1: 2018 organizational GHG external verification completed, verification statement obtained for the results of the 2022 inventory in January	Complete external inventory	Achieved	Completed inventory in Q4

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Employee	Environmental Team's follow-up meeting	Monthly	Internal Website Hii
Customers	-Sustainability Report -Official website	-Yearly -Periodically	-Secretariat of the Sustainable -Development Committee
Suppliers	-Sustainability Report -Official website -Supplier Conference	-Yearly -Periodically -Yearly	-Secretariat of the Sustainable -Development Committee -Supplier Conference
Shareholders	Submitting the shareholders' report	Once a year	Shareholders' meeting

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets

		Method of evaluation
Short-term goals (2024 to 2025)	- ISO 14064-1 organizational GHG inventory completion verified by third-party verification -Compliance with regulatory requirements	
Mid-term targets (2026 - 2030)	- ISO 14064-1 organizational GHG inventory completion verified by third-party verification - Compliance with regulatory requirements	Obtained ISO 14064-1: 2018 Certification Statement
Long-term targets (2050)	- ISO 14064-1 organizational GHG inventory completion verified by third-party verification - Compliance with regulatory requirements - Net Zero Emissions	

United Nations Sustainable Development Goals (SDGs)

13.3 Improve education, raise awareness, and enhance the capacity of individuals and institutions in climate change risk reduction, adaptation, impact mitigation, and early warning.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Green Product Design	- Comply with international regulations such as RoHS and HF material usage standards, arrange third-party laboratory verification for the electrical reliability, and meet international regulations including CE, FCC, and UKCA, with corresponding reports provided to customers. - Products comply with the specifications of JEDEC Solid State Technology Association. - Plastic packaging materials that meet recyclable specification will be labeled with the Recycle symbol. - Product design complies with the development process P-FLOW, with relevant development and manufacturing following this process management.	301-3

Impact Description

Implementing sustainable green concepts from product design to manufacturing, with the goal of continuously producing environmentally friendly products and creating a green industrial chain.	Actual	Potential	Positive	Negative
	∨		∨	

Actual Plans

		2023 Targets	2023 Performance	Result Tracking
Management actions/preventive and remedial measures	Recycling and reuse of cartons	To recycle 600 pieces	Achieved	To recycle 806 pieces
	Recycling and reuse of trays	To recycle 10,000 pieces	Achieved	To recycle 14,281 pieces
	Halogen-free materials used for industrial DDR5 products	DDR5 adopts 100% halogen-free materials	Achieved	DDR5 adopts 100% halogen-free materials
	Adopt halogen-free housing for Consumer USB flash drive products	To introduce two new models	Achieved, with a total of two products: AH333, AH355	Two new models have been introduced

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Customers	-Customer Satisfaction Survey -Company website	Once a year	-Company website - Communication via mail or phone explanation
Suppliers	-Supplier Conference -Supplier satisfaction survey	Once a year	- AGP system - Communication via mail or phone explanation

Material Topics in This Chapter

| Material Topics | Material Topic Management Policy | Comparison with International Frameworks and Indicators |

Sustainability targets

Method of evaluation

Short-term goals (2024 to 2025)	- Implementation of Green Packaging Design - Introduction/full use of PCR (Post-Consumer Recycled) plastic materials for structural components - Fully lead-free resistors introduced	
Mid-term targets (2026 - 2030)	-Using recycled paper packaging up to 50% -Using recycled plastic packaging up to 50% -New products are designed to be 100% compliant with international environmental regulations, meeting green product design standards	- Number of Products Introduced - Percentage of products using green packaging - Percentage of green product design
Long-term targets (2050)	- Introduce renewable green packaging into all products - Green product design 100% complies with international environmental regulations	

United Nations Sustainable Development Goals (SDGs)

6.3 By 2030, we will improve water quality, reduce pollution, eliminate garbage dumping, reduce the release of toxic chemicals and hazardous materials, halve the proportion of untreated wastewater, and increase global recycling and safe reuse rates. (No production wastewater)
13.3 Improve education, raise awareness, and enhance the capacity of individuals and institutions in climate change risk reduction, adaptation, impact mitigation, and early warning.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Raw Material Management	Apacer fully implements the RoHS directive in its processes and material management, complies with REACH regulations and relevant customer requirements, conducts audits on component suppliers, and requests environmental commitment statements to ensure that source materials comply with regulations. Apacer uses the AGP system (Apacer Green Product Web System) to establish control information and communicate management policies and procurement standards at supplier conferences, effectively managing the use of raw materials.	301-3

Impact Description

Increase the proportion of renewable raw materials in products and enhance the recyclability of packaging materials to realize the spirit of a circular economy. Ineffectively managing the procurement and use of controversial raw materials can lead to increased operating costs, ethical controversies, and environmental pollution

Actual	Potential	Positive	Negative
V		V	

Actual Plans

		2023 Targets	2023 Performance	Result Tracking
Management actions/preventive and remedial measures	The AGP system enhances control over material composition tables	The recycling rate of the Total Material Composition Table for new components achieves 100%.	In progress	With a recycling rate of 99%, the remaining 18 items are approved for shipment through special arrangements
	Hold the annual supplier conference and communicate management policies	Supplier satisfaction of 80 points	Achieved	This year's supplier satisfaction score was 88 points

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Customers	-Email -Telephone	From time to time	-Company sales personnel -Communication via mail or phone explanation
Suppliers	-Email -Telephone -Official website -AGP system announcements -Supplier Conference	From time to time/yearly	-Corporate Procurement Personnel -Supplier Conference -Communication via mail or phone explanation

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets

Method of evaluation

Short-term goals (2024 to 2025)	-The AGP system will be revised to optimize for regulatory updates and customer needs, strengthening automatic system verification checkpoints -The annual supplier conference will be held to implement and publicize relevant regulatory requirements and AGP system operation	-AGP will be revamped to be launched in 2024 -Supplier conference satisfaction -Recycling rate of the Total Material Composition Table for new materials
Mid-term targets (2026 - 2030)	-The recycling rate of the Total Material Composition Table for new components achieves 100%.	
Long-term targets (2050)	-The recycling rate of the Total Material Composition Table for new components achieves 100%.	

United Nations Sustainable Development Goals (SDGs)

12.2 Achieving the sustainable management and efficient use of natural resources before 2030.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Hazardous Substance Management	Products and services free of hazardous substances, compliant with international standards and customer needs.	Customized Material Topics

Impact Description

Apacer's products comply with the EU RoHS (Restriction of Hazardous Substances Directive) regulations and are certified with IECQ QC 080000 (Hazardous Substance Process Management for Electronics and Electrical Components and Products), ensuring the safety and health of product users and the environment.

Actual	Potential	Positive	Negative
V		V	

Management actions/preventive and remedial measures	**Actual Plans**	**2023 Targets**	**2023 Performance**	**Result Tracking**
Management actions/preventive and remedial measures	QC 080000 valid certificate	Certificate continues to be valid	Achieved	Certificate continues to be valid

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Customers	-Email -Tel.:	From time to time	-Company sales personnel -Communication via mail or phone explanation
Suppliers	-Email -Tel.: -Official website	From time to time/yearly	-Corporate Procurement Personnel -Supplier Conference -Communication via mail or phone explanation

Sustainability targets

Sustainability targets		Method of evaluation
Short-term goals (2024 to 2025)	Legal compliance	
Mid-term targets (2026 - 2030)	Legal compliance	Obtained QC 080000 valid certificate
Long-term targets (2050)	Legal compliance	

United Nations Sustainable Development Goals (SDGs)

-

Major Topic 2.1

# Environmental Commitment and Legal Compliance (material topic)

Apacer follows the environmental, safety, health, and energy policy of "compliance with regulations, pollution prevention, consultation participation, risk control, green design, continuous improvement, and environmental friendliness", refraining from using substances that endanger the environment or cause damage. We also make proper use of existing resources to employ practical measures such as energy conservation, carbon reduction, and resource reuse to minimize resource depletion. The Company aims to become a renowned green enterprise as its operational goal.

Apacer's Environmental Commitment

Legal aspect

-Check the status of regulatory updates quarterly and comply with domestic environmental protection and energy management regulations. There were no environmental-related incidents in 2023
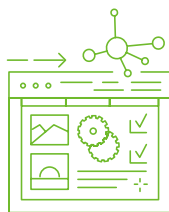
Institutional aspect

-Manage the negative environmental impacts of processes and products in a systematic manner through the ISO 14001: 2015 environmental management system

-The procurement and manufacturing process complies with international environmental protection standards for electronic products, meeting the Hazardous Substances Free (HSF) specification, and implementing the IECQ QC 080000: 2017 Hazardous Substance Process Management System

-Advocate and implement RoHS 2.0 requirements

-100% non-use of metals from conflict-affected and high-risk areas
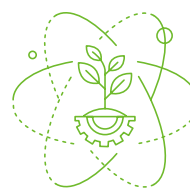
R&D aspect

-Develop green products and reduce energy and resource use from the perspective of product design

Specific Actions

-Set carbon emission reduction targets and review them annually.

-The 1st to 6th floors of the operational headquarters were replaced with water-cooled air conditioners, resulting in a 60% reduction in air conditioning electricity consumption compared to 2021

-Conduct employee environmental protection education and training every year to strengthen employees' awareness of environmental protection and energy conservation

-Set short-, mid-, and long-term environmental sustainability goals to continuously improve green and sustainable practices

● Introduce the environmental management system

To become a green enterprise, Apacer has introduced quality management (ISO 9001: 2015) and environmental management system (ISO 14001: 2015), we follow the PDCA (Plan-Do-Check-Act Cycle) to ensure that all stages of operations and product comply with policy standards and achieve established goals. Through systematic management, we ensure product quality and environmental assurance, reducing the negative impact of products and their processes on the environment.

Key Points of Apacer's EMS PDCA Promotion

Plan	Do	Check	Action
Environmental impact inventory and action plan	**Actual operation**	**Performance review**	**Continuous improvement and management**
Conduct a comprehensive inventory of the plant's environmental impact, analyze the environmental impact of workflows, and formulate an environmental protection action plan	According to the action plan, each department implements environmental protection actions, including reducing factory waste, minimizing product packaging materials, and implementing office environmental protection actions	Supervise and measure the effectiveness of each implementation item to ensure the achievement of environmental protection goals	Based on the gap between the performance and goals, we make improvements to the deficiencies, improve various actions, and set the goals for the next stage

Apacer's Implementation of Management System

Management system

ISO 9001：2015 Quality Management System

Major management items

Ensure that all customers receive consistent high-quality products and services

Actions and performance

Strict control of product quality and traceability through MES (Manufacturing Execution System) production records

Management system

ISO 14001：2015 Environmental Management System

Major management items

Balance environmental protection with changes in social and economic environmental conditions through a product lifecycle approach

Actions and performance

-Establish a risk-oriented thinking model and a lifecycle perspective in environmental management
-Ensure that environmental requirements are included into every stage of the product lifecycle, including design and manufacturing

Major management items

IECQ QC 080000：2017
Hazardous Substances Process Management System

Major management items

Raw materials comply with EU RoHS and REACH regulations

Actions and performance

Raw material suppliers must sign the Environmental Protection Commitment, provide raw material test reports, and complete the substance survey

Management system

ISO 14064-1：2018
GHG Verification Statement

Major management items

GHG emissions generated by emission sources and operational activities within the boundary

Actions and performance

In response to the international trend of net-zero carbon emissions and domestic GHG verification requirements, obtaining statement of impartiality through third-party verification activities

● **Employee environmental protection education and training**

To internalize environmental and energy-saving awareness among employees, apart from periodically disseminating new knowledge through announcements, we reinforce environmental and energy-saving knowledge and trends through physical courses. This ensures that employees understand professional environmental knowledge and design products that are environmentally friendly.

New employees

Training content

General education on environmental protection and energy saving

Training outcomes

-Course pass rate of 100%
-99 hours of training for new employees in 2023

Other employees

Training Content

Hazardous Substance Process Management, HSPM
Education and training outcomes:
-Annual education and training pass rate of 100%
-1,164 hours of training for employees in 2023

Training outcomes

-Annual education and training pass rate of 100%
-1,164 hours of training for employees in 2023

Hazardous Substance Process Management (HSPM) education and training

Accumulated hours (hours)

Year	Accumulated hours
2020	290
2021	400
2022	838
2023	1,206

累計時數　　線性
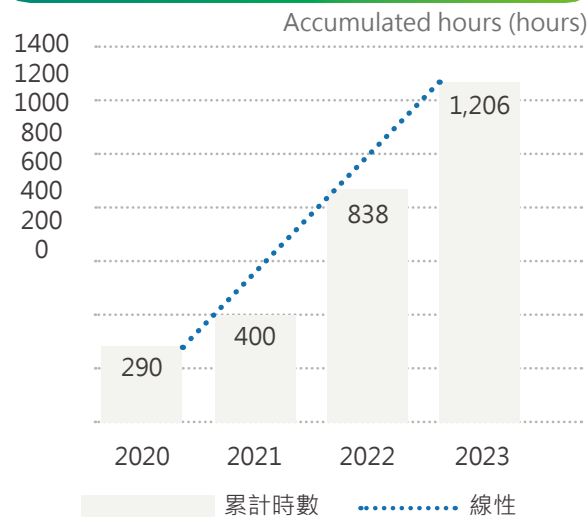
Note: The above data does not include the subsidiary UD Info.

Environmental protection expenditure

2023 Expenditure items

Expenditure items	Amount (NTD thousand)
Environmental management system verification fee	433
	19,933
Production equipment improvement	395
	155
General business waste	101
Hazardous industrial waste disposal	1,852
	18
Working environment survey	212
Environmental sanitation inside and outside the office area	
Greening and beautification of the environment	
Office LED replacement	
Total amount	23,099

Note: The above data does not include the subsidiary UD Info.

2.2 Climate Change Risk Management

To address the risks and impacts of climate change, Apacer references the framework of the Task Force on Climate-related Financial Disclosures (TCFD) proposed by the Financial Stability Board (FSB) to identify and manage climate change risks and opportunities.

	Governance	Strategy	Risk Management	Indicators and Targets
Management Strategies and Action Plans	-Sustainable Development Committee: : Apacer's top climate change risk management organization, chaired by the Chairman, reviews the execution and planning of climate change-related work quarterly and reports to the Board of Directors annually -Environmental Care Team: Under the Sustainable Development Committee, it is responsible for planning and promoting climate change response work	-Each department identifies climate change risks and engages in cross-departmental discussions on key climate risks and opportunities of concern	-Following the TCFD framework, identifying the climate risks and opportunities that have a significant impact on Apacer -Based on the climate risk identification results, risk prevention and management indicators are established in advance to mitigate risks -Incorporate climate risk identification and evaluation into operational risk management	-Conduct an annual inventory of GHG emissions
Implementation Status	-In 2023, a total of 4 checks were conducted to evaluate the performance of measures for energy conservation and carbon reduction, waste management, environmental sanitation, and environmental protection. -Execute and monitor the upgrade of energy-saving equipment and track the energy-saving benefits after equipment upgrade on a quarterly basis.	-Environmental Care Team: Under the Sustainable Development Committee, it is responsible for planning and promoting climate change response work	-Cross-departmental discussion is conducted to evaluate the identification of climate-related risks/opportunities, and evaluate the possible impact on the Company's finance -Report the possible impacts of the identified climate-related risks/opportunities to the Sustainable Development Committee -Please refer to Chapter 1 "Organizational Risk Management Policy" in this report for details	-Continue to implement energy-saving measures to reduce Scope 2 carbon emissions. Please refer to "Energy Saving Improvement Benefits in 2023" for detail information -Based on the GHG inventory results, we plan energy conservation and carbon reduction measures and report them to the Sustainable Development Committee for regular review of implementation performance

● Risk/Opportunity Identification Process

To understand the risks that climate change may bring to the Company, Apacer identifies and prioritizes climate-related risks/opportunities according to the TCFD framework to identify which risks/opportunities may have an impact on Apacer. Apacer will refer to international organizations' climate change research reports and integrate them with a climate risk and opportunity matrix. This will inform the integration of sustainability measures such as energy conservation, carbon reduction, and water conservation into the Company's operational policies. Significant impact of relevant risks can be identified through risk identification based on "impact level" and "likelihood of occurrence".

Planning and formulating
-Collection period: January 2023 to December 2023

Step1

-Collect relevant risk/opportunity topics
-Identify risk/opportunity stakeholders and responsible department

Internal interview
-Analysis frequency: Re-examined every year

Step2

-Interviews with representatives of responsible department on matters related to the identification of climate risks/opportunities
-Conduct climate change risk assessments for the upstream and downstream of the value chain, including direct and indirect operational scopes

Risk/opportunity identification
-Analysis frequency: Re-examined every year

Step3

-Generate the climate change risk and opportunity matrix
-Risk/opportunity identification data provided by the responsible department
-Integrate data for statistical analysis

Control measures and target setting
-Analysis frequency: Re-examined every year

Step4

-Present Risk/Opportunity Response Strategies
-Track the implementation of corresponding strategies for each risk/opportunity every year

● Apacer Identification of Material Risks and Opportunities

	Risks and opportunity topics	Likelihood of occurrence	Level of Impact	Financial impact level	Total score	Materiality (V)
Opportunity	1 Obtain cooperation and incentives from public sectors	5	5	3	13	V
	2 Promotion of the energy-saving and carbon-reducing production	3	3	4	10	V
	3 Engagement in the market for green products	4	4	5	13	V
	4 Promotion of the positive corporate image	2	2	2	6	
	5 Creating a Green Building Environment	1	1	1	1	
Risk — Actual risk	I Typhoon and flood	5	5	5	15	V
	II Droughts	2	1	1	3	
	III Sea level rise	1	1	1	3	
	IV Rising temperature	2	1	3	4	
Transformation risk	A.Environmental regulations are becoming increasingly stringent	5	5	3	13	V
	B.Higher cost of carbon emission management	4	3	5	12	V
	C.Unstable energy supply	3	3	2	8	
	D.Impact on the Company's image	1	1	5	7	

Risk Category	Risk Level 1	Apacer's Management Method
Key focus	10 points or more	Formulate countermeasures and review their implementation status every year
Continuous	Score of 5 or higher	Actively collecting relevant domestic and international news and case studies, and reviewing this topic every year
Low risk	1 to 4 points	Continuous observation
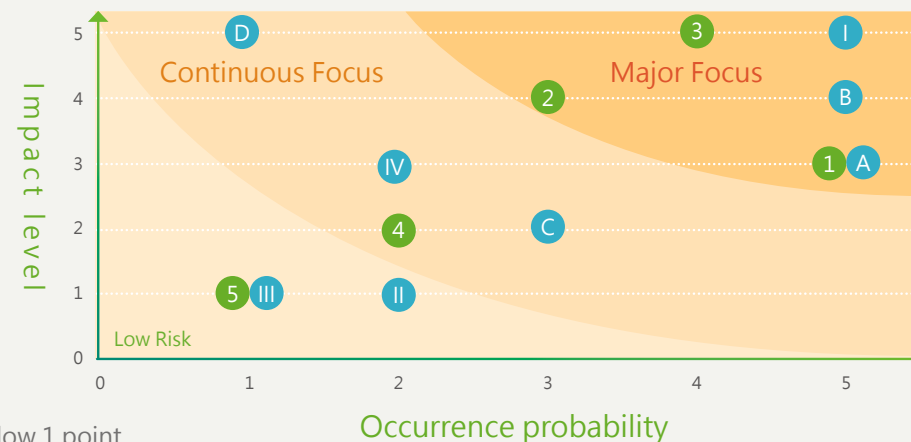
Note 1:
Impact level - extremely high 5 points/high 4 points/moderate 3 points/low 2 points/extremely low 1 point,
Likelihood of occurrence - extremely high 5 points/high 4 points/moderate 3 points/low 2 points/extremely low 1 point
Financial impact - extremely high 5 points/high 4 points/moderate 3 points/low 2 points/extremely low 1 point

● Risks and Opportunities

In 2023, Apacer identified two major climate risks and two major climate opportunities as its key focus areas. Based on the nature of these risks and opportunities, strategies were proposed to address them. For risks, we proactively manage them as early as possible to minimize possible negative impacts in the future. For opportunities, we allocate resources and carry out planning in advance to grasp the business opportunities that may be brought about by climate change.

Risks and opportunity topics		Value chain scope of impact			Description of the main potential financial impact	Response strategies
		Upstream	Operations	Downstream		
Opportunity	Obtain cooperation and incentives from public sectors		V		-Additional sustainability-related norms and regulations -Additional cost of greenhouse gas emissions	-The organization may incur costs associated with compliance with regulatory requirements, such as the purchase of green power certificate -In response to the Climate Change Response Act, the Company are required to purchase energy-efficient production equipment or energy-saving facilities
	Promotion of the energy-saving and carbon-reducing production		V		In the manufacturing process, work stations are combined to reduce electricity consumption and paper waste.	By integrating the E-system and merging the TEST workstations, aiming to reduce production costs
	Engagement in the market for green products		V		-Environmental awareness is rising to avoid paper waste and design new products -Continuous production and R&D of wide-temperature product design and R&D (temperature resistance) Note: Wide-temperature products refer to products capable of withstanding special high and low temperatures, as required by industrial control customers	-Development of E-paper product to replace printing paper for users, thereby reducing deforestation -Enhance competitiveness and market share
Risk	Actual risk	Typhoon and flood	V	V		-Reduced production capacity and increased costs -Damage to the plant due to risk occurrence	-Continue to strengthen the simulation and drills for daily disaster response plans -Continue to strengthen supply chain management
	Transformation risk	A.Environmental regulations are becoming increasingly stringent	V	V	V	-Reduced production capacity and increased costs -Increase in equipment installation expenses	-Evaluate the introduction of environmentally friendly alternatives -Continued R&D of products and technologies that comply with laws and regulations.
		B.Increase in carbon emission management costs		V			-Evaluate the carbon footprint of products to understand how to reduce carbon emissions in the manufacturing process

● Energy Management

Through the ISO 14001: 2015 environmental management system certification, Apacer has established pollution prevention and improvement mechanisms to conserve energy usage and reduce the environmental impact of its operations The Company mainly relies on electricity for internal energy usage, with purchased electricity for the headquarters (indirect energy) accounting for over 99% of total energy consumption. In 2023, shutting down the water-cooled air conditioning equipment one hour early and replacing all lighting fixtures with LED lighting, along with the procurement of new energy-efficient equipment, resulted in a significant decrease in electricity consumption. As a result, the energy intensity also showed a slight decrease, indicating an overall downward trend. Compared to the previous year, there was a 2.6% reduction in total electricity consumption. (3,573 kWh in 2023 and 3,669 kWh in 2022)

Energy Usage Over the Years							
Year	2020		2021		2022		2023	
Direct energy — Diesel Type[1] Forklifts	0 liter	0 GJ	20 liter	0.702 GJ	0 liter	0 GJ	20 liter	0.702 GJ
Indirect energy — Plant and Office Power Use[2]	4,112,765 kiloliters	14,805.954 GJ	3,748,997 kiloliters	13,496.389 GJ	3,673,094 kiloliters	13,223.138 GJ	3,572,888 kiloliters	12,862.396 GJ
Total Energy Consumption (Gigajoule, GJ)	14,805.954		13,497.091		13,223.138		12,863.098	
Annual Revenue (million)	7.152.222		8,682.393		8,797.035		7,631.446	
Energy intensity[3] (GJ million)	2.07		1.55		1.50		1.69	

Note 1: 1 liter of diesel = 8,400 kcal, 1 calorie = 4.18 joules (refer to Table of the calorific values of energy products, Energy Administration, Ministry of Economic Affairs)
Note 2: 1 kWh of electricity = 3.6 million joules = 3.6x10-3 GJ
Note 3: Energy intensity (GJ/million) = total energy consumption (GJ) / annual revenue (million)
Note 4: Data of 2023 does not included in the subsidiary UD Info.

● Energy Saving Improvement Benefits in 2023

To protect the environment, reduce GHG emissions and resource consumption, Apacer invested NTD 2.5 million in 2019 to replace the air-cooled air conditioners on the 7th floor of the factory office with water-cooled air conditioners. After one year of tracking and evaluation, it was calculated that the water-cooled air conditioners achieved energy savings of over 30% compared to the air-cooled ones. Due to the outstanding achievements in energy saving, in 2020, Apacer invested NTD 15 million to replace the air-conditioning equipment on the 1st to 6th floors. New air conditioning equipment was installed in 2021. Additionally, in 2022 and 2023, low-energy-consuming production equipment such as solder paste inspection machines, placement machines, and reflow ovens were successively replaced to save electricity. Apart from achieving cost savings in electricity bills, these efforts also contribute to environmental conservation and mitigate climate change.

Green factory and office energy saving improvement

√ Replacement of low-energy consumption production equipment: Reflow oven, pick-and-place machine, solder paste inspection machine, resulting in electricity savings of at least 6% compared to the original equipment
√ After replacing the water-cooled air conditioners, the electricity savings for air conditioning increased by 60%
√ Promote more walking instead of taking elevators
√ Replacement of low-energy LED lighting fixtures
√ Turn off the air conditioner an hour earlier
√ Adjust the number of lighting fixtures in public areas

In 2023, compared to 2022, there was an overall electricity saving of 95,801 kWh, leading to a reduction in GHG emissions of 47.326 t CO_2-e

Note: The carbon emission factor is calculated based on the latest electricity emission coefficient announced by the Energy Administration at the time of the inventory. For 2023, the carbon emission coefficient is 0.494 kg/kWh.

Energy Saving Actions and Benefits over the Years

Year	Action	Details	Action	Details
2023	Optimized test mode to reduce process time and power consumption	Optimized DRAM test mode to reduce process power consumption by about 7000 kWh/year (25.2 GJ/year)	Performance tracking of air conditioning system after transitioning from air-cooled to water-cooled	In 2023, tracking the electricity usage of the water-cooled air conditioning system continued to save 538,000 kWh per year. Additionally, implementing an early shutdown by one hour each day resulted in a total electricity reduction of 95,800 kWh/year compared to 2022, estimated to be a decrease of 2.6%
2022	Reduced process electricity consumption	Purchased production equipment with low-consumption for the reflow ovens to save electricity consumption by 28.8%, generating 27,000 kWh/year Purchased production equipment with low-consumption for the reflow ovens to save electricity consumption by 19.8%, generating 10 kWh/year	Water-cooled air conditioning used to save air conditioning electricity consumption	Fully implementing water-cooled air conditioning systems in 2021 resulted in over 30% electricity savings for air conditioning. Additionally, in 2023, total company electricity consumption decreased by 538,000 kWh/year compared to 2020, a reduction of 13%
2021	Testing process refined to reduce electricity consumption	Reduced the number of DRAM testing stations from 4 to 2 saves process electricity consumption	Air conditioning fully replaced equipment helps save air conditioning electricity consumption	Building on the achievements in 2019, we introduced water-cooled air conditioners on the 1st to 6th floors of the factory office in 2020, which were fully operational by 2021. It is expected that the electricity consumption for air conditioners can be reduced by over 30% in the future

Year				
2020	**Testing process optimized to reduce energy consumption**	Reduced the number of platforms from 52 to 39, saving about 20-37% in energy	**Air-conditioning equipment optimized to create an energy-saving office environment**	Apacer introduced water-cooled air conditioning to the 7th floor offices in 2019, resulting in energy savings of over 30% compared to the previously used air-cooled air conditioning
2019	**Containment tanks installed to prevent chemical leakage**	Liquid containment tanks to eyewash equipment and explosion-proof rooms were installed to prevent chemical leakage from flowing into the drainage pipes	**SMT equipment optimization: Reducing process energy consumption by using fewer nitrogen generators**	The nitrogen generator equipment was updated to provide a five-stage energy-saving mode. During production, the equipment can automatically adjust the energy-saving mode according to the operating conditions
			Testing process refined to reduce electricity consumption	1.　　Energy saving and improvement of run-in equipment: 19.64% reduction in electricity consumption, leading to an annual saving of 6,920.64 million joules 2.　　Energy saving and improvement of air compressor: 19.35 reduction in electricity consumption, leading to an annual saving of 466,560 million joules
2018	**Dust emission monitoring introduced**	Monitoring of the production process PCB dust, with dust recycling implemented. After recycling, the natural gas emissions are released into the atmosphere. Data monitoring of dust operations is conducted before and after emissions to ensure compliance with air quality regulations and to prevent air pollution	**Ice water chillers with temperature cloud monitoring introduced**	Capable of randomly retrieving necessary power consumption, inlet and outlet water flow rates, temperatures, and cooling water quality data. Monitor long-term energy consumption information to prevent energy waste and set energy-saving improvement goals
2017	**Apacer energy saving patrol**	In 2016, employees independently established the Apacer Energy Saving Patrol to evaluate and implement company energy-saving actions and prevent energy waste	**Room temperature control measures**	Install air curtains at the entrances of the production line to reduce indoor and outdoor temperature exchange, improve temperature and humidity control to meet customer requirements, and reduce air conditioning energy consumption
2016	**Water-saving equipment introduced**	In 2016, domestic water-saving equipment was installed, achieving a 24.8% reduction in water usage compared to 2015	**Air Conditioning Energy Saving Measures**	Install curtains, heat insulation film, and circulating fans on internal windows to improve energy efficiency. The indoor air conditioner in the office is set at 26° C to reduce unnecessary energy consumption

● Office Environmental Protection Actions

Apacer prioritizes incorporating energy-saving and environmental protection concepts into daily operations, reducing environmental impact while fostering environmentally friendly behavior among employees.
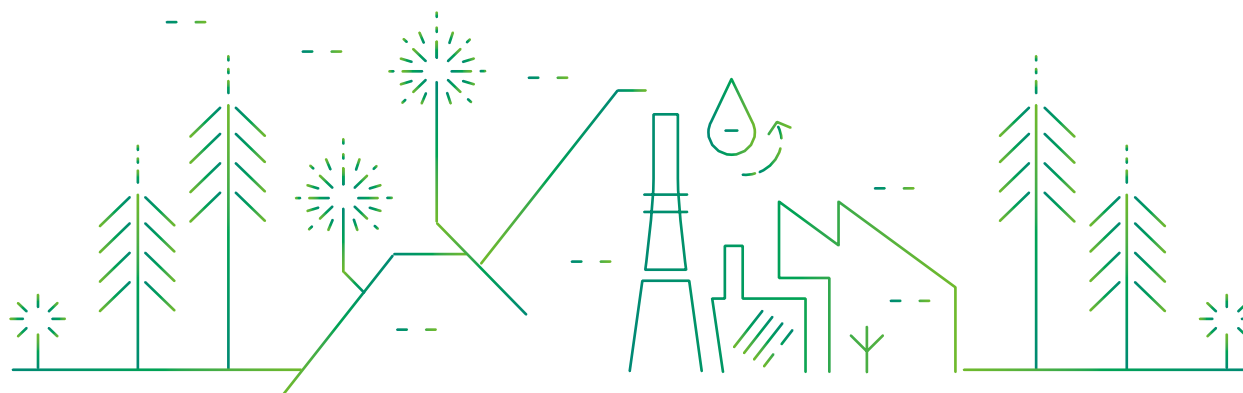
2023 Apacer Office Environmental Protection Action Results

Replacement of LED lighting fixtures

-The factory office has gradually replaced T5 lighting fixtures with more energy-efficient LEDs. Replaced 960 lighting fixtures in 2023, resulting in a 55% reduction in lighting power consumption
-Each LED lighting fixture reduces power consumption by 36.5W. Over the course of the year, this can change results in an estimated electricity savings of 86,549 kWh/hr1 and emissions reduction of about 42.755 tons of CO_2e (2)

Energy conservation advocacy

-Post energy conservation posters encourages employees to conserve energy resources Host
- "Move Day" events to accumulate walking steps encourages employees to take the stairs more than the elevators

Office Energy Saving Activities

-Reduced the consumption of A4 paper by 1,040 packs in 2023 compared to 2022, representing a reduction of approximately 5%.
-Since May 2021, the Company has prohibited the use of disposable meal boxes and switched to reusable utensils. In 2023, there was a reduction of 692 pairs of disposable chopsticks compared to 2022

Note 1: Calculation method: T5 lighting fixtures (14W*4=56W), LED lighting fixtures (6.5W*3=19.5W), each reduce 36.5W, resulting in a reduction of 0.365 kWh/day. 960 lighting fixtures * 0.365 kWh/day = 350.4 kWh/day, 350.4 kWh/day * 247 days = 86,549 kWh/year.
Note 2: The carbon emission coefficient for 2023 is 0.494 kg/kwh

● **GHG Management**

To understand the environmental impact of our operations, Apacer has initiated independent GHG emissions inventory since 2023, setting 2022 as the base[1] for inventory. This aims to accurately monitor the Company's GHG emissions and reduce them in accordance with government carbon reduction policies and international environmental trends.
Apacer will complete the GHG inventory for Scope 1 and 2 emissions for 2023 by September 2024. The operational headquarters located in Tucheng Dist., New Taipei City, will serve as the boundary for the inventory. Emission sources will include onsite equipment and purchased electricity, The inventory for Scope 3 emissions will also be finalized[2].
The GHG emissions (Scope 1 and Scope 2) in 2023 decreased by 43.659 metric tons of CO_2e/year compared to the emissions in 2022.

Note 1: Since 2019, Apacer has upgraded the air conditioning equipment on the 7th floor to the water-cooled type that is more energy-efficient. The energy-saving benefits have been observed and recorded to confirm that it can effectively reduce the electricity consumption of air conditioning. The full implementation of water-cooled mainframes took place in 2021. Therefore, previous disclosed information used 2020 as the base year for GHG reduction. However, starting from 2022, external verification of GHG emissions and changes in refrigerant calculation methods have led to a revised base year of 2022.
Note 2: Apacer has replaced the GHG inventory verification standard with ISO 14064-1: 2018 and has completed the verification of Scope 3 emissions

GHG[7] Emissions				
Scope	2020	2021	2022	2023[6]
Scope 1 (metric tons of CO_2e)	9.05	681.39[1]	125.212	132.551
Scope 2 (metric tons of CO_2e)	2,092.49	1,887.39	1,816.00	1,765.002
Subtotal of emissions (metric tons of CO_2e)	2,101.54	2,568.78	1,941.212	1,897.553
Scope 3 (metric tons of CO_2e)	-	-	366.673	389.153
Total emissions (metric tons of CO_2e)	2,101.54	2,568.78	2,307.89	2,286.706
Annual Revenue (million)	7.152.222	8,682.39	8,797.04	7631.446
GHG Emission Intensity5 (metric tons of CO_2e/million)	0.29	0.29	0.22	0.25

Note 1: The increase in the number of 2 "water-cooled mainframes" and 6 "dehumidifiers" activated in 2021 led t o a significant increase in the amount of refrigerant filled, resulting in an increase in Scope 1 emissions. (GHG Emission Coefficient Management Table Version 6.0.4 - Procurement or Outsourced Supplement Method)
Note 2: Year of reference data for GWP: IPCC 2007
Note 3: Source of carbon emission factor: At the time of inventory The latest emission factors for electricity announced by the Energy Administrationcalculation, the carbon emission factor for 2023 is 0.494 kg/kwh
Note 4: Method for setting inventory boundary: Operational control method, with the operational headquarters in Tucheng Dist. New Taipei City, as the boundary. Relevant emission sources include internal equipment, purchased electricity etc., completing the inventory for Scopes 1 to 3. The above data does not include subsidiary UD Info.
Note 5: GHG emission intensity (metric tons CO_2-e/million) = Subtotal emissions (metric tons CO 2-e)/annual revenue (million)
Note 6: The data for 2023 is self-reported and will be verified in July 2024. The relevant data will be updated in the 2024 report
Note 7: GHG emissions types include CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3

※ The Company does not use ozone-depleting (ODS) substances or equipment, and produces no nitrogen oxides (NOx) and sulfur oxides (SOx)-related gas emissions in its manufacturing processes.

2.3 Waste and Water Management

● Waste Management

To effectively clean up waste and prevent environmental pollution, Apacer attaches great importance to the reduction of waste in production. We ensure proper sorting, recycling, and outsourcing of waste disposal. Both general and hazardous waste are handled by qualified external vendors to ensure proper management. Apacer has established relevant management procedures to ensure proper and legal waste disposal. The responsible department conducts onsite audits at least once a year as needed. If the audit results do not meet the standards, the vendor is required to stop the operation and make improvements within a specified deadline. If the improvements are not satisfactory, the contract will be suspended, and another qualified vendor will be selected to fulfill the corporate responsibility for waste management. For the waste solutions generated during production, we have installed containment tanks in the eyewash equipment and explosion-proof rooms to prevent chemicals from leaking and flowing into the drainage pipes.

In 2023, the total amount of waste was 44.3 tons, an increase of 33% compared to the previous year. This increase was primarily due to the rise in general industrial waste resulting from rework operations on returned products from customers.

2023 Waste Disposal Management

Item	Hazardous industrial waste				General business waste			
Disposal method	Landfill	Incineration	Reuse	Recycled and reused	Landfill	Incineration	Reuse	Recycled and reused
Disposal volume (tons)	0	2.3	0	4.3	0	17.9	19.8	0
Subtotal (tons)	6.6				37.7			
Total (tons)	44.3							

Note 1: All the wastes produced by Apacer are outsourced to qualified vendors for off-site disposal according to the legal disposal methods for various types of industrial waste, and no waste is disposed of onsite.
Note 2: Qualified vendors: Authorized by competent authorities to remove and handle specified types of waste, these public or private waste disposal and treatment agencies are referred to as qualified vendors.
Note 3: Data sourced from the Industrial Waste Reporting and Management Information System, Ministry of Environment, Executive Yuan.
Note 4: The above data does not include the subsidiary UD Info.

2023 Waste Disposal Management

Item	Hazardous industrial waste		General business waste	
Disposal method	On-site Disposal	Off-site Disposal	On-site Disposal	Off-site Disposal
Disposal Quantity (Tons)	0	6.6	0	37.7
Subtotal (tons)	6.6		37.7	
Total (tons)	44.3			

Note 1: Qualified vendors: Authorized by competent authorities to remove and handle specified types of waste, these public or private waste disposal and treatment agencies are referred to as qualified vendors,
Note 2: Data sourced from the Industrial Waste Reporting and Management Information System, Ministry of Environment, Executive Yuan.
Note 3: The above data does not include the subsidiary UD Info.

● Water Resource Management

Through the ISO 14001: 2015 environmental management system certification, Apacer has established pollution prevention and improvement mechanisms to conserve energy usage and reduce the environmental impact of its operations. The Company's internal resource usage mainly involves domestic water at the headquarters, and the manufacturing process does not require water, hence no industrial wastewater is generated. The Company's water supply comes from Taiwan Water Company, sourced from the Shihmen Reservoir. Domestic wastewater is collected via sewage pipelines and treated at a sewage treatment plant. The intake and discharge of water do not cause significant environmental impact. In 2023, due to the automatic shutdown of the water-cooled air conditioning systems on the 1st to 7th floor one hour earlier, both the total electricity and water consumption decreased. As for the increase in total water consumption, it was due to a water pipe leakage, resulting in water loss. Upon identifying the situation, the water pipe was promptly repaired.

Water Resource Management over the Years				
Year	2020	2021	2022	2023
Water intake — Water intake source	surface water[1]	surface water	surface water	surface water
Water intake — Total water intake (million liters)	5.80	9.18[4]	9.88	9.12
Displacement — Displacement end point	sewage works[2]	sewage works	sewage works	sewage works
Displacement — Total displacement (million liters)	-	-	4.19[5]	4.42
Water consumption — Water consumption category	Domestic water[3]	Domestic water	Domestic water	Domestic water
Water consumption — Total Water Consumption (million liters)	-	-	5.69	4.70

Note 1: Apacer draws water from Shihmen Reservoir, which is surface water, and evaluation indicate it does not originate from water-stressed areas.
Note 2: Apacer's wastewater discharge is categorized as domestic wastewater. After being discharge into the sewage pipeline, it undergoes treatment at the sewage treatment plant before being discharged.
Note 3: Apacer's products do not require water to be used in the manufacturing process, so water consumption is solely for daily life purposes.
Note 4: As the water-cooled air-conditioning equipment on the 1st to 7th floors came into operation in 2021, the total water intake increased slightly.
Note 5: The flow meters were installed in mid-2021, so there is no displacement and water consumption data before 2022.
Note 6: The above data does not include the subsidiary UD Info.

Major Topic 2.4 Green Products

● Green Products (material topic)

In response to the global trend of environmental protection and the commitment to fulfilling the core brand value of "being a good partner", Apacer continuously strives to think from the core business operations to bring a positive impact on the global environment. We extend the concept of environmental protection and sustainability to the entire value chain of the enterprise. This includes implementing environmental management systems, managing the supply chain, designing green products, and providing environmental education. By practicing green production and product concepts, we aim to meet the latest international environmental standards and ensure that Apacer's products maintain a competitive edge in the global market.

Green products

Design
- Comply with RoHS and REACH directives
- Deem energy-saving, recyclable, and pollution-free as goals
- Reduce packaging materials

Production
- Lead-free manufacturing process
- Comply with ISO 14001 environmental management system
- Comply with ISO 14064-1 greenhouse gas inventory
- Chemical control and waste disposal

Procurement
- Lead-free components
- Recyclable packaging materials
- Hazardous substance management
- Restriction management for minerals from conflict- affected and high-risk areas

Recycling
- Comply with WEEE specification for recycling wastes

● [Procurement] Responding to Hazardous Substance Control in Advance (material topic)

Apacer has fully implemented the RoHS directive in the management of manufacturing processes and materials to comply with REACH regulations and relevant customer requirements. We also implement supplier management by auditing component suppliers and requesting environmental commitments to ensure that sourced materials comply with environmental regulations. Additionally, supplier conferences are held to communicate management policies and procurement standards, effectively managing the sources of raw materials.
Replace manual email sending with system notifications. Before raw materials enter Apacer, suppliers must provide sufficient information and upload the "FMD Material Composition Table" to ensure that the components comply with the hazardous substance regulations of Apacer and its customers.

● [Design] Environmentally friendly products with high efficiency and low energy consumption

In order to meet market demands and future trends, Apacer is developing designs that prioritize high efficiency and low energy consumption. In terms of material usage, we employ precise calculations to ensure the most effective use of materials, thus avoiding waste. Additionally, any leftover or scrap materials from the production process are recycled and reused, promoting a circular and sustainable use of resources. In packaging designs, we prioritize considerations such as ease of disassembly and recyclability. Additionally, we aim to minimize volume to reduce waste generation and lesson environmental impact. All Apacer's products are free from hazardous substances, thus contributing to the preservation of natural ecosystems.

耗能降低	易拆解	可回收	減少 廢棄物	限用 有害物質

In 2023, we implemented a project of introducing halogen-free components into its products

-100% of the DDR5 SDRAM products in the industrial control category adopted halogen-free components, including the PCBA as a whole, comprising PCB and electronic components, with no housing containing halogens.
- Adopt halogen-free housing for Consumer USB flash drives product

Halogen-free housing is introduced for new models of USB flash drives. In 2022, models such as AH25B, AH25C, AH11J, AH15H were introduced, and in 2023, models like AH355, AH333 continued to be introduced. We anticipated that by 2024, more than 50% of the top three USB sales models will feature halogen-free housing

● 【Process】Intelligent green production

Smart factory - further upgrade of process management

Apacer leverages automation equipment, network communication technology, and manufacturing production systems to create an "intelligent factory production system", aiming to enhance overall production efficiency and cost competitiveness.
Use IoT smart sensing devices to monitor the production and warehousing environment to reduce quality risks and improve customer satisfaction.
Equipped with advanced production equipment, autonomous R&D capabilities, and comprehensive factory management, we establish a green production environment that complies with international standards. We tailor the best processes for our customers and use the APS (Apacer Planning System) to precisely control production schedules and progress, aiming to maximize production efficiency and optimize capacity.

Reduction of product packaging materials

In order to implement energy conservation and carbon reduction in the routine work and avoid the waste of resources. Apacer re-examines multiple production processes to identify potential resource idle time or waste operations. Since 2019, we have been progressively planning measures, including reducing the amount of packaging materials such as cartons and implementing tray/carton recycling and reuse initiatives. Up to 2022, 10,800 pieces of packaging materials (pcs) have been reduced, and 293,991 pieces tray/cartons have been recycled and reused. Reducing waste of resources by changing the SOP. In the future, Apacer will continue to maintain a proactive attitude, seek methods to conserve energy, reduce carbon emissions, and protect the earth, thereby fulfilling our responsibility to protect the environment.

2020		2021		2022		2023	
Target	Planning of recycle and reuse of trays Reduction of cartons packaging	Target	Recycle and reuse of tray/cartons Reduction of cartons packaging	Target	Recycle and reuse of tray/cartons Reduction of cartons packaging	Target	Recycle and reuse of tray/cartons Reduction of cartons packaging
As	Optimization of inbound operations: Items less than 1 box are not packed and stored, saving 3,600 units of packaging materials	As	-Simplified product workflow: Reduced labels by 13,816 pieces per month -Cumulative recycling and reuse of tray/carton: 291,647 pieces recycled	As	Cumulative recycling and reuse of tray/carton: 293,991 pieces recycled	As	Cumulative recycling and reuse of tray/carton: 309,078 pieces recycled

● [Recycling] Comply with EU WEEE regulations

Improper disposal of electronic waste may lead to the release of hazardous substances, causing serious pollution hazards. Apacer upholds the spirit of "producer responsibility" and follows the EU WEEE standard to join the waste electronics recycling system. Products are labeled with the WEEE (Waste Electrical and Electronic Equipment) recycling label, aiming for a recycling rate of 80% for Recovery, and 70% for Re-use and Recycled, in line with the global of sustainable responsibility with consumers. All Apacer products sold in Europe can be properly disposed by local qualified vendors to protect the earth's environment and recycle resources.

At present, in the implementation of green products, the USB flash drive adopts the recyclable halogen-free casing design, with sales accounting for 16.02% of this product line, and it is expected to exceed 50% in 2024. In addition, more than 70% recycled paper will be used in the packaging design, and two series of products have been introduced accordingly. All consumer DRAM memory products have also adopted the green polymer casing design using recycled materials.

WEEE compliant

Chapter III

A Good Partner That Shares Progress and Growth

Vision

Apacer remains committed to delivering high-quality products and services, adhering to international environmental standards, and building a trustworthy international green brand. We also aspire to play a role in driving growth and progress across the entire industry chain. Therefore, Apacer has formulated various management policies related to suppliers and customers to achieve cooperative growth and mutual progress, which is in line with Apacer's core brand values of "Deliver on promises, strive to be better, advance together".

Policies and Commitments

Apacer adheres to the quality policy of "delivering competitive, defect-free, and environmentally safe products and services on time to satisfy customers", pledging to fulfill social responsibilities by providing consumers with safe and reliable green products.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Sustainable Supply Chain Management	With "delivering competitive, defect-free, and environmentally safe products and services on time" as our core policy, and with the management system ISO 9001: 2015, IECQ QC 080000: 2017, quality and hazardous substance management are carried out.	308-1, 414-1, 414-2

Impact Description

Apacer has established comprehensive management processes and methods for suppliers. This includes evaluating and screening suppliers and contractors based on governance, environmental, and social standards. The aim is to maintain supply chain stability while ensuring the quality and schedule of deliveries to provide timely services to customers, thereby achieving operational profitably.	

Actual	Potential	Positive	Negative
V			V

Management actions/preventive and remedial measures

		2023 Targets	2023 Performance	Result Tracking
Actual Plans	Conduct supplier questionnaire and implement improvement projects based on the number of dissatisfactions identified	Over 90% of suppliers were satisfied with the improvements made in response to their complaints	Achieved	- 96.4% of suppliers were satisfied with the improvements made in response to their complaints. - 100% completed

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Suppliers	- Supplier evaluation - Supplier Conference - Quality improvement meeting	-Periodically - Once a year - Material quality incidents from time to time	- Supplier satisfaction survey
Customers	- Satisfaction Questionnaire - Customer visit - Audit operations for Apacer	- Once a year - From time to time - Periodically	- Customer satisfaction questionnaire - Customer service email

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets

		Method of evaluation
Short-term targets (2024)	- Supply chain collaboration for carbon emission management - The supplier conference is held every year, and the supplier satisfaction survey reaches more than 85 points.	
Mid-term targets (2024 - 2026)	- RBA VAP (Validated Assessment Program) regulations for supply chain evaluation/audit/management with a score of 75 or above - A supplier conference is held every year to promote the important issues of the year. - Incorporating ESG considerations into supplier policies to build sustainable supply chain management	- Supplier satisfaction survey - Execution results of the supplier conference - Results of the annual supplier evaluation
Long-term targets (2027)	Develop green intelligent management - Internal: Apacer develops green product designs and processes - External: Continue to update green products and environmental regulations through the AGP system (Apacer Green Product Web System), advocating and requiring compliance from relevant suppliers	

United Nations Sustainable Development Goals (SDGs)

12.2 Achieving the sustainable management and efficient use of natural resources before 2030.

17.16 Through multilateral cooperation, we assist and enhance global collaboration on sustainable development by mobilizing and sharing knowledge, expertise, technology, and financial support. This aims to help all countries achieve sustainable development goals, especially developing countries.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Hazardous Substance Management	We provide non-hazardous products and services, as well as practicing pollution prevention. All raw materials and products 100% comply with EU RoHS and REACH regulations, and our Hazardous Substances Free (HSF) management meets international regulations and customer demands.	Customized Material Topics

Impact Description

	Actual	Potential	Positive	Negative
Emphasizing the management of hazardous substances, ensuring careful management from supplier management, through receipt and production line operations, to waste disposal processes, to ensure safety for personnel and the local environment.	V		V	

Management actions/preventive and remedial measures

Actual Plans		2023 Targets	2023 Performance	Result Tracking
	100% of new suppliers have signed the environmental protection commitment letter	100%	Achieved	100%
	100% of raw materials provided by suppliers comply with EU RoHS and REACH regulations	100%	Achieved	100%

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Customers	- Communication with dedicated personnel - Customer satisfaction questionnaire - Audit operations for Apacer	- From time to time - Once a year - Periodically	- Customer satisfaction questionnaire - Customer service email
Suppliers	- Quality/hazardous substance communication meeting - Supplier Conference	- Periodically - Once a year	- Supplier satisfaction survey

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets

Method of evaluation

Short-term targets (2024)	- AGP revision and optimization - The recycling rate of the Total Material Composition Table for new components achieves 70%	
Mid-term targets (2024 - 2026)	- The recycling rate of the Total Material Composition Table for new components achieves 80%.	- AGP system updated and went online - Recycling rate of the Total Material Composition Table for new materials
Long-term targets (2027)	- The recycling rate of the Total Material Composition Table for new components achieves 100%.	

United Nations Sustainable Development Goals (SDGs)

12.2 Achieving the sustainable management and efficient use of natural resources before 2030.

Major Topic 3.1

Sustainable Supply Chain Management
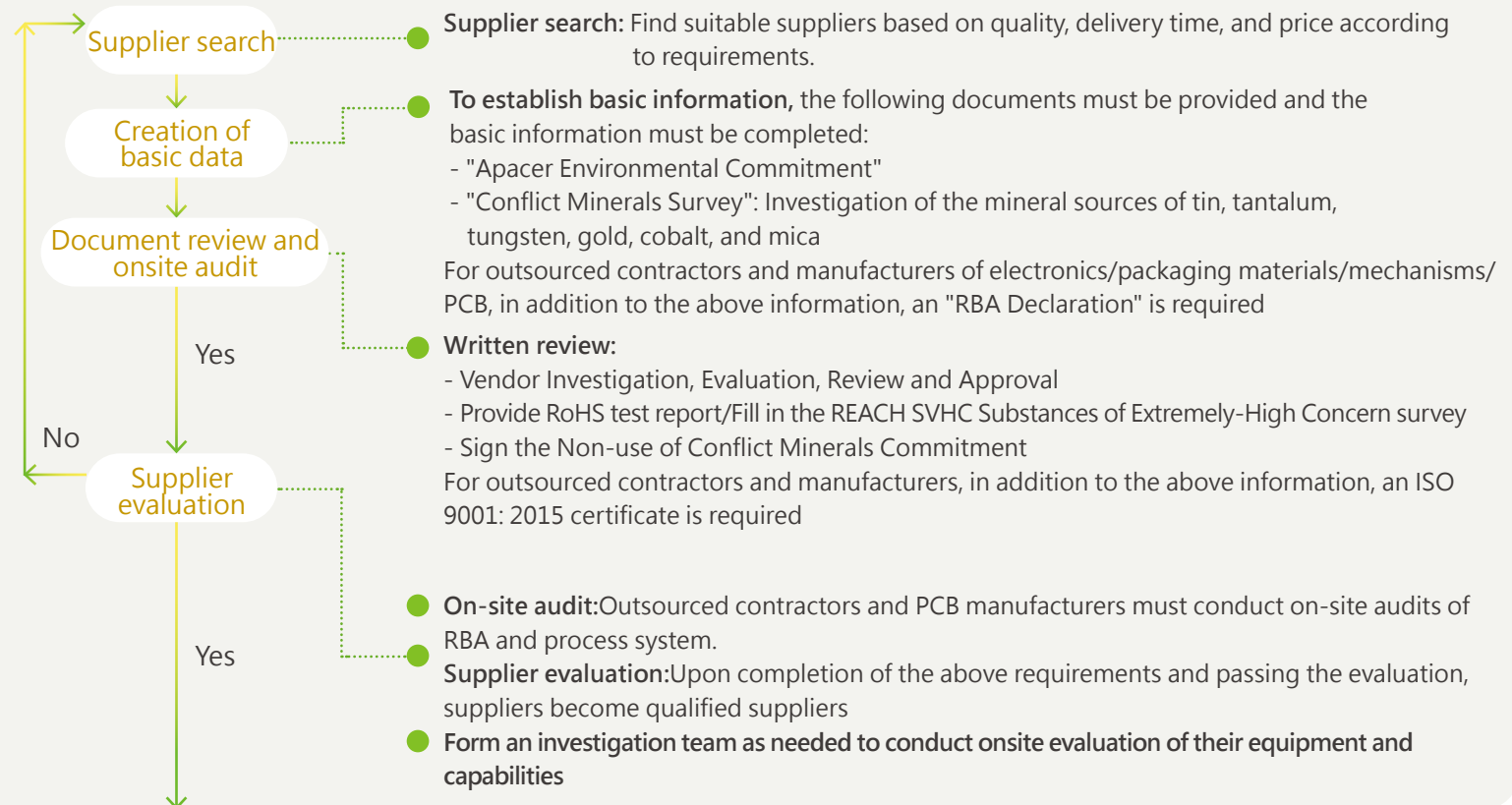
3-1.1 Supplier Management Strategy

Apacer is dedicated not only to fulfilling its corporate social responsibility and responding to the needs of stakeholders but also fostering mutual growth with its supplier partners. We seek continuous improvement in areas such as regulations, human rights, environmental safety, and health to reduce risks, build robustness, and engage in sustainable management and development. This is all aimed at constructing a "sustainable supply chain".

Apacer has set "promoting sustainable supply chain management" as a mid- to long-term goal. Besides the original four management aspects of QDCS (quality, delivery, cost, service), it has added three more aspects of ESG (environmental, social, corporate governance). Since 2020, we have been gradually incorporating ESG considerations into our supplier evaluation, grading, and support systems to implement the spirit of sustainability.

Supplier Management Process

New supplier introduction stage

New suppliers must undergo a review process, with the main evaluation criteria including economic and environmental aspects.
We conduct on-site audits depending on the type and risk of the supplier to evaluate their equipment and capabilities.
The introduction of the evaluation system for suppliers encourages supply chain partners to prioritize and implement corporate sustainability.

Supplier search → Creation of basic data → Document review and onsite audit → (Yes) → Supplier evaluation → (No / Yes)

Supplier search: Find suitable suppliers based on quality, delivery time, and price according to requirements.

To establish basic information, the following documents must be provided and the basic information must be completed:
- "Apacer Environmental Commitment"
- "Conflict Minerals Survey": Investigation of the mineral sources of tin, tantalum, tungsten, gold, cobalt, and mica

For outsourced contractors and manufacturers of electronics/packaging materials/mechanisms/PCB, in addition to the above information, an "RBA Declaration" is required

Written review:
- Vendor Investigation, Evaluation, Review and Approval
- Provide RoHS test report/Fill in the REACH SVHC Substances of Extremely-High Concern survey
- Sign the Non-use of Conflict Minerals Commitment

For outsourced contractors and manufacturers, in addition to the above information, an ISO 9001: 2015 certificate is required

On-site audit: Outsourced contractors and PCB manufacturers must conduct on-site audits of RBA and process system.

Supplier evaluation: Upon completion of the above requirements and passing the evaluation, suppliers become qualified suppliers

Form an investigation team as needed to conduct onsite evaluation of their equipment and capabilities

Supplier periodic assessment stage

New supplier introduction evaluation project

Yes

Economic aspect (79%)	Environmental aspect (21%)	Social aspect (required)
Business management, quality management, manufacturing capabilities, equipment management, delivery time	Free from hazardous substances (HSF), environmental health and safety	Non-use of Conflict Minerals Commitment, compliance with RBA standards

Supplier periodic assessment stage

All raw material suppliers are required to undergo regular assessments and conduct actual audits as necessary.
We have included RBA regulations as annual assessment items. In the future, we will continue to expand the scope of assessment to gradually enhance the sustainability management capabilities of our suppliers.

Regular supplier evaluation

Regular supplier evaluation:
- Outsourced contractors: Quarterly
- Outsourced purchasers and manufacturers: Semiannually
- Distributors and traders: Annually

On-site audits will be conducted depending on the supplier type and risk classification

Supplier Annual Evaluation Items

Quality, HSF (Hazardous Substances), delivery time, compliance, RBA audit

Tiered supplier management

Supplier classification management: Suppliers are classified into four levels, A, B, C, and D, according to the evaluation results. Supplier quality improvement measures and subsequent procurement operations will be carried out accordingly

Supplier Classification	Scoring Standards	Management system
Class A	90 points to 100 points	Increase the order quantity or provide incentives as appropriate
Class B	80 points to 89 points	No reward or punishment
Class C	70 points to 79 points	Reduce the quantity ordered and set a deadline for improvement
Class D	Below 69 points	Revoke the qualification of HSF qualified supplier

Note: General service suppliers are excluded from this management process.

2023 supplier evaluation and classification results

Since the implementation of the evaluation system, Apacer has continued to conduct non-audit and related counseling activities, expecting to make progress together with its partners. In 2021, Apacer implemented an online real-time evaluation system, replacing the previous manual assessments conducted every 3 months to a year, with monthly automatic evaluations by the system. In 2023, 97% of the overall suppliers have reached the A level, and the remaining 3% are B level suppliers.

After the implementation of the real-time automatic evaluation system, we have continued to observe the changes in the supplier grades. We have observed a consistent increase in the proportion of A-grade suppliers over the past three years. Therefore, we evaluate that the current evaluation method is conductive to motivating suppliers to autonomously upgrade their grades. If all B-grade suppliers are upgraded to A-grade in the future, the evaluation threshold for A-grade will be further raised to ensure that suppliers meet our expectations increasingly through the evaluation system. If certain suppliers remain at B-grade consistently, we will begin by addressing the issue through individual communication and engagement.

We have also included the five RBA standards: Labor, health and safety, environmental protection, ethics, and management system into the annual assessment items. In the first stage, manufacturers of considerable scale with factories that can cooperate with the implementation of RBA requirements will be given priority. In the future, we will continue to expand the scope of assessment to include institutional manufacturers, aligning with international standards, and gradually enhancing the sustainable management capabilities of our suppliers. In the 2023 RBA assessment, all suppliers must be A-grade and 100% comply with RBA regulations.

2020

Taiwan Region
- Class A 92.6%
- Class B 7.4%
- Class C --
- Class D --

Non-Taiwan Region
- Class A 95.3%
- Class B 4.7%
- Class C --
- Class D --

2021

Taiwan Region
- ClassA 83.25%
- Class B 16.75%
- Class C --
- Class D --

Non-Taiwan Region
- Class A 90%
- Class B 10%
- Class C --
- Class D --

2022

Taiwan Region
- Class A 94.88%
- Class B 3.98%
- Class C 1.14%
- Class D --

Non-Taiwan Region
- Class A 100%
- Class B --
- Class C --
- Class D --

2023

Taiwan Region
- A 級 97%
- B 級 3%
- C 級 --
- D 級 --

Non-Taiwan Region
- Class A 100%
- Class B --
- Class C --
- Class D --

Note: The above data does not include the subsidiary UD Info.

Supplier Procurement Policy

Apacer considers various factors when evaluating suppliers, including product quality (ISO 9001: 2015), delivery time, price, green product capability (IECQ QC 080000: 2017), and implementation of RBA policies. We conduct regular evaluations of suppliers from different regions who provide raw materials, ensuring a comprehensive risk assessment process. With the support of these policies, Apacer ensures stable product quality and meets customer demands while adhering regarding hazardous substances (HSF).

Apacer adopts the principle of local procurement, aiming to retain the economic benefits of business operations in Taiwan and reduce the carbon emissions generated by raw material transportation. Currently, 88% of Apacer's suppliers are based in Taiwan, and in terms of procurement budget, local suppliers in Taiwan account for 72%.

Procurement status by vendors in 2023

Region	Vendor classification	Number of vendors	Percentage of vendors	Budget percentage
Taiwan	Distributors	69	88%	72%
	Outsourced contractors	18		
	Outsourced purchasers	22		
	Traders	46		
	Manufacturers	126		
	Outsourced and contractors/suppliers	5		
Non-Taiwan Region	Distributors	7	12%	28%
	Outsourced contractors	0		
	Outsourced purchasers	4		
	Traders	23		
	Manufacturers	6		
	Outsourced and contractors/suppliers	0		
Total		326	100%	100%

Note 1: The supplier policy mainly covers raw material suppliers and does not include suppliers for general services.

Note 2: The above data does not include the subsidiary UD Info.

Critical Raw Material Risk Management Method

In the modern globalized business environment, the challenges of the supply chain are increasing day by day. Apacer has established a comprehensive set of critical raw material risk management methods to improve the stability of the supply chain and reduce the risk of raw material shortages. Apacer's critical raw material risk management method includes the following four aspects:

Regularly review material delivery dates and update market information
- Understand the market supply status through the system's regular delivery updates

Enhance material commonality
- Reduce the use of single or specialized materials and reduce the reliance on single raw materials

Establishment of secondary suppliers or substitute raw materials
- Actively seek multiple sources of materials to reduce the risk of shortages in the supply chain

Spot market backup
- Maintain good interaction with spot dealers to cope with unexpected demand

3-1.2 Responsible Supply Chain

Supplier Sustainability Management Actions Over the Years

2011

Fill in the Environmental Protection Commitment

Conduct audits on component suppliers and request environmental commitment forms and RoHS testing reports

2013

Conflict mineral survey

Request suppliers to fill out the Conflict Mineral Survey

2016

Launch of the green grading system

Based on the "audit pass rate" and "expired renewal completion timeline" uploaded by the supplier's RoHS test report for classification

2017

Introduce RBA regulations

Implement RBA regulations to first-tier suppliers, request them to provide RBA Declaration, and conduct RBA audits.

2020

Conflict minerals commitment

Request suppliers to sign the Non-use of Conflict Minerals Commitment to ensure 100% supplier commitment

2021

Supplier sustainability management guidance

- Conducting questionnaire to assess the ESG policies and implementation status of suppliers, and providing guidance to selected parties accordingly
- GHG inventory guidance
- Organize GHG inventory courses to encourage suppliers to evaluate whether to do the

2022

"Being a good partner" Questionnaire for suppliers

- Conduct satisfaction surveys with suppliers regarding their cooperation with Apacer, and implement improvement projects based on supplier feedback
- GHG inventory guidance
- Requiring suppliers to conduct GHG inventory checks to strengthen suppliers' awareness of carbon reduction.

2023

"Being a good partner" Questionnaire for suppliers

Conduct satisfaction surveys with suppliers regarding their cooperation with Apacer, and implement improvement projects based on supplier feedback

Supplier Green Grading System

In addition to categorizing suppliers based on the five major evaluation items, it also evaluates suppliers' ability to manage hazardous substances. Apacer launched the "Supplier Green Grading System" in 2016 based on its original supplier management process. The score is calculated based on the "Audit Pass Rate" and "Expired Renewal Timeline" uploaded from the supplier's RoHS test report. Procurement personnel can adjust the supplier assessments and ratings based on the scores from the green grading system. This allows them to request improvements in the suppliers' management of hazardous substances (HSF) to meet the latest international and customer requirements and regulations.

In 2023, Apacer encouraged suppliers to upgrade their green grading through channels such as the AGP Green Level automatic calculation and supplier conferences. The proportion of suppliers rated as A and B grades remains at 95%, with a noticeable continuous growth in the A grade, showing an increase of 3.6% compared to the previous year. Although there has been a slight increase in the proportion of B, C, and D grade suppliers, which is within an acceptable range, Apacer will maintain good communication with them. We will continue to actively provide guidance and education to suppliers to further improve their grading.

Supplier Green Classification over the past years

Classification	Score	Percentage of Suppliers in 2020	Percentage of Suppliers in 2021	Percentage of Suppliers in 2022	Percentage of Suppliers in 2023
Class A	90 points or more	87.3%	88.4%	85.4%	89%
Class B	75 to 89 points	3.9%	5.9%	10.4%	6%
Class C	60 to 74 points	0.5%	3.2%	1.4%	2%
Class D	Below 59 points	2.9%	2.5%	2.8%	3%
Not rated[1]	Not rated	5.4%	-	-	-
Total		100%	100%	100%	100%

Note 1: An unclassified supplier refers to a supplier that only provides outsourced services or a new supplier.

Note 2: The above data does not include the subsidiary UD Info.

Supplier Commitment: Supplier signs RBA declaration

Since 2017, the RBA standard has been implemented to the first-tier suppliers, including representative material suppliers, outsourcing manufacturers, intermediaries, waste disposal contractors, and other labor-intensive suppliers. They are required to respond to the RBA declaration, showing a shared commitment to labor rights, environmental protection, and ethical and transparent operations.

Responsible Business Alliance
Advancing Sustainability Globally

100% response rate to the supplier's RBA declaration

Suppliers and Hazardous Substance Management (material topic)

Apacer has introduced the IECQ QC 080000: 2017 Hazardous Substance Process Management System. Through our supplier management process, we ensure the quality and stability of our products, as well as compliance with international standards and customer requirements regarding hazardous substance management (HSF).

Suppliers must sign the Environmental Protection Commitment, provide raw material test reports and complete substance surveys while complying with international standards.

RoHS   REACH COMPLIANT

100% of raw materials provided by suppliers comply with EU RoHS and REACH regulations

Do not use conflict minerals

Apacer requires all qualified suppliers to fill out the Conflict Mineral Reporting Template (CMRT) and Extended Minerals Reporting Template (EMRT) based on the Responsible Minerals Initiative (RMI). This ensures that the metal minerals used in Apacer's products come from regions in Europe, Asia, and the United States, and are not sourced from OECD-listed high-risk areas. Additionally, suppliers must comply with the Responsible Business Alliance (RBA) Code of Conduct regarding related trading activities.

Ensure that suppliers understand and comply with the regulations of non-use of conflict minerals. All qualified suppliers are required to sign the Non-use of Conflict Minerals Commitment and fill out the Conflict Metal Survey Form.

- 100% of suppliers sign the Non-use of Conflict Minerals Commitment
- 85% of suppliers responded to the conflict mineral survey

Note: The OECD defines conflict-affected and high-risk areas as regions where there is a risk of armed conflict, widespread violence, or other harmful circumstances to the people. Armed conflicts may take many forms, such as international or non-international conflicts that may involve two or more countries, or may include liberation wars, rebellions, civil wars, etc. High-risk areas may include regions with political instability or repression, weak governance, insecurity, civil infrastructure breakdown, and widespread violence. These regions are often characterized by widespread human rights abuses and violations of national or international law. Conflict minerals refer to minerals mined in conflict-affected and high-risk regions.

3-1.3 Sustainable Interaction and Recognition with Suppliers

Annual Supplier Conference: Communication and Guidance

We continue to learn and grow together with our supplier partners on environmental sustainability issues, enhancing the industry's ability to manage green environmental topics, and taking action to implement global environmental sustainability trends. In 2023, Apacer organized an online supplier conference to facilitate the participation of supplier partners worldwide. The event received positive feedback and active participation from our supplier partners.

2023 Supplier Conference Key Performances

Attendance rate
99 %

Responding to Environmentally Friendly Use of the **Electronic Questionnaire**

Questionnaire recovery rate
100%

Satisfaction Level
91 points

Understanding of the topic
88 points

2023 Supplier Conference Communication Topics

Communication topics	From international sustainability trends to action plans of Taiwanese enterprises	RBA Ver 7.1.1 Revision Description	Apacer RBA Policy	Apacer's External Communication Channels	Apacer's Ethical Corporate Management and Employee Ethics Whistleblowing Channel	Supplier Responsibilities and Requirements	Restricted Substances Regulations and AGP Operation Practices
Understanding (average score)	85	85	100	87	89	86	84

Supplier satisfaction survey

To achieve the goal of common progress with our partners, Apacer conducted a supplier satisfaction survey in 2023 to see if suppliers are satisfied with Apacer's supplier management method. We integrate the feedback of our suppliers and partners to identify areas of dissatisfaction, and hold review meetings to make improvements.

Major dissatisfaction in 2023 includes: Warehouse receiving speed and overly strict IQC inspection standards. These dissatisfactions were all resolved within 3 months through the establishment of a new system and enhancement of communication.

Key Performances of Supplier Satisfaction Survey in 2023

Satisfaction Level
92.7 points

Questionnaire recovery rate
85%

Proportion of Dissatisfied Opinions
6%

Supplier Sustainability Survey

ESG-related issues	Actions in 2023	Implementation Result
Supplier GHG Inventory Survey	Investigate the GHG inventory status of suppliers to facilitate the evaluation of methods for implementing "Collaborative Supply Chain Carbon Emission Management" goals	Understanding Suppliers' ISO 14064-1: 2018 evidence collection status No planning 80% Evidence collect 12% Plan 8%
Suppliers' response policies to plastic tax	Investigate suppliers' response policies to plastics tax to evaluate the supply chain's ability to respond to ESG trends	Understand suppliers' response policies to plastic tax No plans yet 69% Recycled materials used 31%

● Feedback from Supplier Partners

Li Fu-Cheng/Chairman/Chieftron International Corporation

Apacer is a respectable company. We, as Chieftron International, are a semiconductor component distributor. We have been cooperating with Apacer for over 20 years. Apacer holds itself to high standards and also demands strict compliance from other companies. They set high standards for product specifications and maintain rigorous quality control.

We thank Apacer for their support and care over the years. As Apacer's scale has gradually expanded, so has Chieftron. In 2020, when the COVID-19 pandemic hit, the demand for computer-related industries surged. This led to international port congestion and material shortages, among other challenges. We closely collaborated with Apacer, shared information, sought resources, and provided solutions. We have developed a strong bond, overcoming all difficulties together step by step. However, in 2022, the situation took a complete 180-degree turn. Market demand plummeted, inventory surged, and outstanding orders continued to be postponed. This posed severe challenges for the industry and for both companies. Nevertheless, Apacer, embodying the spirit of sharing both good times and bad, worked closely with us. Through mutual assistance, we ultimately overcame these difficulties, ensuring that both companies could continue to grow safely and smoothly.

Apacer is committed to mutual prosperity and sustainability with its customers and suppliers. They maintain strict standards for managing substances that impact the environment, ensuring the entire supply chain complies fully. Apacer makes significant efforts to protect the earth's environment and ecosystem, support local farmers, and foster industrial development. We appreciate Apacer's dedication and hope that more companies will follow their sustainability policies. Together, we can achieve harmonious and sustainable development for businesses, people, and the environment, creating a prosperous future for millions of years to come. Thank you.

Customer Relationship Management

Major Topic 3.2

● Customer Relationship and Quality Management

In order to provide customers with high-quality products and meet customers' requirements, Apacer has introduced a quality management system (ISO 9001: 2015) and followed the Plan-Do-Check-Act Cycle (PDCA) management cycle, Apacer ensures that all stages of operations and production comply with policy and regulations and achieve set objectives. This systematic management approach guarantees the quality of our products.

Quality commitment

Continuous improvement   High-quality service   Create product value

● Customer Service Niche: Providing the Best Service Experience

Global marketing channels

We are committed to grasping market dynamics in line with the characteristics of local markets, actively building global marketing channels, with operating locations in the U.S., the Netherlands, Japan, Hong Kong, China, and India. By marketing its own brand, Apacer deeply cultivates these local markets.

Provide customized services

As the memory demand of various mobile devices and equipment grows, Apacer is committed to providing customers with customized products and services. Starting from the needs of customers, Apacer collaborates with clients to achieve a leading market advantage together.
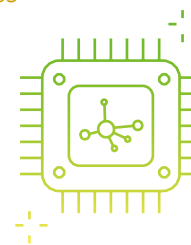
Excellent Customer Service Team

In response to the frequent occurrence of diversity and compatibility across different platforms and applications, Apacer conducts technical analysis based on customer requirements. Beyond the existing customer service system, Apacer collaborates with customers to develop next-gen platforms, facilitating product development and customer communication

From R&D to after-sales, always putting customers' thoughts first

"Access the best, share memories" is Apacer's brand promise. We prioritize user experience, paying attention to every detail of product design. Each customer's feedback is considered an important cornerstone for our improvement, as we strive for perfection. We have established the quality and HSF (hazardous substance-free) policy: "Delivering competitive, defect-free, and environmentally safe products and services on time to satisfy customers" to provide customers with the best service experience.

R&D and design

Listening to customers
Assist in planning the best sales product mix based on user experience and build a convenient, high-quality, and abundant digital storage life for consumers.

Gain new technology insights
Gain insight into the evolution of the latest technology, industry trends, and customer needs from the most forward-looking perspective. We assist customers in creating the best solutions to enhance their market competitiveness together.

After-sales service

Global after-sales service
Provide localized real-time sales and technical services through local business and technical personnel to ensure a 100% satisfactory user experience for consumers.

Global logistics system
Integrate various interface technologies of logistics and transportation to enable customers to grasp the logistics status in real time and provide customers with the fastest, most effective logistics services.

Customer privacy protection

Apacer values the privacy of every customer and always ensures the highest standards to protect customer privacy rights. We have established comprehensive procedures and regulations to protect customer privacy data. In 2023, there were zero complaints regarding customer data breaches or violations of customer privacy rights. We will continue to maintain this excellent record and prepare in advance for possible future risks.

Customer privacy protection measures	
Policy category	- Contractual protection: The contract contains a confidentiality agreement - Customer code system: Use customer codes to conceal the real names of customers - Independent process specifications: Avoiding the disclosure of product privacy between customers due to similar processes
Technology category	-Information equipment security control: Prevent customer privacy leakage due to virus or hacker intrusion - Document access control: Restricting access to and reading access of documents - System access control: Authorization control over customer data inquiries and operations - Access control: Access control systems are set up in the server room and production line.

● Global After-sales Service System
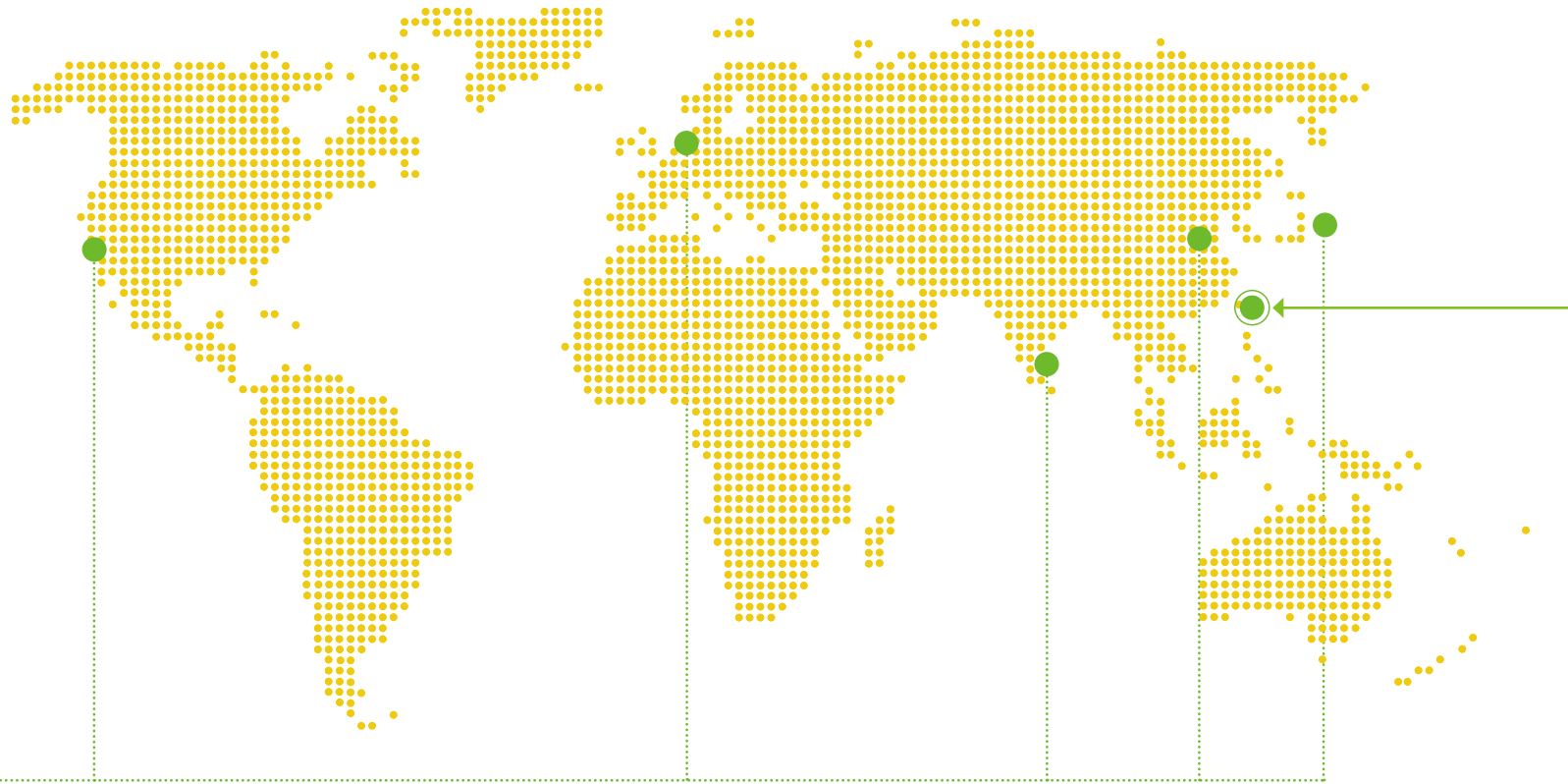
Global

- Provide localized real-time sales and technical services through local business and technical personnel
- Provide customers with professional logistics solutions with real-time status updates, efficient process planning, competitive costs, and provide the fastest, most convenient logistics services

Taiwan

- The Customer Service Department and Sales Department are responsible for the technical support, customer complaint handling, and return/exchange process (RMA) after the products are sold.
- There are service centers in north, central, and various regions, or agents that can provide after-sales service such as product maintenance or replacement.

The tandem service system provides better services

To provide customers with better services, Apacer has integrated the Enterprise Resource Planning (ERP), Manufacturing Execution System (MES), and web Return Merchandise Authorization (webRMA), etc. This integration completes the connection of information and databases, enhancing traceability of processes, maintenance, shipment, after-sales service, and other information to provide customers with more comprehensive services and meet their needs.

Furthermore, through the integration cross-system data, it facilitates data collection and analysis. For example, by connecting information to databases, we can collect data on material management, processes, customer information, inventory, maintenance, shipment, after-sales service, etc. Subsequent analysis and application allow us to understand the needs of different customer groups, improve product design, enhance process capabilities, provide products and service that exceed customer expectations, and strengthen the Company's competitiveness.

Customer Satisfaction Survey

We regularly conduct customer satisfaction questionnaires every year to collect customer opinions. In 2023, through surveys conducted across nine major aspects, we collected 62 questionnaires. The overall customer satisfaction score was 91.38 points, showing an increase compared to 2023. Satisfaction scores for each aspect have risen. "Product Planning" was a crucial improvement focus in 2023, and customers have provided positive feedback on our improvements.

Key Performances of Customer Satisfaction Survey in 2023

Survey **62** customers

Satisfaction score reached
91.38 points

Note: The above data does not include the subsidiary UD Info.

Customer Satisfaction Score

2020	2021	2022	2023
82.49	86.84	89.89	91.38
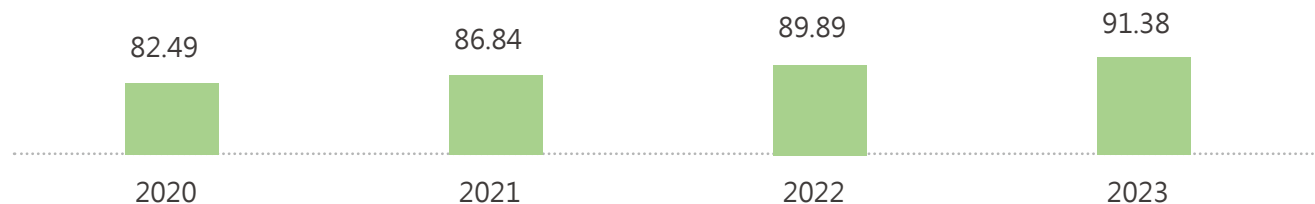
In the future, we will take this year's customer satisfaction survey scores as the benchmark and actively review, analyze, and improve to provide products and services that better meet customer needs.

Multi-faceted customer communication channels

Apacer adheres to the "service first" spirit and values communication with customers by actively establishing smooth and diversified communication channels to understand customers' needs and provide timely and comprehensive services. Our customer communication channels are divided into three categories: permanent, regular, and irregular. Listening to customers' feedback and opinions is an important basis for Apacer to improve and develop its customer relationships.
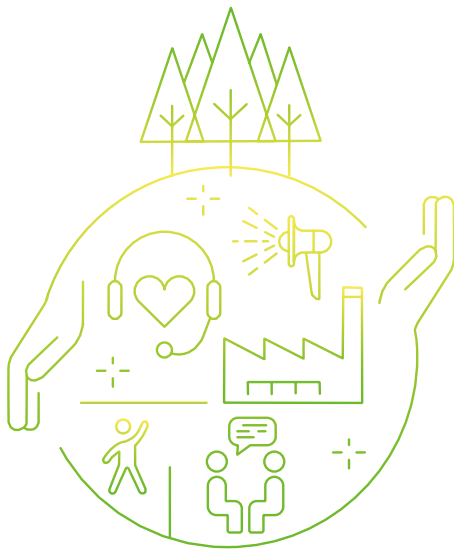
Type	Communication channel
Permanent	- Official website - Official social media（YouTube / LinkedIn / Facebook / Instagram） - Customer service email - After-sales Service Website - Sales/Customer Service Team
Regular	- Customer satisfaction survey/Annually - Sustainability Report/Annually - Business review with major customers/quarterly
Irregular	- Release of press release - Release of promotional videos - CRM system to track customer needs and - product progress - Customer visit - Customer audit

Chapter IV

A Friendly and Healthy Workplace Partner

Vision

Strategy of talent development: Introduce outstanding talent, develop future technologies, establish a trustworthy employer brand. Mission of human resource administration: Become an enthusiastic, innovative, and reliable professional team for human resource administration.

Vision for HR and Administration: Create a learning organization at Apacer in a friendly and healthy workplace.

Policies and Commitments

Apacer adheres to the core value of "Becoming Better Partners" by delivering on our promises, striving to do better, and making daily progress, and integrates corporate sustainability and human resource development. By doing this, our colleagues can keep learning in the organization, improving their knowledge and experiencing and promoting organizational performance. At the same time, we pay attention to the health and family life of colleagues, create a friendly and healthy workplace, and achieving work-life balance.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Occupational Health and Safety	Apacer complies with ISO 45001: 2018 International Occupational Safety and Health Management Standards and RBA regulations to provide a safe and healthy workplace, continues the A+ EAPs employee assistance program, and builds a friendly and healthy workplace to protect talent's physical and mental health and safety, creating a win-win situation.	403-1~403-10

Impact Description

We comply with laws and regulations to create a healthy and safe workplace, and conduct regular inspections and continuous improvement to provide employees with a protected workplace.

Actual	Potential	Positive	Negative
V		V	

Management actions/preventive and remedial measures		2023 Targets	2023 Performance	Result Tracking
Actual Plans	ISO 45001:2018 Occupational Health and Safety Management Verification	To be verified	Achieved	To be verified
	Occupational Safety and Health Education and Training	100% training rate	Achieved	100% training rate

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Employee	- Strategy and Operational Management Committee meeting - Occupational Safety and Health Management Committee meeting - Sustainable Development Committee meeting - We share occupational safety knowledge and information on occupational safety activities through the intranet.	- Monthly - Quarterly - Quarterly - From time to time	Permanent complaint channels and links to Intranet

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets

		Method of evaluation
Short-term targets (2024)	- Maintain ISO 45001 and RBA verification - 100% training rate of all employees for occupational safety and health education and training - Less than one occupational accident per six months (excluding traffic accidents on the way to and from work and non-occupational safety factors)	- ISO 45001:2018 verification - RBA verification - Training rate of occupational safety and health training - Number of occupational accidents - Third party affirmation
Mid-term targets (2024 - 2026)	- Building a friendly and healthy workplace that has received a third-party approval by external friendly and healthy workplaces	
Long-term targets (2027)	- Zero occupational accidents (excluding traffic accidents and non-occupational safety factors)	

United Nations Sustainable Development Goals (SDGs)

No direct relations

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Talent Attraction and Retention	Apacer complies with ISO9001 International Quality Management Standards, RBA regulations, and SDG 5 of the United Nations to establish a dual-track talent development framework. The dual-track talent development framework is based on competency, and promotes the establishment of a talent supply chain mechanism and Apacer Academy and while maintaining the remuneration level of the industry peers, continuing the A+ EAPs employee assistance program to build a friendly and healthy workplace, thereby adding value to talent and creating a win-win situation.	401-1~401-3

Impact Description

	Actual	Potential	Positive	Negative
Comply with laws and regulations to build a friendly workplace, and improve talent retention through diverse programs to ensure timely replacement in the succession team, and to maintain the Company's long-term operations.	V		V	

Management actions/preventive and remedial measures

Actual Plans		2023 Targets	2023 Performance	Result Tracking
	Talent supply chain	Dual-track talent retention rate 80%	Achieved	Dual-track talent retention rate 98%
	Health promotion and sport instructors of clubs	To receive the reward for the Company's hired sports instructors.	Achieved	We received the iSports Enterprise Certificate and the reward for hiring an instructor.

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Employee	- Strategy and Operational Management Committee meeting - Sustainable Development Committee meeting - Share information regarding employee training and event through the intranet.	- Monthly - Quarterly - From time to time	Permanent complaint channels and links to Intranet

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets

Method of evaluation

Short-term targets (2024)
- Maintain ISO 9001 and RBA verification Talent supply chain retention rate reaches more than 80%

Mid-term targets (2024 - 2026)
- Building a friendly and healthy workplace that has received a third-party approval by external friendly and healthy workplaces

Long-term targets (2027)
- Annual turnover rate of all employees is below 3%

- ISO 9001 verification
- RBA verification
- Dual-track talent retention rate
- Third party affirmation
- Employee turnover rate

United Nations Sustainable Development Goals (SDGs)

SDG 5.c adopts and strengthens reasonable policies and effective legislation to promote gender equality, empowering women and girls at all levels.

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators
Talent Cultivation	Apacer complies with ISO9001 International Quality Management Standards, RBA regulations, and SDG 5 of the United Nations to establish a dual-track talent development framework. The dual-track talent development framework is based on competency, and promotes the establishment of a talent supply chain mechanism and Apacer Academy and while maintaining the remuneration level of the industry peers, continuing the A+ EAPs employee assistance program to build a friendly and healthy workplace, thereby adding value to talent and creating a win-win situation.	404-1~404-3

Impact Description

We comply with laws and regulations to build a friendly workplace, and promote talent learning and development through the diverse learning programs of the Apacer Academy to ensure that talent has the motivation to learn and to maintain the Company's competitive momentum.	Actual	Potential	Positive	Negative
		V	V	

Management actions/preventive and remedial measures

		2023 Targets	2023 Performance	Result Tracking
Actual Plans	Apacer Academy competence evaluation	Competence evaluation rate 100%	Achieved	Competence evaluation rate 100%
	Apacer Academy education and training	Talent training execution rate over 90%	Achieved	Talent training execution rate over 99%

Stakeholder Engagement

Stakeholder Category	Communication Method	Frequency	Reporting System or Response Method
Employee	- Strategy and Operational Management Committee meeting - Sustainable Development Committee meeting - Share information regarding employee training and event through the intranet.	- Monthly - Quarterly - From time to time	Intranet standing reporting Channels and links

Material Topics in This Chapter

Material Topics	Material Topic Management Policy	Comparison with International Frameworks and Indicators

Sustainability targets		Method of evaluation
Short-term targets (2024)	- Maintain ISO 9001 and RBA verification - Apacer Academy competence evaluation rate 100% - Apacer Academy talent training execution rate over 90%	- ISO 9001 verification - RBA verification - Competence evaluation rate - Training execution rate - Third party affirmation - Competence completion rate
Mid-term targets (2024 - 2026)	- Building a friendly and healthy workplace that has received a third-party approval by external friendly and healthy workplaces	
Long-term targets (2027)	- Competence completion rate more than 90%	

United Nations Sustainable Development Goals (SDGs)

SDGs 4.4: By 2030, the number of youth and adults who possess relevant skills, including technical and vocational skills, required for employment, decent jobs and entrepreneurship will significantly increase.

4.1 Personnel Overview

● Apacer is committed to promoting a friendly and healthy workplace

Apacer values human rights and provides employees with a dignified and safe working environment! We implement workplace diversity and prohibit discrimination based on race, skin color, age, gender, sexual orientation, nationality, disability, pregnancy, religion, political position, marital status, education background, and any other forms of discrimination that are protected by law. Please refer to Employee Rights and Interests of this unit for details.

To promote gender equality and prevent and eliminate sexual harassment, we have formulated the "Workplace Sexual Harassment Complaint and Disciplinary Procedures" and "Sexual Harassment Prevention, Complaint, Investigation, and Handling Procedures" and procedures for disseminated sexual harassment complaint. For details, please refer to 4.3 Diversified and Unimpeded Employee Communication Channels, and Sexual Harassment Complaint Procedure.

Overall, the gender ratio of the employees and the senior management are quite balanced. For details, please refer to Apacer's Global Employee Distribution, Apacer Operational Headquarters Employee Distribution, and Apacer Operational Headquarters Employee Structure in this unit. The number of training hours of employees overall is quite equal as well, see 4.4 Average Training of Employees for details. The payment ratio based on gender for each job category is balanced, see 4.4 Overall Pay Ratio for details.

Apacer's HR unit inherits the Company's vision, mission, core values, long-term business strategies, strives to design a function-based talent development system, plan talent development policies and strategies, and establish a dual-track talent system to promote talent supply chain mechanism, and eventually the establishment of the Apacer Academy. By doing this, Apacer is able to gradually implement five major human resources functions, including talent management, recruitment selection, training and development, performance development, and employee relations. The Company can also implement respective solutions, and review the internal and external environments every year to make rolling adjustments. Please refer to 4.4 talent Cultivation and Remuneration System for more details.

● Employee rights

Apacer adheres to the Responsible Business Alliance Principles, and the United Nations' Sustainable Development Goals, which are higher than national laws and regulations. To protect human rights, Apacer provides colleagues with double assurances and double focuses: Ensuring workplace safety and health, and ensuring employee rights and interests; focusing on smooth communication channels, and on work-life balance.

For the series of employee selection and retention, ranging from recruitment and appointment, training and development, performance development, promotion and transfer to salary and rewards, we have established relevant management regulations to ensure the integrity of the system.

Item	Ensuring safety and health in work environment	Protecting the rights and interests of employees	Emphasizing smooth communication channels	Emphasizing work-life balance
Target	Provide a safe and healthy work environment and build a trustworthy employer brand.	Abide by national laws, international regulations, and the Company's human rights policy to build a trustworthy employer brand.	Emphasize colleagues' opinions and feedback, providing diverse and smooth communication channels, and building a trustworthy employer brand.	Create a friendly and healthy workplace and build a trustworthy employer brand.
Specific actions	Apacer has passed the certifications of ISO14001 for environmental management and ISO45001 for occupational safety and health management, and has an Occupational Safety and Health Management Committee, overseen by senior heads such as the Chairman and Chief Strategy Officer, General Manager, and Deputy General Managers, to practice environmental and occupational safety and health management through four specific measures. : Disaster prevention: The Committee formulates safety and health management plans or risk control measures, implements safety and health education and training programs, proactively inspects the working environment from time to time, and identifies high-risk locations through dual system risk identification to eliminate potential hazards. An emergency response team was formed to minimize the scope of hazards. Working environment testing: In accordance with the Regulations Governing Labor Workplace Environment Testing, we regularly commission a qualified testing agency to conduct working environment testing. If there is any abnormality, we immediately make corrections to protect the health of workers. Operational safety control: Special	Freedom of employment: Employees are not forced to provide services involuntarily. The work rules state that employees' agreement is needed to work overtime and overtime pay or compensatory time off will be provided. Youth labor: The RBA Handbook stipulates that the employment of child labor is prohibited. A dual ID verification mechanism is adopted for hired employees to ensure that nothing is overlooked. Working hours: Reports of overtime hours are provided every week for the supervisors to evaluate and manage. Remuneration and benefits: Compare with the external remuneration reports every year to ensure that the remuneration and benefits provided are in line with the market conditions of peers. Humane treatment: Migrant workers are treated equally, and equal pay for equal work is provided. The agency fees at home and abroad and the required licenses/medical examinations are provided. The dormitory is provided free of charge, and we do not charge board and lodging fees. Anti-discrimination: The RBA Handbook and internal management regulations clearly stipulate that no discrimination based on race, class,	Face-to-face communication: Interviews for newcomers and employees leaving the Company, performance interviews, tea time for CEO, and unit gatherings, etc. Electronic communication: Apacer intranet, unit/functional group chats, employee opinion survey, etc. Reporting channels: Reporting hotline, email, sexual harassment reporting procedure, etc. Meeting communication: Employee Welfare Committee meetings, labor-management meetings, CSR Committee meetings, RBA Committee meetings, etc. Communication result: The above-mentioned communication methods allow the HR unit, functional teams, heads of all units, and the sexual harassment complaint team to understand the opinions, thoughts, or complaint contents of new or retiring employees. If there are parts that can be introduced or improved in a timely manner, they will be implemented immediately or used as management reference in the future. Any major anomalies will be reported to the Strategy and Operational Management Committee or the Board of Directors chaired by senior heads such as the Chairman and Chief Strategy Officer, General Manager, Deputy General Manager, etc. for further	Apacer launched the "A+ EAPs Employee Assistance Program", with the longitudinal axis focusing on A+ Work, A+ Family, and A+ Health combined with CSR & RBA, and the horizontal axis focusing on food, clothing, housing, transportation, education, and entertainment plus mobility. In the total of seven units, we developed a 28-square grid of employee assistance programs and activities, and received the Work-Life Balance Award from the Ministry of Labor and the iSports Enterprise Certificate from the Sports Administration, Ministry of Education. A+ Work: The Company provides three meals a day, Apacer group uniforms, stress-relieving rest areas, flexible working hours, education and training for new recruits and incumbents, weekly massages and leaves that are better than the prescribed law, sports clubs, and sports instructors. A+ Families: Group purchase of delicious foods, vendor booths, premium lactation rooms of New Taipei City, insurance for family dependents, maternity bonus of up to NTD 36,000/daycare measure, Family Day, the Parent-Child Art Gallery, and the Moving Day. A+ Health: We organize vegan days, provide work clothes cleaning, double certification for environmental health and safety/medical room, the Moving

Item	Ensuring safety and health in work environment	Protecting the rights and interests of employees	Emphasizing smooth communication channels	Emphasizing work-life balance
Specific actions	operation control and work permits are implemented in accordance with the Occupational Safety and Health Act and the results of safety risk assessments. Automatic inspections are also implemented in accordance with the law. Additionally, operators must wear protective equipment to ensure operational safety. Health management: To prevent occupational diseases, health checkups are carried out on a regular basis. The checkup items are divided into general operations and special hazard operations according to the types of operations, and graded management is implemented. If there is any problem, it will be assessed and graded for management, and the risk assessment will be conducted by the nurse to help individuals pay attention to their health.	language, thought, religion, political affiliation, place of origin, gender, sexual orientation, age, marriage, appearance, facial features, physical or mental disability is allowed, or that abusing the previous trade union membership to discriminate is not allowed. Anti-harassment: We have formulated workplace sexual harassment reporting and disciplinary regulations, sexual harassment prevention/reporting and investigation measures, and set up a reporting mechanism to protect employees from harassment. Freedom of association: The Welfare Committee's operating procedures for club activities and trade union organization and meeting place management procedures have been formulated to promote employees' freedom of participation in clubs and associations.	understanding. Moreover, the HR unit, the OHSC, the RBA Committee, or the CSR Committee will provide timely feedback on the resolution results to each head of unit and colleagues. The communication records will be archived and counted, and reflect in the CSR report. If necessary, promotion or training will be held during the annual RBA Seminar.	Community, hold health promotion lectures/activities, provide annual health checkups better than the prescribed law, and set up a fitness gym. CSR and RBA: In addition to the three meals a day, food allowances, free laundry room for migrant workers, free dormitory/subsidies for migrant workers, transportation subsidies for migrant workers, promotional programs for youth of arts and crafts, and sponsorship programs for youth of sports are provided for migrant workers. Diverse and complete employee assistance programs enable employees to work with peace of mind.
Risk assessment	We regularly review unacceptable risks and non-compliance with laws and regulations with each unit by applying the PDCA Cycle and the established dual certification system procedures. Moreover, we formulate relevant management plans or risk control measures, and report the implementation results to the Occupational Health and Safety Committee meetings overseen by senior heads such as the Chairman, who is also Chief Strategy Officer, General Manager and Deputy General Manager. All units are encouraged to care and provide employees with a safe and healthy work environment.	We apply the PDCA Cycle according to the RBA Handbook and relevant management regulations to conduct the procedures of talent recruitment, cultivation, employment, and retention. We also apply the Cycle to avoid non-compliance with national laws and regulations, international standards, and the Company's human rights policy. Lastly, we regularly hold HR meetings to review relevant operating procedures, and take relevant improvement or enhancement measures to protect the rights and interests of employees.	The Company regularly counts the number of participants or cases through each reporting channel, and follows up on the investigation or case results.	The Company regularly counts the number of participants or cases through each reporting channel, and follows up on the investigation or case results.

Item	Ensuring safety and health in work environment	Protecting the rights and interests of employees	Emphasizing smooth communication channels	Emphasizing work-life balance
Mitigation or remediation	Health promotion: Apace's nurses regularly arrange health promotion courses or activities to enhance employees' awareness of safety and health. Doctor consultation: Apacer's nurses regularly arrange for high-risk employees to consult with an on-site doctor. If there is a problem, the employees shall follow the doctor's advice to evaluate the working hours, adjust the work, or provide medical care. Legal compliance: Leaves and attendance and compensation are given in accordance with the law.	Legal compliance: For recruiting new employees and managing incumbents, Apacer follows the appointment and dismissal process in accordance with the law to eliminate issues such as illegal forced labor, child labor employment, violations of humane treatment, discrimination, or harassment. Management tools: Apacer has a system for attendance and overtime work with a reminder function to review and manage work hours. Return of rights: If the Company is found to have violated laws and regulations or forced labor, necessary corrective measures will be taken and the employee's rights will be reinstated.	If anomalies are found, a meeting will be held immediately and improvement plans or measures will be proposed.	Questionnaires will be distributed after each activity to check the participation rate and satisfaction as the basis for future improvement.
Complaint channel	Occupational Safety and Health Committee.	External Complaints: A "Reporting System for Violation of Professional Ethics" has been established on the official website for external personnel to report or appeal. Internal reporting: The Company has established reporting hotline/e-mail, sexual harassment reporting procedure, Employee Welfare Committee meetings, labor-management meetings, CSR Committee meetings, RBA Committee meetings, etc.	External Complaints: A "Reporting System for Violation of Professional Ethics" has been established on the official website for external personnel to report or appeal. Internal reporting: The Company has established reporting hotline/e-mail, sexual harassment reporting procedure, Employee Welfare Committee meetings, labor-management meetings, CSR Committee meetings, RBA Committee meetings, etc.	External Complaints: A "Reporting System for Violation of Professional Ethics" has been established on the official website for external personnel to report or appeal. Internal reporting: The Company has established reporting hotline/e-mail, sexual harassment reporting procedure, Employee Welfare Committee meetings, labor-management meetings, CSR Committee meetings, RBA Committee meetings, etc.

● Workplace environment

Apacer adheres to the principle of "Deliver on promises, strive to be better, advance together" to create a friendly and healthy workplace for our colleagues. Apacer regards employees as important work partners and family members. We hope that employees can feel the comfort and ease of home while at work every day. Therefore, we have set up a resting area, a stress-relief zone, a reading room, an entertainment area and a massage room on the first floor of the headquarters to provide a creative, multi-functional, stress-reducing environment. Colleagues are free to use multiple independent talking spaces with different styles to reduce the sense of restraint of the office space and be inspired by the diverse space design.

Lobby in Apacer headquarters

Employee Lounge

Stress-relief zones
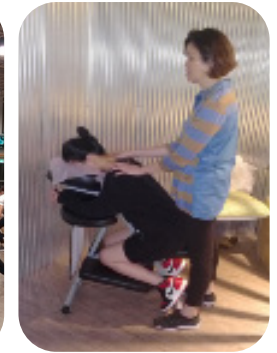
Stress-Relieving Massage Area

Leisure Reading Area

Leisure Entertainment Area

● Profiles of employees around the globe

Apacer's Number of Employees Around the World

As of the end of 2023, Apacer had 605 employees worldwide, with 28% of direct employees and 72% of indirect employees in the production line. In recent years, the significant change in the overall direct and indirect employees has been below 3%, indicating no significant difference.

Year	2022	2023[3]
Number of employees	574	605
Direct employees: [1] (%)	27%	28%
Indirect employees: [2] (%)	73%	72%

Note 1: Direct employees: Refer to employees who actually engaged in machine operation or tasks related to production and manufacturing.
Note 2: Indirect employees: Refer to indirect employees.
Note 3: The 2023 data already includes the subsidiary UD Info.

Direct employees   Indirect employees   No. of person(s)
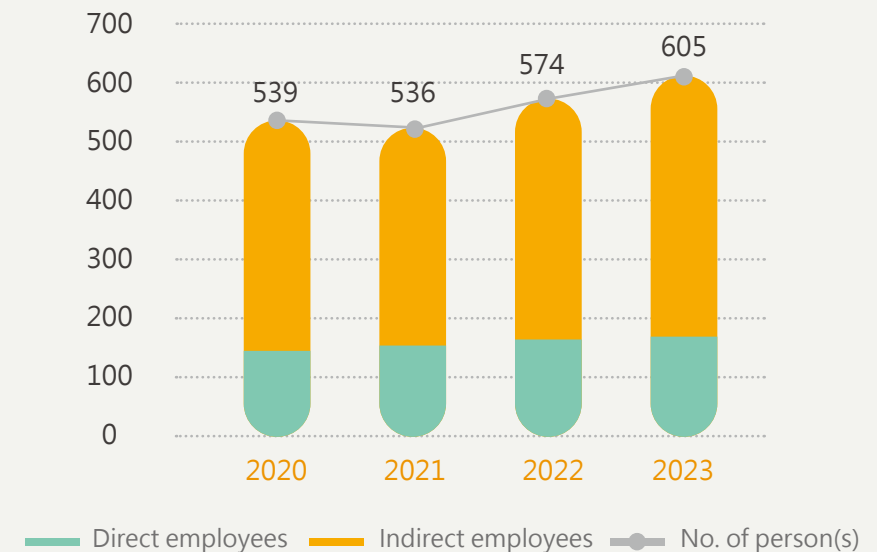
Apacer's global employee distribution in 2023

In terms of the gender distribution of Apacer's global employees, 54% of Apacer's employees are female and 46% are male. The gender distribution is relatively standard.

Classification	Gender						Work area							
	Female		Male		Total		Operation headquarters		Taiwan subsidiaries		Overseas subsidiaries[7]		Total	
	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)
Total number of employees	325	54%	280	46%	605	100%	497	82%	39	6%	69	11%	605	100%
Permanent employee[1]	323	54%	278	46%	601	100%	493	82%	39	6%	69	11%	601	100%
Temporary employee[2]	2	50%	2	50%	4	100%	4	100%	0	0%	0	0%	4	100%
Employees with non-guaranteed hours[3]	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Full-time employees[4]	324	54%	280	46%	604	100%	496	82%	39	6%	69	11%	604	100%
Part-time employees[5]	1	100%	0	0%	1	100%	1	100%	0	0%	0	0%	1	100%

Note 1: Permanent employees: Full-time or part-time employees who sign an indefinite labor contract.

Note 2: Temporary employees: Employees who have signed a fixed-term labor contract. The contract expires at a specified time, or ends when a specific task or event with an evaluation timeframe is completed (such as a work project is ending or an employee relinquishing duties).

Note 3: Employees without guaranteed hours: Employees who are not guaranteed a minimum or fixed number of working hours per day, week, or month, but work on demand, such as temporary employees, zero-hour contract employees and on-call employees.

Note 4: Full-time employees: Employees whose weekly, monthly or annual working hours are defined in accordance with national laws and practices related to working hours.

Note 5: Part-time employees: Those working fewer hours per week, month or year than full-time employees.

Note 6: The above data already includes the subsidiary UD Info.

Note 7: Overseas subsidiaries: Including the United States, the Netherlands, Japan, China and India.

● Employees at the headquarters and subsidiaries in Taiwan

Apacer attaches great importance to the development of local talent. As of 2023, there were a total of 536 employees at the headquarters and subsidiaries in Taiwan, with local employees accounting for more than 90% of the total number of employees. There are 11 managers, including the Chairman, who is the Chief Strategy Officer, General Manager, Deputy General Manager, heads of all centers, and Head of Accounting, and all of them are local employees in Taiwan.

Number of employees at Apacer headquarters and Taiwan subsidiaries

Year	2020	2021	2022	2023
Number of employees	463	465	495	525
Number of managers	8	9	10	11
Total	471	474	505	*536

Note: The 2023 data already includes the subsidiary UD Info.

Apacer follows the laws and regulations promulgated by the government to protect ethnic minorities and ensure the quota of people with physical and mental disabilities. The Company respects indigenous peoples' annual ceremonies, and provides them with one day off every year for ceremonies in accordance with the Regulations Governing Memorial Days and Holidays by the Ministry of the Interior. Those with disabilities are guaranteed to be hired according to the People with Disabilities Rights Protection Act by the Ministry of Health and Welfare. If the monthly employment number is not sufficient, the Company will pay in accordance with the relevant regulations.

Employee statistics are as follows:

Classification	Gender					
	Female		Male		Total	
	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)
Total number of employees	293	55%	243	45%	536	100%
Permanent employee[1]	291	55%	241	45%	532	100%
Temporary employee[2]	2	50%	2	50%	4	100%
Employees with non-guaranteed hours[3]	0	0%	0	0%	0	0%
Full-time employees[4]	292	55%	243	45%	535	100%
Part-time employees[5]	1	100%	0	0%	1	100%

Note 1: Permanent employees: Full-time or part-time employees who sign an indefinite labor contract.

Note 2: Temporary employees: Employees who have signed a contract with a term (i.e. fixed-term). The contract expires at a specified time, or ends when a specific task or event with an evaluation timeframe is completed (such as a work project is ending or an employee relinquishing duties).

Note 3: Employees without guaranteed hours: Employees who are not guaranteed a minimum or fixed number of working hours per day, week, or month, but work on demand, such as temporary employees, zero-hour contract employees and on-call employees.

Note 4: Full-time employees: Employees whose weekly, monthly or annual working hours are defined in accordance with national laws and practices related to working hours.

Note 5: Part-time employees: Those working fewer hours per week, month or year than full-time employees.

Note 6: The above data already includes the subsidiary UD Info.

Employee structure at Apacer headquarters and Taiwan subsidiaries

Item	Classification	Female		Male		Group subtotal and percentage	
		Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)
Production Category	Direct employee[1]	124	72.1%	48	27.9%	172	32.1%
	Indirect employee[2]	169	46.4%	195	53.6%	364	67.9%
Job Category	Head of managers	4	36.4%	7	63.6%	11	2.1%
	Non-head of managers	34	42.5%	46	57.5%	80	14.9%
	Specialized personnel	114	49.1%	118	50.9%	232	43.3%
	Sales Personnel	17	41.5%	24	58.5%	41	7.6%
	Technician[3]	124	72.1%	48	27.9%	172	32.1%
Education distribution	Doctoral degree	0	0.0%	2	100.0%	2	0.4%
	Master's degree	33	33.7%	65	66.3%	98	18.3%
	(Associate's) Bachelor's degree	191	54.9%	157	45.1%	348	64.9%
	Senior (vocational) high school	65	77.4%	19	22.6%	84	15.7%
	Other	4	100.0%	0	0.0%	4	0.7%
Age distribution	Below 20 years old	0	0.0%	0	0.0%	0	0.0%
	21 - 30 years old	52	61.9%	32	38.1%	84	15.7%
	31 - 40 years old	108	53.2%	95	46.8%	203	37.9%
	41 - 50 years old	101	53.2%	89	46.8%	190	35.4%
	Over 51 years old	32	54.2%	27	45.8%	59	11.0%

Employee structure at Apacer headquarters and Taiwan subsidiaries

Item	Classification	Female		Male		Group subtotal and percentage	
		Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)	Shareholders (persons)	Percentage (%)
Marriage distribution	Married	144	51.4%	136	48.6%	280	52.2%
	Single	149	58.2%	107	41.8%	256	47.8%
Nationality distribution	Taiwanese	240	50.1%	239	49.9%	479	89.4%
	Foreign nationality	53	93.0%	4	7.0%	57	10.6%
Number of protected quotas	Indigenous peoples	2	66.7%	1	33.3%	3	0.6%
	Physically or mentally disabled	2	66.7%	1	33.3%	3	0.6%
Total		293	54.7%	243	45.3%	536	100.0%

Note 1: Direct employees: Refer to employees who actually engaged in machine operation or tasks related to production and manufacturing.

Note 2: Indirect employees: Refer to indirect employees.

Note 3: Technical personnel: Refers to the direct employees of the production line.

Note 4: If there are any vacancies caused by changes in personnel, in addition to paying the dues in accordance with the law, Apacer actively welcomes ethnic minorities and the physically and mentally disabled to join Apacer on the recruitment website.

Note 5: The above data already includes the subsidiary UD Info.

Employee analysis

Apacer analyzes employee categories and basic data every year to understand the current employee composition, visualize their profiles, and design A+ EAPs employee assistance programs that meet their needs. See 4.3 Employee Benefits and Communication for details.

Employee production category

Direct employees 32.1%

Indirect employees 67.9%
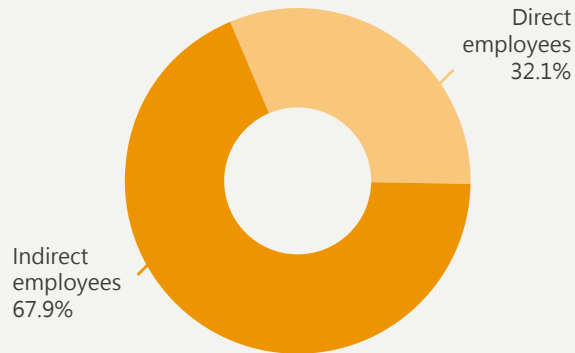
Production category of employees at Apacer headquarters and subsidiaries in Taiwan
In the production category, indirect employees account for about 68% in total.

Employee position category

senior staff 2.1%

Sales Personnel 7.6%

Management personnel 14.9%

Technician 32.1%

Specialized personnel 43.3%
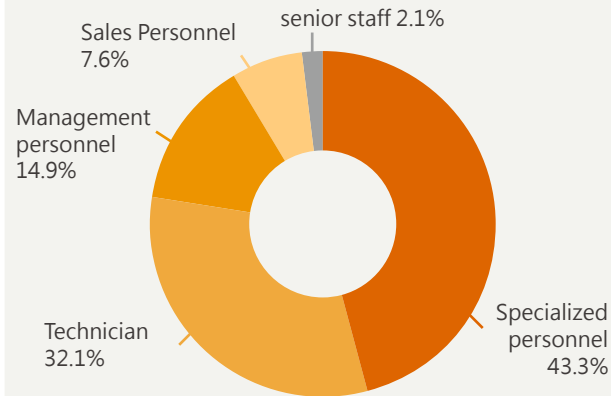
Job category of employees at Apacer headquarters and subsidiaries in Taiwan
Approximately 43% of the duties are professionals, and the male to female ratio of managers is 1:1.75

Employee education distribution

Other 0.7%

Doctoral degree 0.4%

Senior (vocational) high school 15.7%

Doctoral degree 18.3%

(Associate's) Bachelor's degree 64.9%
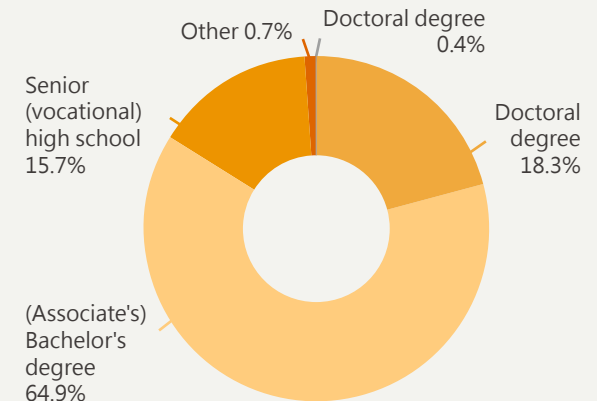
Education background distribution of employees of Apacer's headquarters and subsidiaries in Taiwan
Approximately 65% of the people graduated with an (associate) bachelor's degree.

Employee age distribution

21 - 30 15.7%

Over 51 11.0%

31~40 37.9%

Below 20 0.0%

41 - 50 35.4%
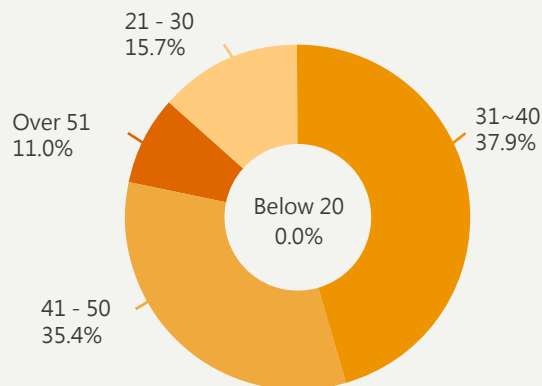
Age distribution of employees at Apacer's headquarters and subsidiaries in Taiwan
The age distribution is mainly based on the age of 31-40, accounting for approximately 38%.

Employee marriage distribution
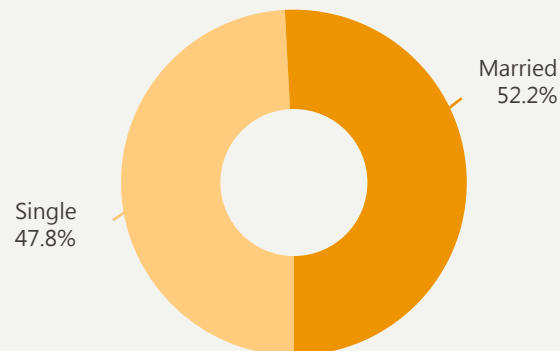
Married 52.2%

Single 47.8%

Marriage distribution of employees of Apacer's headquarters and subsidiaries in Taiwan
Marriage distribution is even

Employee gender distribution

Female 54.7%

Male 45.3%
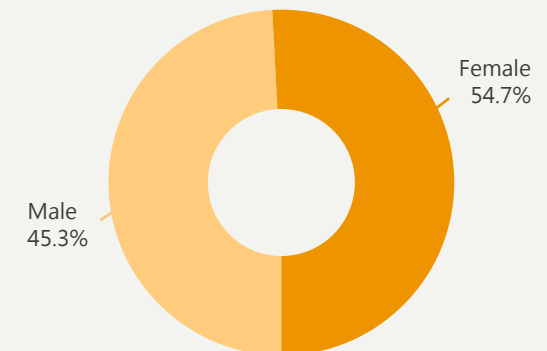
Gender distribution of employees at Apacer's headquarters and subsidiaries in Taiwan
Gender distribution is approximately even to the distribution of global employees

Change of employees at Apacer's headquarters and subsidiaries in Taiwan

Apacer's employee turnover rate has been lower than 2.5% over the years, and this is the goal to maintain a stable manpower supply and appropriate talent cultivation and development.

Turnover rate of employees at Apacer's headquarters and subsidiaries in Taiwan

Item	2022	2023
Average number of employees at the beginning of the period	505	505
Number of new employees	116	119
Number of resigned employees[2] — Management role	6	7
Number of resigned employees[2] — Non-management role	107	81
Number of resigned employees[2] — Subtotal	113	88
Average number of employees at the end of the period	505	536
Annual turnover rate[1] (%)	1.9%	1.4%

Note 1: Turnover rate formula: Based on Work-life Balance Award from the Ministry of Labor the standard calculation, which is: the number of employees resigned throughout the year / (annual average number of workers hired per month * 12) * 100%.
Note 2: Employees who left the Company: Including voluntary resignation, involuntary resignation, leave without pay, and retirement.
Note 3: The 2023 data already includes the subsidiary UDInfo.

Application for unpaid parental leave and reinstatement rate[1] of Apacer headquarters and subsidiaries in Taiwan in 2023

Item	Female	Male	Total
Number of employees eligible to apply for unpaid parental leave	18	14	32
Number of employees actually applied for unpaid parental leave	7	0	7
Number of employees required to be reinstated in the current year (A)	5	0	5
Number of employees applying for reinstatement in the current year (B)	2	0	2
Reinstatement rate % (B/A)	40%	0%	40%
Number of employees reinstated after unpaid parental leave in 2022 (E)	5	0	5
Total number of employees completing the parental leave and still working 12 months after reinstatement in 2022 (F)(E)	5	0	5
Retention % (F/E)	100%	0%	100%

Note 1: The calculated period is 2023/1/1 - 2023/12/31.
Note 2: The above data already includes the subsidiary UD Info.
Note 3: The statistics on the number of people reinstated on Page 825 of the original 2022 Sustainability Report was incorrect. The correct number of female employees then was five.

New and resigned employees statistics at Apacer's headquarters and subsidiaries in Taiwan in 2023

Type	Category	New employee[2] No. of person(s)	New employee[2] Percentage	Resigned employee[3] No. of person(s)	Resigned employee[3] Percentage	Total Subtotal number of people	Total Total number of people	Total To the total percentage
Gender	Female	65	56.5%	50	43.5%	115	115	55.6%
Gender	Male	54	58.7%	38	41.3%	92	92	44.4%
Age	Below 20 years old	0	0.0%	0	0.0%	0	0	0.0%
Age	21 - 30 years old	49	65.3%	26	34.7%	75	75	36.2%
Age	31 - 40 years old	53	58.2%	38	41.8%	91	91	44.0%
Age	41 - 50 years old	14	43.8%	18	56.3%	32	32	15.5%
Age	Over 51 years old	3	33.3%	6	66.7%	9	9	4.3%
Total		119	57.5%	88	42.5%	207	207	100.0%

Note 1: The above data already includes the subsidiary UD Info.
Note 2: Female/male ratio of new employees = number of female or male new employees/total number of active employees in the corresponding category in the year.
Note 3: Female/male ratio of resigned employees = number of female or male resigned employees/total number of active employees in the corresponding category in the year.
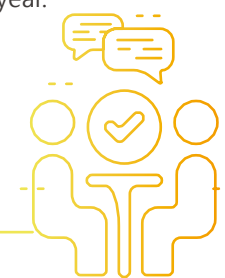
Employee Safety and Health

Major Topic 4.2

● Occupational safety and health management system

Since 2013, Apacer has obtained the external verification of OHSAS 18001 of Occupational Safety and Health Management System, and changed its name to ISO 45001: 2018 Occupational Safety and Health Management System to align with the OHSAS 18001 revision. PDCA Cycle, risk assessment, risk control and management, and regular improvements are made to complete occupational safety and health management. Moreover, Apacer has passed the ISO 45001: 2018 Occupational Safety and Health Management Certification again, and external verification is continued every year to maintain system effectiveness.

The Occupational Health and Safety Management System[1] covers all workers[2] of Apacer's headquarters and its subsidiaries. There are a total of 536 employees, accounting for about 98%. Non-employees (e.g. in-plant suppliers, in-plant customers, contractors, security personnel, dispatched personnel, etc.) are about 10 people, accounting for approximately 2%.

Note 1: The occupational safety and health management system covers the plants and workers of the headquarters of Apacer and the Taiwan subsidiary UD Info, excluding overseas employees.

Note 2: The above workers include: All employees at the headquarters of Apacer and the non-employees in the Taiwan subsidiary UD Info (such as in-plant suppliers, in-plant customers, contractors, security personnel, dispatched personnel, etc.).

Audit category	Audit method	Audit result
Internal audit	- Occasional internal audits: Internal audits are conducted from time to time every quarter, and the audit results are reported at the quarterly OHSC meeting. - Regular internal audits: Internal audits are conducted on a regular basis every year as self-inspections before the external audits to ensure the sound operation of relevant management mechanisms.	- Items conformed (OK): 114 - Non-conformities (NG): 2 - Not applicable (NA) items: 136 - Non-conformance rate: 1.75% - Continuous improvement: The position of the fire extinguisher was changed without being checked, and the vacuum machine maintenance record was not uploaded to the document control system for the record. - Improvement result: Completed
External audit	- External audits are carried out on a regular basis every year. Based on the verification period in the management system, the audits are renewed, and the certificates are renewed or transferred.	-The system will continue to be effective after the verification in 2023.

● Occupational Safety and Health Committee

To provide a healthy and friendly workplace and reduce occupational accidents, Apacer has established the "OHSC" in accordance with the "Occupational Safety and Health Act" to review, coordinate, and advise on safety and health-related matters. The OHSC is subordinate to the General Manager, and holds a committee meeting every quarter to review occupational safety and health matters.

Operation of the OHSC (Occupational Health and Safety Committee)

Number of labor and management representatives	There are 13 labor representatives[1] and 5 management representatives.
Election method of labor representatives	Elected by all full-time employees
Term of office of the labor and management representative	2 years
Frequency of meetings	Quarterly (4 times a year)
Discussion matters	1. Occupational health and safety issues/management plans/operating environment testing 2. ISO 45001:2018 Occupational Health and Safety Management System Issues 3. RBA system issues 4. Fire protection system management topics

Note 1: The labor representative of the OHSC (Occupational Health and Safety Committee) shall account for more than 1/3 of the total Occupational Health and Safety Committee.
Note 2: The above data does not include the subsidiary UD Info.

Specific measures of the OHSC

The OHSC implements occupational safety and health management by following four specific measures: "disaster prevention," "operating environment testing," "occupational safety control," and "health management system."
At Apacer, we implement operation control for operating procedures that may generate high risks. To minimize the operational risks of our colleagues, we conduct disaster prevention, education and training, regular commissioning of external qualified agencies to implement operating environment inspections, implementation of special operation control and work permits in accordance with the Occupational Safety and Health Act and safety risk assessment results, implementation of automatic inspections, and the health management system. There have been no cases of lost time due to occupational diseases over the years.

	Four major actions for occupational safety and health management				2023 occupational accident statistics
Management actions	Disaster prevention	Working environment survey	Operational safety control	Health management system	
2023 management performance	100% occupational safety training	100% Compliance	Implementation of occupational safety system management	Annual health check-up for all employees	0 cases (excluding traffic accidents)

Disaster prevention

To prevent work-related accidents, Apacer has formulated occupational safety and health management plans and built an occupational safety system to manage any potential risks. By conducting the plans and inspecting the operating environment in the plants from time to time, we report, track, and assess all injuries, non-injuries, and near misses. We can also provide regular education and training to all employees.

According to the Occupational Safety and Health Act, employees have the right to withdraw. If employees believe that there is an immediate hazard in the workplace, they can instantly leave the work environment and go to the emergency assembly point. For common workplace risks, we establish relevant systems for risk assessment, and implement management and improvement based on different levels. In response to emergencies related to strong wind, water, fire, and earthquake, Apacer has established emergency response procedures. Corresponding actions are implemented before, during, and after an event to minimize the scope of hazards, and review preventive measures to avoid related accidents.

Occupational risks

Risk identification
- ISO 45001 Systematic Risk Identification
- Frequency of risk identification, once/year
- Unscheduled dynamic plant audits

Risk assessment
- Graded management conducted according to the risk factor, and a management plan will be established when the risk factor is above 4.

Management plan
- Goal setting
- Tracking mechanism
- Responsible unit
- Improvement plan

Review and improvement
- Improvement in performance review frequency, 4 times/year
- Evaluation process review, 4 times/year

Emergency disasters

Before the occurrence
- We formulate the emergency response measures and procedures, which are periodically re-examined and adjusted once/year
- Regular disaster drills, twice/year

During the occurrence
- Form an emergency response team
- On-site employee withdrawal right
- Notification mechanism (inside the enterprise/ government departments)

After the occurrence
- Incident investigation
- Review of preventive measures

In 2023, a total of 632 people completed occupational safety and health education and training, reaching 935 hours, or 1.5 hours per person on average, and the training rate reached 100% to ensure workplace safety and enhance employee safety awareness. Compared to 1.8 hours on average per person last year, the average hours slightly decreased due to the bi-annual retraining on licenses. This year, there were 4 work-related injuries (4 traffic accidents, 0 falling accidents, and 0 chemical spills), which is an increase from last year. We hope that through relevant preventive measures, the management goal of one or fewer work-related accidents every six months will be achieved.

2023 Occupational Safety and Health Education and Training Statistics

Trainees	Course	Number of participants	Number of hours
Employee	Occupational safety and health education and training for new recruits	96	288
	Incumbent Occupational Safety and Health Education and Training[1]	514	514
	Occupational safety and health-related certification[2] Initial training/Retraining	13	124
Non-employees[3]	Occupational safety training for the management committee (security guard/property/cleaning) of the contractor's building	10	30
Total		633	956

Note 1: Occupational safety and health education and training for incumbents: Including the subsidiary UD Info. Other data does not include UD Info.
Note 2: Occupational safety and health-related licenses include: Occupational safety and health operation supervisors, occupational safety and health personnel, organic solvent operation supervisors, radiation protection, fire prevention managers, first aid personnel, and nurses.
Note 3: Non-employees: Refer to those who work for the organization but have no employment relationship with the organization, such as in-plant suppliers, in-plant customers, contractors, security and property personnel, and dispatched personnel.

Statistics on the number of employee occupational injuries and diseases in 2023

Item	Female	Male
Total working hours[1]	569,592	470,448
Total working days	71,199	58,806
Total number of work - related injuries[2]	4	1
Occupational injury rate (IR)[3]	1.40	0.43
Number of deaths	0	0
Number of work - related injuries[4]	1[10]	0
Total working days lost	2	0
Lost day rate (LDR)[5]	0.70	0.00
Total days of absence[6]	1,233.1	372.6
Absence rate (AR)[7]	0.006%	0.003%
Number of serious work-related injuries[8]	0	0
Serious occupational injury rate	0	0

Note 1: Total working hours: Calculated based on "total number of employees for the year x total number of working days x 8 working hours per day"
Note 2: Total number of work-related injuries: Including all commuting and business-related traffic accidents.
Note 3: Occupational injury rate (IR) = (total number of occupational injuries/total number of working hours) x 200,000*
Note 4: Number of work-related injuries: Excluding commuting and business-related traffic accidents.
Note 5: Lost day rate (LDR) = (total workdays lost / total hours worked) x 200,000*
Note 6: Definition of absence: An employee is absent from work due to incapacity to work, not limited to work-related injuries or illnesses (including occupational diseases, sick leave, and menstrual leave)
Note 7: Absence rate (AR) = total absent days / (annual total number of employees × total working days)
Note 8: Severe work-related injuries refer to injuries that cause death or make it difficult for the worker to return to the state of health before the injury within 6 months.
Note 9: The above data already includes the subsidiary UD Info.
Note 10: The work-related injuries in 2023 were incidents that occurred in 2022, and there were still work-related losses caused by leave of absence up to 2023.
Note*: 200,000 is calculated based on 50 weeks in a year, 40 working hours per week per 100 employees.

Statistics on the number of non-employee[1] occupational injuries and diseases in 2023

Item	Female	Male
Total number of occupational injuries	0	0
Occupational injury rate (IR)	0	0
Number of deaths	0	0

Note 1: Non-employees: Refer to those who work for the organization but have no employment relationship with the organization, such as in-plant suppliers, in-plant customers, contractors, etc. In 2023, there were around 10 non-employees at Apacer.
Note 2: The above data already includes the subsidiary UD Info.

Apacer has established a detailed investigation process for "occupational injuries". Investigators must work with labor representatives to investigate the cause of accidents, and the reports produced must be signed by the General Manager. The Company provides guidance for the injured employees to improve their health. When returning to the workplace, a gradual return-to-work system has been established for employees. When employees are unable to perform duties due to injuries, the medical staff in the plant will provide medical care and relevant medical advice, helping employees apply for insurance money.
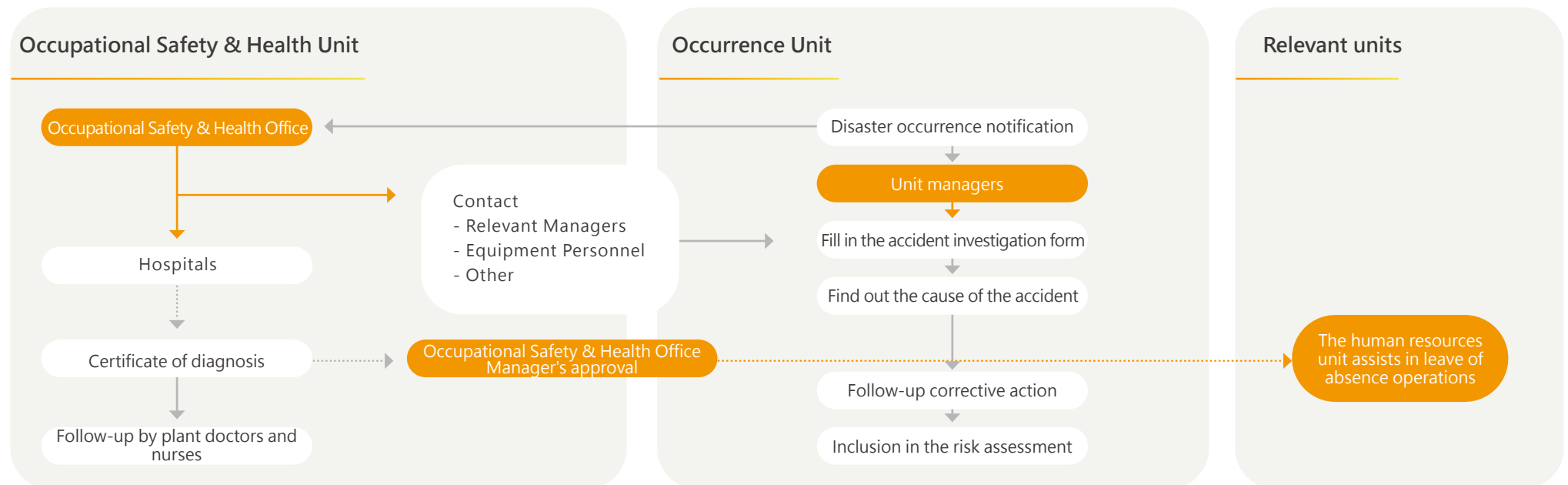
Working environment survey

Apacer regularly commissions external qualified organizations to conduct work environment testing. The testing items include dust, organic solvents, carbon dioxide, lighting, etc. If the testing results are abnormal, we will immediately improve and correct them to ensure the health and safety of colleagues.

Operational safety control

To maintain a safe operating environment, Apacer has implemented special operation controls and work permits for overhead works, fire operations, and ionizing radiation equipment in accordance with the Occupational Safety and Health Act and the results of safety risk assessments. At the same time, automatic inspections are carried out in accordance with the law, and all machinery and equipment are regularly inspected for approval according to the law. Operators must obtain professional licenses and undergo regular in-service employee re-training.

To prevent work-related hazards, operators must wear protective equipment according to the nature of the work. In addition, to ensure that workers are not exposed to radiation hazards, Apacer implements regular equipment testing and requires workers to wear radiation badges and participate in radiation work health examinations to accurately grasp the radiation dose received by workers and their physical health.

Health management system

In order to fully understand the health status of employees and prevent occupational diseases, Apacer conducts regular health checkups for employees. The inspection items are divided into "general operation"and "particularly hazardous operation" according to the type of operation. For workers prone to health and safety hazards such as ionizing radiation and organic solvents, special inspections are further implemented and graded management is implemented. In 2023, a total of 20 special hazards workers received special health checks, and the results were all normal. If there are work-related health abnormalities, the individual's health condition will be assessed and graded, and the "personnel risk assessment form" will be prepared by the nurse to help the individual pay attention to his or her health status.

In addition, Apacer has planned a health management system for the employees based on the four aspects of "Healthy Eating”, "Exercising”, "Health", and "Health and Safety". Apacer also integrated the Apacer A+ EAPs Employee Assistance Program to plan a series of health and sports activities to strengthen the health of employees and workers and continue to promote the healthy workplace.

The total amount of loss arising from legal actions related to employee health and safety violations in 2023 was NTD 0.

For more information on Apacer's healthy workplace actions, please refer to .

<div style="float:left">Major Topic 4.3</div>

Employee Benefits and Communication

> Apacer is committed to creating a friendly and healthy workplace worthy of long-term investment for its employees.

● Development of EAPs

2017
A+ Happy Company Plan of Becoming a Happy Company was certified with the Badge of Accredited Healthy Workplace by the Ministry of Health and Welfare
Starting from the "A+ Happy Company Plan", Apacer has planned various welfare activities in three aspects: Work, family, and health to create a happy workplace. The Company was certified by the Health Promotion Administration of the Ministry of Health and Welfare with the Badge of Accredited Healthy Workplace.

2018
Apacer's A+ EAPs Employee Assistance Program (18-square grid) of Building a Friendly Workplace won the Work-Life Balance Award from the Ministry of Labor
Apacer has further expanded its scope to organize employee assistance programs and activities in an 18-square grid, with A+ Work, A+ Family, and A+ Health as the vertical axis and food, clothing, housing, transportation, education, and entertainment as the horizontal axis, which became the "Apacer A+ EAPs Employee Assistance Program" to create a friendly workplace. Furthermore, the program won the Work-Life Balance Award from the Ministry of Labor.

2019
Apacer's A+ EAPs Employee Assistance Program (28 squares) builds a friendly and healthy workplace, which was awarded by the Ministry of Education with the iSports Enterprise Certificate and acquired the Badge of Accredited Healthy Workplace from the Ministry of Health and Welfare.
Moreover, Apacer continues to improve. In response to the spirit of CSR and RBA sustainable operations, we have begun to advocate healthy workplaces and encourage employees to be healthy and exercise! In addition to A+ Work, A+ Family, and A+ Health, the vertical axis also combines the four major aspects of "CSR & RBA". With the seven units of the horizontal axis include food, clothing, housing, transportation, education, and entertainment, a 28-square grid employee assistance program and activities have been developed to create a friendly and healthy workplace. In addition to continuing to receive the Badge of Accredited Healthy Workplace from the Health Promotion Administration of the Ministry of Health and Welfare, we have also been certified with the iSports Enterprise Certificate by the Sports Administration, the Ministry of Education.

2020
Apacer's A+ EAPs Employee Assistance Program (28-square grid) of Building a Friendly and Healthy Workplace won the reward from the Ministry of Education for hiring a sports instructor

2021
Apacer's A+ EAPs Employee Assistance Program (28-square grid) of Building a Friendly and Healthy Workplace has consecutively received the reward for hiring a sports instructor by the Ministry of Education, and has been recognized with the Badge of Accredited Healthy Workplace by the Ministry of Health and Welfare.
In line with ESG development, Apacer adjusted the fourth aspect of the "Apacer A+ Employee Assistance Program" on the 28-square grid from "CSR & RBA" to "ESG & RBA" and continued to refine its programs and activities, winning the Ministry of Education's reward for hiring a sports instructor and the Badge of Accredited Healthy Workplace from the Health Promotion Administration of Ministry of Health and Welfare.

2022
Apacer's A+ EAPs Employee Assistance Program (28 squares) of Building a Friendly and Healthy Workplace has been recognized with iSports Enterprise Certificate by the Ministry of Education for creating a friendly and healthy workplace, awarded for hiring a sports instructor by the Ministry of Education, and received the HR Asia's Best Employer Award

2023
Apacer's A+ EAPs Employee Assistance Program (28 squares) of Building a Friendly and Healthy Workplace has been continuously recognized by the Ministry of Education with the iSports Enterprise Certificate, recognized with the Badge of Accredited Healthy Workplace by the Ministry of Health and Welfare, and won the Gold Award for Happy Enterprise from 1111 Job Bank

Results of EAPs

Apacer won the 2023 Happy Enterprise Gold Award for its ESG implementation

Since its establishment, Apacer has upheld the core value of "Becoming Better Partners,", valued the growth and development of employees, and continuously cared for employees to create a work environment and a friendly workplace culture that satisfies them.
In recent years, in conjunction with the ESG strategy, we have actively implemented the Employee Assistance Program (A+ EAPs), for which we have won the Work-Life Balance Award, the Badge of Accredited Healthy Workplace and the iSports Enterprise Certificate, etc. In terms of the social aspect of ESG, we regard employee care as an important part of our sustainability and social responsibility. The Company is committed to implementing various measures to achieve sustainable corporate development. Specific practices include but are not limited to:

- We establish a dual-track talent development system to accelerate talent promotion and promote outstanding talent.
- We establish talent supply chain and Apacer Academy to promote talent sustainability and build a sustainable organization
- We continue to train sports instructors and encourage employees to participate in club activities to strengthen physical and mental health.
- We purchase group insurance and pandemic insurance for all employees.

Apacer practices corporate sustainable management, and was awarded the Happy Enterprise Gold Award in 2023 by 1111 Job Bank. The Company stood out among 3,000 companies after preliminary elections, online voting, and secret customer evaluations, showcasing Apacer's commitment to ESG and corporate governance. Apacer's outstanding performance in employee care also reflects the positive feedback it has received in terms of corporate culture and employee satisfaction, which fully demonstrates the value of our employer brand. In the future, Apacer will continue to promote ESG and focus on corporate sustainable development.

Apacer A⁺ EAPs Employee Assistance Program

Apacer A⁺ EAPs = A⁺ Work + A⁺ Family + A⁺ Health + ESG & RBA

After analyzing employee types and basic data every year, the HR team proposed the prototype and concept of Apacer A⁺ EAPs in 2017. With work-life balance as the main focus, the HR team began to design various activities or programs that meet the needs of employees.

With the even distribution of marriage and gender, and that Apacer's employees in Taiwan are 73% aged 31 - 50 years old, and more than 90% work in back-office (including more than 30% are shift workers), our activities at the operating headquarters are planned as closely as possible to the work and needs of each employee. We also consider the day and night shifts of the production line personnel to satisfy the needs of Apacer employees.

A⁺EAPs Employee Assistance Program	Food	Clothing	Living	Transportation	Education	Entertainment	Activities
A⁺work	-Three meals a day subsidies -Food allowance -Annual departmental gathering	-Apacer group uniforms -Production line work clothes	-Stress-relieving rest area -Creative Development Room -Professional property management cleaning	-Flexible working hours -Remote work -Work from home	-TTQS certification -New staff training -In-service training	-Number of leave days better than prescribed by law -Annual spring party event -Birthday gift voucher/event	-Sports Business Certification -Sports Instructor
A⁺family	-Daily dinner allowance -Stalls set up by vendors -Contracted vendors	-Apacer employee purchase -Stalls set up by vendors -Contracted vendors	Gold-awarded lactation room	-Group insurance better than prescribed by law -Insurance for dependents	-Handbook for new moms -Childbirth incentives -Childcare measures	-Family Day -Employee travel -Parent-child art gallery	Sports Day
A⁺health	Vegetable Day	-Laundering of work clothes	-Occupational Environmental Safety Certification -Infirmary	Sports community	-Health promotion activities -Health promotion lecture	-Weekly massage service -Health checkups better than prescribed by law -In-house consultation for occupational medicine	-Sports clubs -Sports competition
ESG RBA	Qualified group catering suppliers	Free laundry room for migrant workers	-Free dormitory for migrant workers -Subsidies for migrant workers	Transportation allowance for migrant workers	Migrant worker advocacy training	-Gift vouchers for three major holidays -Festival activities	Stress-relief zones

A⁺ EAPs: A⁺ Work

We have hired sports instructors, which was recognized with the iSports Enterprise Certificate.

Apacer also encourages employees to participate in clubs that are beneficial to the body and mind, and provides funds for club establishment and subsidies for club activities to support the operation and development of clubs. We provide employees with a healthy stress-relieving channel through sports, and promote exchanges between cross-unit colleagues through clubs.

In line with the Sports Administration's active promotion of sports instructors, Apacer has received subsidies from sports companies to hire sports instructors. Apacer has continued to promote and has been certified with the iSports Enterprise Certificate by the Sports Administration of the Ministry of Education and won the award for hiring a sports instructor. Through our sports instructors, we provide counseling and recommendations to sports clubs to enhance the intensity and range of physical training for our colleagues, promoting the health benefits of exercising.

A⁺ EAPs: A⁺ Families

In September 2023, Apacer hosted a Family Day at Window on The World Theme Park. 1,108 people (including their families) participated, a 26% increase compared to the previous year. The event is to thank employees and their families for their support for Apacer. The theme of the Family Day is Apacer Forest Club. Competitions and sports activities were designed for families and children. Employees and their family members were invited to have fun together and walk into World Theme Park with APA, the mascot of Apacer, to embark on a series of Apacer adventures. APA hats and electric fans were distributed during the activities so that employees and their families can still have fun on a hot summer day.

In support of ESG Sustainability and our love for the Earth, for Family Day, we have designed activities called Running Man and Where is APA, Apacer's mascot. These activities were also combined with the Million Steps Club campaign to encourage colleagues and their families to use public transportation instead of self-driving and walking instead of public transportation. The total amount of steps accumulated in the activities reached more than one million steps, which is equivalent to reducing 142 kilograms of carbon emissions! In addition, we invited the Super Mario Video Game Show, Animal Rhapsody, and Miss Cherry and Mister Orange who are children's favorites to dance together. A lucky draw with a total prize of about NTD 600,000 was arranged as well. The employees and their families returned home full of joy, and the satisfactory rate of the overall event reached 87%.

A⁺ EAPs: A⁺ Health

Apacer has established a health management system for its employees with the four aspects of "Healthy Eating", "Exercising", "Health", and "Health and Safety".

Apacer health management system

Healthy Eating:
Eat without worries! Eat healthy!

1. 3 meals provided each day
2. Qualified group catering suppliers
3. Promotion of the concept of vegan food

Exercising:
Exercise to stay healthy!

1. Sports community
2. Sports clubs
3. Sports competition
4. Stress-relief zones

Health:
Understand health knowledge better!

1. Health promotion activities
2. Health promotion lecture

Health and Safety:
Improve and protect health management results!

1. Weekly pressure-relieving massage
2. On-site occupational medical consultation
3. Health check-ups that exceed regulatory requirements
4. Health insurance that exceeds regulatory requirements

Healthy Eating:

3 meals are provided each day and are made by qualified group catering suppliers. Our employees can eat with no worries!

Total number of people making food orders in 2023: 52,772
Average number of people making food orders per weekday: 218

Apacer cares about the health and diet of its employees, providing or subsidizing three meals each day.
In addition to strictly selecting hygienic, reliable, and reputable quality suppliers and providing healthy meals that have less sugar and oil, we hope to encourage colleagues to have healthy meals. At the same time, we also promote the importance of environmental friendly tableware to colleagues as an act of love towards the planet. We encourage our employees to reduce the use of disposable tableware. From environmental friendly tableware to healthy meals, we help employees pay attention to health, develop a correct and balanced diet, and stay healthy and full of energy every day!

Promote the concept of vegan food for a healthy diet!

Total number of people attending Vegan Day in 2023: 51

Apacer regularly organizes Vegan Days to actively promote healthy DIY low-carbon vegan diets. Through the activities, we encourage colleagues and workers to choose seasonal and local ingredients and eating more whole food to reduce the use of additives, oils, salt, sugar and other seasonings and processed products. By doing this, we are able to create a diet with lower impact on the environment, thereby reducing carbon dioxide emissions, and carrying out the sustainable value of low-carbon life and low-carbon diets.

A⁺ EAPs: A⁺ Health

Exercising 1: Moving Community! **If you want to stay healthy, we must move!**

"Exercise to stay healthy!" This is a concept actively promoted by Apacer's Chairman, Austin Chen, after recovering from meningioma surgery. The Chairman realized the importance of health and encourages colleagues and workers to develop regular exercise habits.

For six consecutive year, we have been implementing Moving Community activities for employees to help them establish the habit of exercising, integrating it into their lives. The number of people who participated in Moving Community activities reached 336 by the end of 2023, accounting for more than 68% of the total number of employees at the headquarters.

During the pandemic, Apacer continued its group health activities and created the Apacer Moving Community through the JoiiSports APP to remind one another to maintain their exercise habits. With the Body Dashboard function in the APP recording personal health information and utilizing scientific data, it can easily monitor one's physical condition anytime, anywhere.

A total of 566,399,144 steps were taken in 2023, equivalent to a carbon reduction of 94,249 kilograms. Exercise not only improves personal health but also contributes to environmental protection, allowing us to continue to move towards a healthy lifestyle with carbon reduction.

Number of employees in the group chat in 2023: 336 people (participation rate 68%)
Total group steps: 566,399,144 steps (equivalent to a carbon reduction of 94,249 kg)

Calculation instructions:

- The number of steps is converted to kilometers, so that 0.8 meters per step = 0.0008 kilometers.

- Replacing a car saves 0.208 kilograms of carbon emission per kilometer. The coefficient refers to the "Carbon Reduction Calculator on the Electronic Tax Filing and Payment Service Website of the Ministry of Finance"

$2023 = 566{,}399{,}144 * 0.0008 \text{ km} * 0.208 = 94{,}249 \text{ kg } CO_2e \text{ saved}$

Exercising 2: Sports clubs! **Exercise if you want to stay healthy!**

With the continuation of "Exercise to stay healthy!" concept, General Manager Chang Chia-Kun encourages colleagues to participate in clubs that are beneficial to physical and mental health, and provides funds for club establishment and subsidies for club activities to support the operation and development of clubs. By doing this, the development of corporate sports clubs can be accelerated.

As of 2023, Apacer's diverse sports clubs included eight clubs: Golf Club, Basketball Club, Badminton Club, Aerobic Boxing Club, Muscle Training Club, Yoga Club, Aerial Yoga Club, and Jogging Club. There are 117 people participating in the clubs, which is about 26% of the total number in the headquarters. With the care and assistance of instructors, we make sports a healthy way to reduce stress for our colleagues. Through cross-unit exchanges in clubs, we ensure that every colleague participating has a healthy and rich life.

Sports clubs in 2023: 8
Participation in clubs: 117 people

A⁺ EAPs: A⁺ Health

Exercising 3: Moving Competitions, adding fun and relief into work and life!

Under the leadership of General Manager Chang Chia-Kun, Apacer has been organizing various interesting Moving Competitions in conjunction with the Dragon Boat Festival, Mid-Autumn Festival, or Family Day.

During the Dragon Boat Festival and Mid-Autumn Festival in 2023, the events were held at the headquarters. In addition to delicacies and fun, more importantly we gave employees a chance to exercise. In 2023, their favorite Moving Basketball Competition and paddling competition were arranged. A total of NTD 80,000 was offered as prize money. 408 employees signed up for this event, which is 91% of the total employees in the headquarters.

During Apacer's Family Day event, we have designed the Running Man and Million Steps Club activities. The prize money is awarded to the person who completes the tasks and reaches the finish line the fastest. There was a sing-along and dancing activity with Miss Cherry and Mister Orange. Prizes were given to the children who were the best dancers selected by Miss Cherry and Mister Orange.

Exercise competition in 2023: 3
Total number of participants: 1,516 (including family members)

Exercising 4_Stress-reducing Moving Area makes use of spaces flexibly!

Apacer has planned a stress-reducing Moving Area for indoor exercise clubs. In addition to the skin-friendly soft wooden floors suitable for exercises on the floor, a movable floor-to-ceiling mirror wall is installed to help employees correct their posture during exercise, creating a comfortable and varied place for employees and for various clubs to use flexibly.

Sports clubs used in 2023: 2
(Cardio Boxing Club, Muscle Training Club)
Total number of sessions: 104

Health: Health promotion activities (lectures) to enhance health knowledge and concepts

Apacer organized a CPR+AED course in the first half of 2023 to increase colleagues' first aid knowledge, so colleagues can be prepared in case of any emergency. In the middle of the year, Apacer held a weight-losing competition "Change Your Weight and Lose Your Body Fat Program" for the employees as their diet improved and most of them were eating out. 2 lectures were arranged where a dietician was invited to teach colleagues the correct diet and achieve fat loss by adjusting diet. The actual competition was completed by 31 participants and a total of 28.2% of body fat was reduced, which is equivalent to the total fat mass of a normal adult. In the second half of the year, health promotion activity with technological physical fitness examination was regularly arranged to help colleagues understand their physical condition. During fat-burn competitions, technological physical fitness examination was equipped to help colleagues understand not only the distribution of fat, but also whether their muscle throughout the body were sufficient. With the examination, the colleagues were able to confirm whether you are working hard in the correct direction for your health.

Health promotion lectures (events) in 2023: 4
People attended the lectures (events): 311 people

A⁺ EAPs: A⁺ Health

Health and Safety 1: Weekly pressure-relieving massage

Apacer provides employees with a 15-minute massage per week, or two 30-minute massages per month. A 15-minute muscle massage can help relieve muscle soreness, lower the stress hormone cortisol, and increase the pleasant hormones dopamine and serotonin in the body, helping our employees relieve stress.
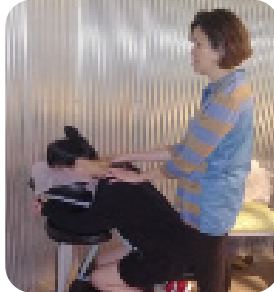
Total number of people receiving pressure-relieving massages each week in 2023: 302 people.

Health and Safety 2: Consultation by an in-plant doctor & health checkups that exceed the prescribed law to improve health management results

Apacer provides employees of all ages with health checkups that are better than those prescribed by laws every year to regularly check their health. The idea of "prevention is better than treatment" is carried out, so we check for the particular parts our employees care about each year. Based on the checkup result, interviews with the on-site physicians are arranged for employees with high risks to be treated with the on-site physician so as to help them find problems and provide correction and treatment early. The Company also provides them with professional medical assistance and services.

In 2023, 2 inspection items that exceeded regulatory requirements were added
Total number of people participating in the health checkup: 427
Total number of employees attending the in-factory physician consultation: 67

Health and Safety 3: Health insurance policy better than the regulatory requirements to ensure the achievement of health management.

In addition to purchasing labor and health insurance for the employees, and paying the full pension in time under the old and new pension systems, Apacer also offers four kinds of major insurance (accident, medical, cancer, and life) for the employees every year. We ensure that we are able to protect employees and their family members, and are willing to bear the experience rating. Moreover, employees are allowed to self-fund insurance for family members to enjoy thorough protection together.

勞工保險

團保   全民健保

• 壽險、意外、醫療、癌症險
（公司全額負擔）

In 2023, we provided group insurance that exceeds regulatory requirements (Accident insurance, medical insurance, cancer insurance and life insurance)

A⁺ EAPs _ A⁺ ESG & RBA

Migrant worker benefits

Since Apacer joined the Responsible Business Alliance in 2017, we have gained a deeper understanding of the various expenses that migrant workers must bear in Taiwan. To take care of the migrant workers as much as possible, Apacer continues to provide the agents in Taiwan with subsidies for their expenses every month, as well as providing 3 meals a day, food allowance, and additional external assistance such as free dormitory and transportation allowance. Additionally, we assist each migrant worker with overseas brokerage fees, fees for health checkups and licenses during their tenure, and inbound flight tickets. In response to the COVID-19 pandemic starting in 2020, besides providing promotion and training on prevention for migrant workers, we have improved the promotion of prevention information in the dormitory to help migrant workers understand and comply with prevention measures so that they are able to maintain their health and safety.

● Diverse and smooth employee communication channels

Apacer has specially planned interesting Learning Passports and a Corporate Culture Learning Camp for new employees to help them integrate into Apacer's corporate culture. For all current employees, Apacer values their opinions and feedback. We have established a map of diverse and smooth communication channels for employees, and formulated the "Employee Reporting Procedures", "Workplace Sexual Harassment Complaint and Disciplinary Regulations", and "Sexual Harassment Complaint Prevention and Investigation and Handling Measures". These regulations and measures allow colleagues to fully express their thoughts and opinions, and we also provide care and assistance when necessary. For "Employee Complaint Handling Procedures", please refer to Apacer's official website. https://www.apacer.com/zh-tw/normaldownload/major-internal-policies

All employees

Face-to-face communication
- New employee/leaver interview
- Performance interview
- Labor-management meetings
- Afternoon tea for the CEO
- Gatherings of various units

- Head of each unit
- Human Resources and Administration Department

Electronic communication
- Hii Apacer Intranet Website
- Electronic groups by function and department
- Employee opinion survey

- Each functional team/Head of each unit
- Human Resources and Administration Department

Complaint channel
- Complaint Hotline/E-mail
- Sexual Harassment Complaint Procedure

- Sexual Harassment Complaint Handling Team
- Human Resources and Administration Department

Communication Outcome
- CSR/ESG Report
- RBA Advocacy & Training

- Human Resources and Administration Department
- Occupational Safety and Health Committee
- Sustainable Development Committee
- RBA Committee

Board of Directors Executive Management Committee

Face-to-face communication

• New employee interviews

- To help new colleagues adapt more quickly and integrate into the workplace, Apacer interview new colleagues on a monthly basis to answer and evaluate their improvements based on their suggestions/questions.
- In 2023, a total of 85 new employees were interviewed, and a total of 18 suggestions/questions were raised by new employees, which have all been replied to or handled.
- Regular interviews each month

• Labor-management meetings

- Regular labor-management meetings are held each quarter for employees to discuss and communicate about the Company's various systems and colleagues' opinions on the Company's policies, work environment, safety and health, etc.
- Quarterly regular labor-management meeting

• Performance interview

- At Apacer, we conduct performance evaluations for colleagues on a regular basis every six months, and encourage each unit head to take the opportunity to conduct performance interviews with colleagues to help them understand their strengths and shortcomings at work.
- Performance evaluation once every six months

• Afternoon tea for the CEO

- The CEO regularly interacts with members of the talent supply chain every year to understand the talent's expectations and suggestions for the Company's current operations and future development. The interaction results of the tea party will become an important reference indicator for the Company's development and the implementation of business plans.
- Regular interactive tea party every year

*The talent reward plan was suspended once in 2023.

2023 labor-management meeting	
Number of labor and management representatives	Five labor representatives and five management representatives
Election method of labor representatives	Elected by all full-time employees
Term of office of the labor and management representative	4 years
Frequency of meetings	Quarterly (4 times a year)
Discussion matters	1.Corporate operations and profitability 2.In response to the revision of the Labor Standards Act 3.Annual new product planning 4.Discussion of ESG and employee benefit activities
Material resolutions	1.Resolutions for the 2024 calendar 2.The 7th labor-management re-election All major resolutions are announced on the intranet website

Electronic communication

Hii Apacer Intranet Website

The homepage of the website has three major units: Promotion of the Company's important policies, various announcements, and all information. Colleagues can like, ask questions, or post opinions on the platform at any time.

- Electronic groups by function and department

All functions and units are encouraged to use various social media to form their own communities to achieve common goals through real-time communication and grasp of information.

- Employee opinion survey

We conduct employee opinion surveys every two years. We evaluate six major driving factors, including: supervisors, colleagues, remuneration, work development, corporate culture, and overall satisfaction. We further understand the commitment of colleagues in three aspects: value, effort, and retention.

Complaint channel

- Complaint Hotline/E-mail

Apacer has established the "Employee Reporting Procedures" that apply to all employees of the Company through an open and smooth channel to file complaints about labor inequities or illegal acts that affect the Company. At the same time, the complaint counter also regularly communicates the information on the intranet website. The HR unit is complaint window for handling the complaint, and the identity of the reporter will be kept confidential if necessary. After confirming the acceptance of the grievance case, the HR unit shall reply to the reporter with the investigation result in writing within 30 days. If the reporter has any objection, he or she may report again within 10 days after receiving the reply. As of the end of 2023, there were no employee complaints.

Complaint procedure

01 Application

Applicable to: The Company's employees

Complaint requirements: The complainant may request that his/her identity be kept confidential.

02 Complaint acceptance

Acceptance window: HR Unit
Acceptance conditions: Officially named documents and specific facts

03 Complaint investigation

Investigation days: The investigation will begin within 7 days, and the investigation report will be submitted within 30 days.
Convening a meeting: A "Human Resource Evaluation Meeting" may be convened to review the investigation report if necessary (The meeting shall be composed of both employers and employees. An odd number of members is favorable. There shall be at least 5 members and at least half of them are female)

04 Complaint determination

Approval for reporting: The investigation report or meeting minutes shall be submitted to General Manager for approval.

05 Reply to complaint

Number of days to respond: Reply with the survey result within 30 days.
Re-report: Any objections can be re-submitted within 10 days after receiving the reply.
Case closure: The case will be closed if there is no objection.

Sexual Harassment Complaint Procedure

Apacer has formulated the "Workplace Sexual Harassment Complaint and Disciplinary Measures" and "Sexual Harassment Prevention and Complaint Measures, Investigation and Handling Measures", which will apply to all of the Company's employees (employees, dispatched labors, technicians, and interns) to all the incidents where our colleagues have been sexually harassed by anyone (including non-employees). By doing this, we prohibit any form of sexual harassment and protect the rights and interests of our colleagues and the general public. The HR unit is the complaint window for accepting the report, and the reporter may request that his/her identity not be disclosed.

In terms of incident handling procedures, the complaint window convenes the "Sexual Harassment Complaint Handling Team" according to the needs of the event. The team is composed of representatives from both parties to handle and investigate sexual harassment cases. The working group has one permanent member (the Head of HR) who records the meeting. During each meeting, a head at or above the level of non-related units is invited to serve as the meeting chairperson based on the case. The team consists of at least 3 members (preferably an odd number). The ratio of female representatives shall not be less than 1/2, and the male representatives 1/3 or higher. In addition, experts and scholars may be hired to serve as team members with reference to the Ministry of Health and Welfare's "Professional talent for Sexual Harassment Investigation" (website: https://expert.mohw.gov.tw/).

For reports that are accepted, the HR unit shall investigate within 7 days after the report is filed or transferred, and complete the investigation within 2 months. The HR unit may extend the investigation for 1 month if necessary, and notify the parties concerned. As of the end of 2023, there were no reports of sexual harassment.

Complaint procedure

01 Application
Applicable to all the Company's employees (including employees, temporary employees, interns, etc.), or all the Company's employees when receiving complaints from the public.
Complaint requirements: The complainant may request that his/her identity be kept confidential.

02 Complaint acceptance
Acceptance window: HR Unit
Acceptance conditions: Officially named documents and specific facts

03 Complaint investigation
Investigation days: The investigation will begin within 7 days, and the investigation report will be submitted within 30 days.
Convening a meeting: Convene a meeting of the "Sexual Harassment Complaint Handling Team" to review the investigation report (The team consists of both employers and employees. An odd number of members is favorable. There shall be at least 3 members and at least half of them are female. External experts may be hired if necessary)

04 Complaint determination
Approval for reporting: According to the resolution of the "Sexual Harassment Complaint Handling Team" meeting.

05 Reply to complaint
Number of days to respond: Reply with the survey result within 60 days.
Re-report: Any objections can be re-submitted within 20 days after receiving the reply.
Case closure: The case will be closed if there is no objection (For cases applicable to the Sexual Harassment Prevention Act, a further report may be filed with the local government within 30 days after receiving the reply)

Talent Cultivation and Remuneration System

Apacer talent Development System

Vision and mission

With digital storage as the core, we have become a leader in technological information service integration. We are committed to "striving for perfection and sharing memories" and integrating "digital storage, innovative applications, and added-value services" to become "the most trustworthy business partner".

Core values — Deliver on promises, strive to be better, advance together

Long-term business strategy
- Introduce outstanding talent and stack future technologies
- Enhance product value, differentiate market positioning
- Implement lean process management and optimize service systems
- Team service for customers and marketing channel development

Operational momentum
- Deployment of future technologies
- Focus on key areas
- Digital transformation of operations
- Strategic partner alliance

Talent Development Policy — Attract excellent talent and develop future technologies: Build a friendly and healthy workplace, and build a trustworthy main brand

Talent Development Policy — Competence-based talent development system establishes a dual-track talent system, promotes the construction of talent supply chain, and Apacer Academy maintains industry-level remuneration while continuously offering A+ EAPs employee assistance programs

Talent management	Recruitment and selection	Training and development	Performance development	Employee relations
• Dual-track talent system • Talent supply chain	• Competence assessment • Talent image	• Apacer Academy • Job Description • Training structure • Learning Map • Occupational (skill) competency assessment • New employee guidance evaluation	• Performance evaluation system • Rank promotion system • Project promotion progress (Fast Track)	• External salary survey • Competitive remuneration system • Employee shareholding trust • A⁺EAPs sports enterprise • Employee assistance program

Competence-based talent development system

● Apacer talent Development System

The HR unit inherits Apacer's vision, mission, core values, long-term business strategies, and the four major operating momentums. The unit designs a function-based talent development system, plans talent development policies and strategies, and gradually implements five major HR functions, including talent management, recruitment, training and development, performance development, and employee relations. Moreover, the unit implements their respective plans, and reviews the internal and external environments every year to make rolling adjustments.

Apacer's Talent Development Policy
Attract excellent talent and develop future technologies, build a friendly and healthy workplace, and establish a trustworthy employer brand

Apacer's Talent Development Strategy
We are committed to providing competitive remuneration and benefits in accordance with our talent development policy.
We have established a dual-track talent development system, promoting the talent supply chain mechanism and establishing the Apacer Academy. With these establishments, we have created a friendly and healthy workplace with work-life balance and built a trustworthy employer brand, adding value to talent and creating a win-win situation.

Apacer's Talent Development Targets
Based on the talent development strategy, talent development goals are set, including external compensation survey reaching over P50 ↑, the retention rate of dual-track talent reaching over 90% ↑, annual employee turnover rate is below 2.5% ↓. The goals are reviewed and improved annually at the Sustainable Development Meeting.

Input →

Manpower recruitment cost:
-NT$2,550,000

Expenses for talent development and retention
-NT$13,240,000

Personnel remuneration and benefits:
-NT$740,989,000

Apacer talent development policy and strategy

Policy: Attract outstanding talent and advancing future technologies, creating a friendly and healthy workplace to establish a trustworthy employer brand
Strategy:

- Competence-based talent development system
- Establishment of a dual-track talent system
- Promoting the talent supply chain mechanism
- Establishment of the Apacer Academy (learning maps are planned based on the training framework)
- Maintain industry-level remuneration
- Continuous A+ EAPs Employee Assistance Program

Output →

Human capital efficiency

- External remuneration survey percentile: Same industry Page 50
- Talent match between dual-tracks: 60%
- Dual-track talent retention rate: 90%
- Annual employee dismissal rate: 2.5%

Social economy benefits

- Relative contribution of employee remuneration and benefits to social economy: NTD 740,989,000

Note: Total socioeconomic benefits include salaries and bonuses, insurance, retirement pension, and other benefits. These figures reflect the benefits Apacer employees have contributed to the economy of the overall society.

Competence-based talent development framework

To establish a dual-track talent system for management and professional development, Apacer has planned a competency-based talent development framework. Starting from the job description, the framework distinguishes management, professional, and general competency, and then plans a series of talent management development framework related to salary management, talent management, recruitment and selection, training development, and performance management.

Organizational strategy → Job description (JD) → Remuneration management

Completed
In progress
Pending activation

IDL
- Management competency
- Professional competency
- General competency
- Performance targets (KPIs)

DL
- Production skills

Talent supply chain
- Talent reserve
- Potential talent
- Core talent
- Top talent

Talent selection by competency
- Selection test
- Functional behavior interview
- Talent image

Apacer Academy
Training structure
Training package
Learning Map

Internal lecturer
Training plan
Mentor plan (S-OJT)
Individual Development Plan (IDP)
Knowledge inheritance

Competence assessment (IDL)
Skills assessment (DL)
Performance evaluation

Promotion and rewards
Talent retention

Talent management | Recruitment and selection | Training and development | Performance development

Dual-track talent system

Since 2020, Apacer has established a dual-track talent development system that includes academic background, job description, competency evaluation, and performance evaluation results to solve the problems of promotion delay and difficulties of about 60% of our employees. In 2023, following the new dual-track talent development system and management regulations for all employees, a total of 71 colleagues (9 in management positions and 62 in professional positions), accounting for 16% of the total employees, were promoted, which exceeded 2022 by about 1.1 times. In 2023, we even established a talent development system and integrated the various processes for talent after joining the Company, including education and working experience, personal competency development, training, and performance history. The heads make decisions about talent utilization based on data.

DL : 3-tier and 5-level promotion ladder

IDL : 6-tier and 14-level promotion ladder

(Direct) Operator
- 2G Assistant Technician
- 3~4G Technician and Senior Technician
- 5~6G Foreman and Senior Foreman

Job Evaluation

One year at the earliest · · · Two years at the earliest

(Indirect) Entry-level Personnel
- 8~9X
  - Assistant Engineer
  - Assistant Administrator (Deputy team leader)
- 10~11X
  - Engineer
  - Administrator (Team leader)
- 12~13X
  - Senior Engineer
  - Senior Administrator (Senior team leader)

Two years at the earliest

(Indirect) Management
- Senior manager 20~21M
  - Deputy Head
  - Director ↑
- Mid-level manager 17~19M
  - Assistant Manager
  - Manager
  - Senior manager
- Entry level manager 14~16M
  - Deputy Directors-general
  - Directors-general
  - Senior Directors-general

Professional positions
- 17~19X
  - Deputy Project Assistant Manager
  - Project Manager
  - Senior Project Manager
- 14~16X
  - Deputy Project Directors-general
  - Project Directors-general
  - Senior Project Directors-general

Remarks by Occupational Category:
G: Represents onsite operators
X: Represents the collective name of each functional position (A to Y)
M: Represents the managerial employees

Talent supply chain

To continuously provide and train high-quality talent, Apacer responded to market competition and various business challenges by constructing a "talent Supply Chain" in 2017 to develop talent supply chain, starting from reserve talent to potential talent and long-term core talent of the Company.

Strategy and operational management meetings

Strategy management process
- Strategic intensions
- Growth strategy
- Strategy deployment
- Strategic objectives
- Unit goals
- Personal goals

Organizational management process
- Organizational inventory
- Shift schedule

Personal Evaluation Committee

Talent selection system
- Competence assessment
- Talent image
- Standardized position classification system

Talent employment system
- Strategy rotation
- Project learning

External talent

Talent quality gap

Internal talent pool

Talent training system
- Human resource management development plan
  - Shift schedule
  - Management training
- Professional Ability Development Program
  - Professional training
  - Product training
- Corporate Culture/General Education
  - Leaders' dialogues
  - Cultural Growth Camp
  - General course

Performance management and retention system
- Goal setting
- Performance evaluation
- Performance feedback
- Incentives for development
- Promotion and salary adjustments

Talent supply chain

The HR unit is responsible for the overall planning and initiation of the talent supply chain. First, talent structure and standards need to be confirmed for talent identification. Then, different talent development plans are provided based on different jobs, positions, and growth of talent. Lastly, talent retention is achieved through the reward mechanism. Talent development conditions are reviewed annually.

In 2023, Apacer had a total of 115 members, including 71 reserve talent and 44 potential talent. After training, about 70% were promoted and about 1% received developmental rotation. The retention rate was 98 %. More than 90 % of the talent strategic goals have been achieved, showing a steady growth as a whole compared to the implementation in the previous year.

1 **Talent Structure and Standards**
a. Confirm talent standards
b. List of centers recommended

2 **Talent identification**
a. Prelimij evaluation   c. Re-evaluation
b. Competence assessment

5 **Periodic review**
a. Talent review
b. System review

3 **Personal development**
a. Training
b. Rotation
c. Coach, Mentor to assist IDP

4 **Talent retention**
a. Promotion
b. Incentives

Apacer
Access the best

Talent image

To further cultivate and strengthen the structure of the talent supply chain, Apacer has been using the big data generated by the selection tool of an aptitude test in 2021 to identify the key characteristics of talent needed by the Company and indicate a picture of talent. In the future, it will align with the talent supply chain every year. Members in the chain will be compared to ensure that the Company's development needs are met.

The overall conformity of the 2023 talent picture was over 60%. The content of the talent picture will be optimized in the future to more accurately identify the key characteristics of the Company's talent.

Talent supply chain

Legacy inheritance class
Potential talent

	2021	2022	2023
Potential talent	52	41	44
Legacy inheritance class	66	70	71

Talent utilization

- Job promotion 11.3%
- Developmental rotation 0.9%
- Promotion by rank and professional title 58.3%
- Maintain original position 29.6%
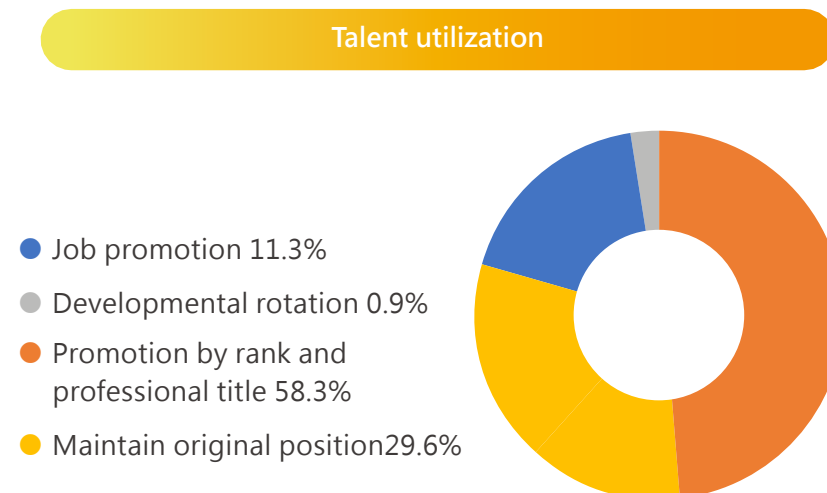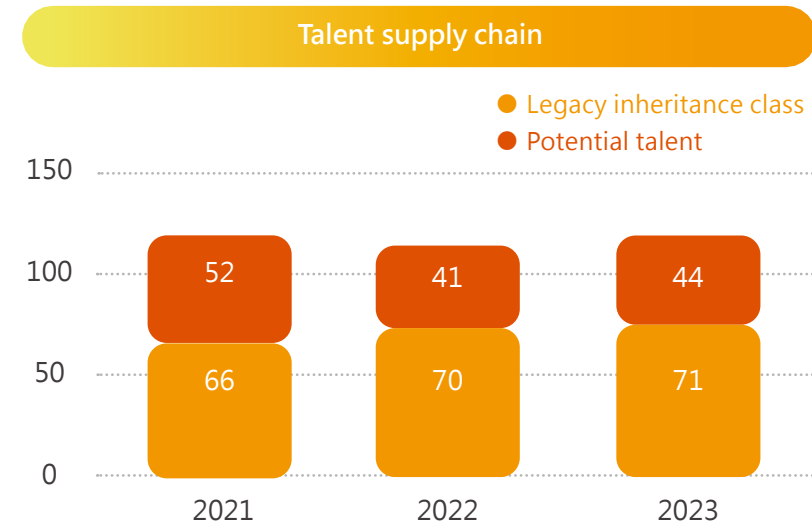
Apacer Academy

Apacer completed the establishment of the Apacer Academy in 2021 with the General Manager serving as the headmaster. Based on each competency, we have distinguished 9 academies by competency and profession, and plan learning development paths and training programs for all employees. The academy provides a transparent learning and development framework for new employees to the management, thereby enhancing the competence completion rate and competitiveness of colleagues.

Apacer Academy

Academy for Leadership and the Future

- R&D and Technology Institute
- Sales and Marketing Institute
- Product and Project Management Institute
- Manufacturing and Quality Institute
- Planning Institute
- Finance Management Institute
- Administration Management Institute

General Knowledge Academy
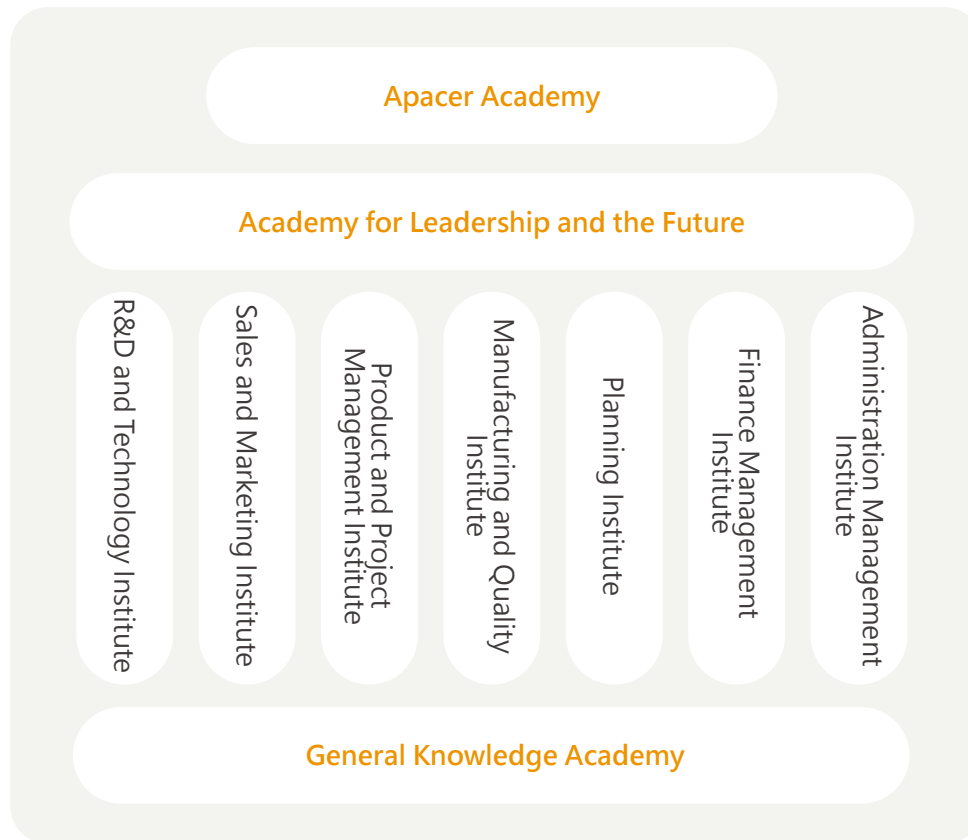
Education and training framework

Apacer adopts the five aspects of TTQS talent Development Management: P (Plan), D (Design), D (Do), R (Review), and O (Outcome) as the training management loop. The management ranges from inventory training needs, annual training plan and course design and implementation, monthly regular meeting review, to training outcome presentation, and finally connects performance and rewards to establish a complete and systematic human resources training framework.

- Plan
- Design
- Do
- Review
- Outcome

Education and training framework

- Link: Apacer Academy ⇢ Learning Map
- Apacer BP → Company, Department, Employee, Competence assessment
- 連結：JD ⇢ Competence assessment
- Training requirement → Training plan
- Training plan → D → L1 Reaction → L2 Learning test → L3 Behavior → L4 Result
- Questionnaire → L1 Reaction
- Learning test → L2 Learning test
- Action plan → L3 Behavior
- Performance link → L4 Result
- Training plan → Training system
- Link: Education and Training Procedures ⇢ Training system
- Training system → Induction training, In-service training
- Induction training → Work adaptation
- Work adaptation → General course, Professional course, Apprenticeship training
- In-service training → Competency development, Personal development
- Competency development → General course, Professional course, Management course, Core course
- Personal development → Core course
- Performance evaluation → Apacer BP
- Link: Performance evaluation
- Link: Promotion and salary adjustments
- Link: Remuneration
- Regular outcome review → Performance evaluation

Education and training courses

Apacer understands that employees are the source of corporate growth and competitiveness. We provide diversified education and training courses to enhance the professional abilities of employees to face the challenges of the rapidly changing external environment. Head of the units and colleagues will be interviewed, and a post-course satisfaction survey will be conducted. Head of the units may also submit training needs along with the Apacer Academy Learning Map during the annual training survey to help colleagues achieve the Company's business development goals and make the course more accessible. To meet the needs of functional learning, in addition to hiring external lecturers to give lectures, we also invite internal colleagues with expertise as lecturers to gradually pass on their experiences.

New employee training (Including occupational safety and health training for new employees)

Company culture (vision, mission, values), business direction, RBA & ethical corporate management promotion, environmental safety and health policy and management system, HR systems and regulations, system operations, and occupational safety and health for newcomers to help them get used to the Company's core values and working environment as soon as possible.

General training (including legal training)

General and professional training include on-the-job occupational safety and health, fire drills and training on other laws and regulations, and professional training for each duty to meet regulatory requirements and enhance the capabilities of all occupations.

Talent Training (including management training)

Training for managers at all levels and talent development to solidify the management and professional capabilities of the succession team

External professional training (including license training)

- Professional training: Global issues of concern, international market trends, external professional training required for each position, etc.
- License training: Professional licenses, legal licenses, etc.

Training on RBA & Management Integrity & Insider Trading (including on-the-job occupational safety and health training)

- RBA includes five major areas: Labor, health and safety, environment, ethics, and management systems.
- Ethical corporate management includes: Ethical Corporate Management Policy, Ethical Corporate Management Best Practice Principles, Code of Conduct, and Code of Ethics
- Insider trading prevention includes: SEC regulations, prohibitions, penalties, and operating procedures for management.

ESG training

Global corporate sustainability trends and issues of concern for global corporate sustainability, etc.

Education and training courses

In 2023, Apacer introduced the Hahow Online Learning Platform. In addition to providing diverse learning resources, it also uses the Platform to designate compulsory courses and turn internal courses online to provide colleagues with more flexible learning space and to further implement hybrid training. In addition, background data (such as class attendance time, number of courses completed, and test scores) are used to track the colleagues' learning results. The overall training hours in 2023 increased by 1,065 man-hours to 9,734 man-hours compared to 2022.

2023 education and training statistics

Course type	Number of employees	Number of participants	Total man-hours	Total cost (TWD)
New employee training (Including occupational safety and health training for new employees)	535	401	768	
General training (including law-related training)		3,491	6,672	
Talent Training (including management training)		477	912	
External professional training (including license training)		87	760	$1,843,644
RBA & Ethical Corporate Management & Insider Trading Prevention Training (Including on-the-job occupational safety and health training)		514	514	
ESG training		79	108	
Total		5,049	9,734	
Average training amount per employee				$3,446

Note: The above data already includes the subsidiary UD Info.

Average training hours of employees in 2023

Job Category	Average training hours per employee per year (Female)	Average training hours per employee per year (Male)
Management personnel	20.0	23.7
Specialized personnel	21.3	29.3
Sales Personnel	46.1	19.9
Technician[1]	2.9	4.9
Total	90.3	77.8
Percentage	54%	46%

Note 1: The technical personnel training mainly focuses on on-site operation skills to meet the needs of online production, so the training hours are shorter.
Note 2: The above data already includes the subsidiary UD Info.

Effectiveness of education and training

To ensure the effectiveness and quality of all education and training courses, all courses are planned, designed, executed, and evaluated using the TTQS Training Loop and Kirkpatrick's Four-Level Training Evaluation Model to evaluate training effectiveness.

In 2023, Apacer launched its training courses focusing on four major themes, namely "Core Technology Deployment," "Transformation and Data-based Thinking," "Competence Enhancement and Reserve talent Cultivation," and "Product Enhancement and Sustainability Awareness". All cases produced concrete training results, and the overall course execution rate reached 99%.

4 Level	Evaluation method/basis	Outcome
L1 Reaction Response evaluation	Course satisfaction survey	92%
L2 Learning Learning evaluation	Drills, after-class feedback, homework, tests, etc.	100% implementation rate
L3 Behavior Behavior evaluation	Competency evaluation, pre-test and post-test, action plan, presentation, etc.	13 sessions
L4 Results Result evaluation	Quality improvement, reduction of customer complaints, maintenance of system effectiveness, improvement of employee engagement, etc.	3 sessions

Core technology deployment

- A total of 17 patents have been certified and are validly maintained.
- Implemented a total of 4 innovative value-added technology projects

Product reinforcement and sustainability awareness

- Product courses: 840 people in total
- Sustainability course: A total of 110 participants with an average score of 95.

Competence Improvement & talent Cultivation

- **Competence improvement**
  Continue to improve and maintain the supply rate at 91%
  Communication and coordination completion rate increased from 86% to 91% (+5%)

- **General training**
  88% of the students' presentation skills improved

- **talent training**
  100% of the students' presentation skills improved
  Final presentation: Two groups of participants performed exceptionally well.

- **Supervisor training**
  Feedback from subordinates indicates a 76% rise of positive attitude about supervisors

Transformation & Data thinking establishment

- Reform-related courses: A total of 6 people took the test, and the average score was 100 points. The test pass rate was 100%.
- Data thinking-related courses: A total of 14 people took the test, and the average score was 100 points. The test pass rate was 100%.

● Performance management

Apacer conducts skill evaluations for direct employees and competency evaluations for indirect employees on a yearly basis. The results of the skill evaluations/ competency evaluations are also considered in the Company's promotion system as an effective result for the future development plans of employees. Moreover, the Company conducts performance evaluation on a regular basis. In the design of its performance management system, the performance evaluation items are divided into direct and indirect employees, and the proportion of performance evaluation is divided into management and non-management positions. The results of the performance evaluation are also closely related to the Company's reward and promotion system so that the overall performance management system can reward colleagues in a timely manner and integrate with their future development plans.

Skill appraisal and competency evaluation

◆ Direct employees

We ensure that all operators strictly follow the standard operating procedures in the production process to reduce quality instability caused by human factors, and to cultivate multi-skilled workers to effectively adjust the use of manpower.

• Frequency of skill appraisal: Once/year
• 2023 skills evaluation execution rate: 100%
• Skill completion rate: 98.1%

◆ Indirect employees

The job description starts from the JD (job description) and divides the evaluation into three categories: Management, professional, and general. If the evaluation results show a gap in competency, they will be linked to the relevant courses in the learning map in the hopes of improving the required competency and improving the capabilities of colleagues.

• Frequency of competence evaluation: Once/year
• 2003 competency evaluation and talent supply chain competency evaluation execution rate: 100%
• Competence completion rate: 95.5%
  From 2021, the completion rate of management competency increased by about 5% on average, and the completion rate of general competency and professional competency increased by about 2% on average.

Performance evaluation

◆ Direct employees

• Frequency of performance evaluation: Conducted monthly
• Performance evaluation items: work quality, work discipline, work cooperation, attendance status

◆ Indirect employees

• Frequency of performance evaluation: Once every six months
• Performance evaluation items:
- KPI evaluation: The unit supervisor discusses with colleagues and cooperate with the Company's annual strategy and the unit's annual plan. KPI key performance indicators are set in January each year.
- Competency evaluation: To be formulated by the HR unit based on the core competency items for the competency development of each job category.

Performance bonus

◆ Direct employees

• Monthly and annual performance bonuses are distributed based on performance evaluation results.

◆ Indirect employees

• Performance bonuses are distributed on a quarterly (for business) and annual basis based on the performance evaluation results, and we regularly review the performance of employees and the progress of their personal development plans.

● Remuneration management

The HR unit formulates remuneration policies, designs financial and non-financial remuneration and benefit systems, and refers to multiple external remuneration survey reports every year to conduct rolling adjustment to ensure that Apacer's remuneration system is competitive in the HR market.

Over the years, Apacer has adopted the salary survey reports provided by a number of external professional consulting firms as the reference for the remuneration standard of peers in the industry. This is to ensure that Apacer can perform above the P50 percentile of peers in the industry and to attract outstanding talent to contribute their talent and long-term investment. In addition, various performance bonuses, patent bonuses, and other reward systems are available to encourage colleagues to continuously improve their work performance, pursue excellence and break through.

Apacer has established the Remuneration Committee since 2011, and all of the committee members have been independent directors since 2018. The Committee regularly reviews the performance and compensation policies, systems, standards, and structures for directors and managers. Moreover, the Committee reviews the performance of the management team and employee remuneration policy. For details on the operation of Apacer's functional committees, see: 1.2 Business Integrity and Corporate Governance.

Benefits

Non-financial
- 3 meals a day
- Weekly massage service
- Annual leave provided better than prescribed by law
- Subsidies for gatherings of departments
- Group insurance for dependents
- A⁺EAPs

Financial

Company:
- Annual salary adjustment
- Childbirth incentives
- Wedding and funeral subsidies for managers

Welfare Committee:
- Three major holiday/birthday gift vouchers
- Subsidies for travel, childbirth, weddings and funerals

Salary

- Median policy, same industry, page 50 to 74

Reward

- Bonuses (linked to the Company's performance) for three major festivals
- Performance bonus (related to the performance of the company/unit/individual)
- Employee remuneration (related to the performance of the company/unit/individual)
- Shares/Employee Shareholding Trust (for designated talent)
- Patent Creation Bonus

Allowance

- Bonus for managers and bonuses for duties
- Food allowance
- Shift allowance
- Overseas allowance
- Dependents allowance
- Housing allowance
- Relocation allowance after leaving/returning to Taiwan
- Settlement allowance for leaving/returning to Taiwan

Apacer applies fairness and impartial standards to classify employees and salary according to their academic background, job type, professional licenses, and special expertise.

Overall Pay Ratio in 2023

Job classification	Female	Male
Management personnel	1.0	1.2
Sales Personnel	1.0	1.0
Specialized personnel	1.0	1.2
Technical personnel	1.0	1.1

Note: The above data already includes the subsidiary UD Info.

In 2023, the ratio of basic-level employees[2] to the local minimum wage

Gender	Local minimum wage[1]	Apacer's salary	Salary and remuneration ratio of male and female
Female	1.0	1.2	1:1.1
Male	1.0	1.3	

Note 1: The minimum wage in Taiwan is based on the monthly basic wage of NTD 26,400 that was implemented on January 1, 2023.
Note 2: Basic-level employees of Apacer are technical personnel.
Note 3: The above data already includes the subsidiary UD Info.

Salary of non-head employees over the years

Item	2020	2021	2022	2023
Employees not in manager positions[1]	476	438	445	455
Average annual salary of non-head employees (NTD)	$869,000	$1,084,000	$1,178,000	$1,130,000
Median annual salary of non-head employees (NTD)	$729,000	$959,000	$1,014,00	$1,023,000

Note 1: Employees refer to the number of employees in Taiwan after deducting managers, part of the working hours, and salary for serving for less than 6 months. They are calculated based on the average number of people. The total salary is an accrual basis and includes: Basic salary, various allowances, overtime pay, various bonuses, employee remuneration. However, the salary does not include the estimated amount of share-based payment that is expensed.
Note 2: This salary profile follows the regulations of TWSE and only discloses that of Apacer, which is a listed company.
Note 3: The above data does not include the subsidiary UD Info.

Annual total compensation ratio

Ratio of highest compensation to median employee compensation[1]	Annual compensation change ratio[2]
622%	100%

Self-defining calculations with reference to GRI Standards
Note 1: Ratio of highest salary to median employee salary = ratio of median annual total compensation of top management/median of annual total compensation of all other employees (excluding top management).
Note 2: Ratio of annual total compensation change = ratio of annual percentage change in the total compensation of the top management/median of the percentage of change in the annual total compensation of all other employees (excluding the top management).

Remuneration and benefit expenses in 2023			
Type	Item	Amount (NTD)	Number of beneficiaries
Salary	Employee salary	$388,567,179	6,281
Reward	Holiday bonus	$42,953,854	1,037
	Performance bonus	$156,876,890	531
	Remuneration to employees	$90,849,0000	472
Benefits	Labor and health insurance	$39,416,367	6,281
	Group insurance	$1,697,419	6,281
	Employee health check-up	$213,500	427
	Maternity allowance	$219,000	12
	Massage service	$21,680	302
	Spring party event	$2,510,855	474
	Family activity	$2,189,725	426
	Retirement plan	$10,475,135	6
Welfare: Welfare Committee	Subsidies for wedding and funeral	$134,200	62
	Subsidies for meetups between departments	$336,801	482
	Subsidies for books, newspapers and magazines	$50,990	490
	Subsidies for annual and festival activities	$1,932,455	529
	Subsidies for clubs	$80,000	117
	Subsidies for travel	$2,464,178	430
Total		$740,989,228	24,640

Note: The above data includes UD Info

● Retirement system and assistance plan

Apacer has formulated the employee retirement policy in accordance with the Labor Standards Act, with clearly stated pension distribution, employee retirement conditions, and pension payment matters. At the same time, Apacer has legally established the "Supervisory Committee of Business Entities' Labor Retirement Reserve", which deposits the employee retirement reserves into the statutory financial institutions each year under the Committee's name and based on the amount evaluated by a third-party actuary (the actuarial evaluation report is the report of the previous year made in January each year). Starting from July 2005, to meet with the new retirement pension system of the government, Apacer allocates 6% of the retirement pension for employees who choose the new system according to the monthly wage contribution classification of labor pension (the employees may also voluntarily contribute their wages under the 6% range), which is stored in the personal retirement pension accounts established by Bureau of Labor Insurance . For employees choosing the old system, Apacer continues to make adequate contributions to the retirement reserve annually according to the old regulations and the actuary's advice. As of December 31, 2023, Bank of Taiwan's retirement pension asset balance has exceeded NTD 30 million, which has been fully allocated according to the actuary's report. In 2024, only NTD 390,000 is required to be allocated. This has been reviewed and approved by the Supervisory Committee of Business Entities' Labor Retirement Reserve.

To help retired employees for the new future and challenges, Apacer offers the following assistance programs:
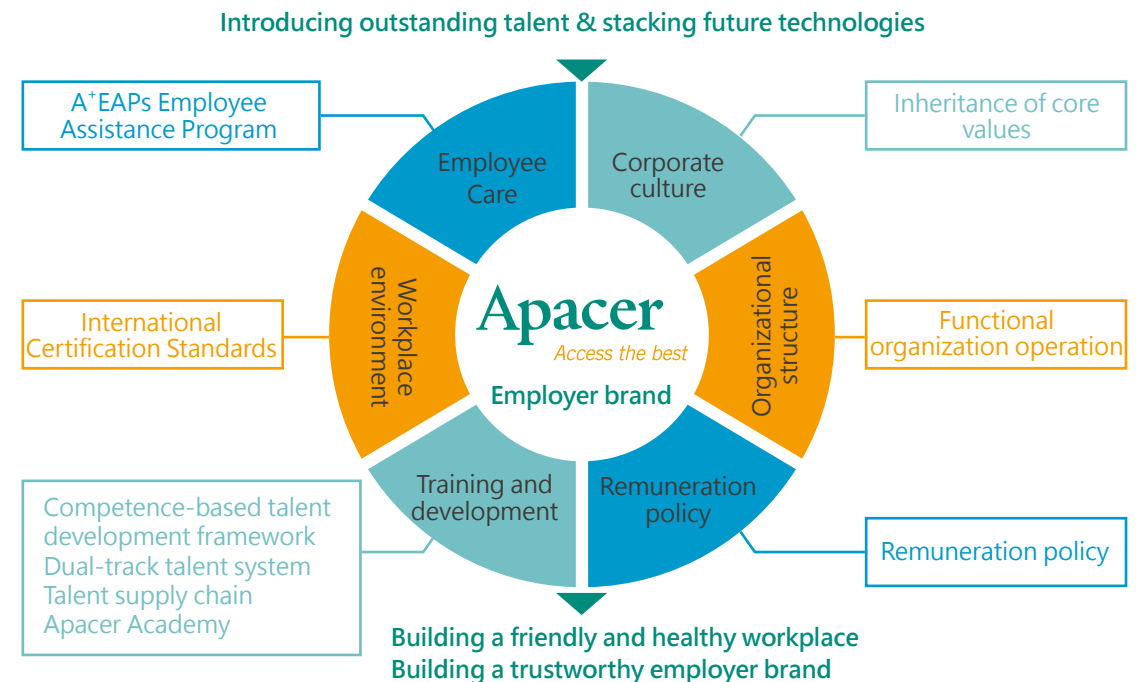
◆ Economy: Since 2008, Apacer has introduced a preferential retirement procedure, which is subject to the approval of the competent authorities. Employees can choose to start the retirement life. This enables employees to plan early and adapt to the new future in advance apart from having sufficient protection.

◆ Health: Apacer has regular on-site doctors to provide middle-aged and elderly employees with health consultations on physical changes. The Company also organizes regular health checkups and health promotion lectures to remind them to pay attention to their health, and have the knowledge of nutrition.

◆ Workplace: Based on employees' wishes after retirement, industry development trends, and in line with the government's policy of "Three Industries and Four Modernizations", we provide relevant official vocational training to enhance their other knowledge-based professional capabilities and to start a new career.

For employees whose employment is involuntarily terminated, Apacer provides job leave and severance pay in accordance with the Labor Standards Act to assist employees in preparation after resignation.

Apacer employer brand

Through the talent development system, Apacer has launched a series of talent development operation, including policies and strategies related to talent management.

In addition, based on the six aspects of corporate culture, organizational structure, remuneration policy, cultivation development, workplace environment, and employee care, we conduct review, refinement, and rolling adjustments with reference to internal and external environmental developments to ultimately create a friendly and healthy workplace and build a trustworthy employer brand.

Introducing outstanding talent & stacking future technologies

A+EAPs Employee Assistance Program

Inheritance of core values

Employee Care

Corporate culture

International Certification Standards

Workplace environment

Apacer
Access the best
Employer brand

Organizational structure

Functional organization operation

Competence-based talent development framework
Dual-track talent system
Talent supply chain
Apacer Academy

Training and development

Remuneration policy

Remuneration policy

Building a friendly and healthy workplace
Building a trustworthy employer brand

Chapter V

A Good Partner of a Livable Home

Vision

With the idea of "A perfect home, Apacer is with you", Apacer is deeply committed to localization, and encourages its employees to act on sustainable solutions and give back to local needs with quantifiable actions. These initiatives will gradually spread to neighboring communities and even other counties and cities. Furthermore, we work together as a group to create a sustainable environmentand and a happy homeland that is suitable for living and thriving together.

Policies and Commitments

The plant-office headquarters of Apacer is located in Tucheng District, New Taipei City. To give back to society, we continue to promote local care programs and establish long-term cooperative relationships with local groups. Through actions such as being friendly to the community, we hope to inspire employees to participate and expand our social influence.

5.1 Local impacts

Since 2015, Apacer has been implementing the "Green Plan", which mainly encourages employees to implement energy conservation, pursue carbon reduction, and adopt a vegetarian diet.

In 2016, we launched the "One-day Volunteer" activity. For the participation in relevant projects over the years, please refer to the following table.

A total of 586 people have participated in the Green Initiative.

Training	2015	Taiwan Energy-Saving Patrol On-site diagnosis during the Carbon-reducing Vegan month	5 lectures attended by 218 employees Nearly 60% of the employees indicated that "the activities enhanced the motivation to choose a vegan diet."
		Green Parent-Child Day	48 employees and their family members participated 100% of the respondents gave feedback indicating that "the event has inspired more energy-saving and eco-friendly lifestyle habits."
Action	2016	One-day volunteer at Apacer	34 employees and their family members participated 100% of the respondents said they would like to continue participating in corporate volunteer activities in the future.
In-depth participation	2017	One-day volunteer at Apacer	42 employees and their family members participated Participating employees have a 100% satisfaction rate.
		Carbon Reduction and Vegan Day	1 lectures attended by 60 employees Energy Soup + Vegan Experience Lecture
Innovation planning	2018	One-day volunteer at Apacer	42 employees and their family members participated Collaborating with Landscape Conservation Association for 3 consecutive years 97.6% were satisfied with the tour guide on the nature tour during the one-day volunteer activity An exhibition was displayed on the 1st floor of the headquarters based on the theme of tung blossom and fireflies, which received positive feedback.
		Parent-child DIY vegan spring rolls	45 employees participated Encourage employees to eat healthy and grow healthy
Continuous investment	2019	One-day volunteer at Apacer	37 employees and their family members participated The theme of this event is removing invasive species, accompanied by tour guide on ecological firefly watching. The resident Buddhist abbot of Shan Xi Temple expressed high support for the continuation of relevant activities to help maintain ecological balance.
Expanding participation	2020	DIY vegan diet for parents and children	60 employees participated Collaborated with King Wen University of Science and Technology - King Wen Sinwu Local Industrial Social Responsibility Project to promote natural vegan diet

Apacer is with You

Local care	2021	Charity activities	- 594 invoices collected - 1 batch of supply donated - 168 new year dishes collected Charity sale of NTD 81,696 in red envelopes, with 550 sets
		Vegan Delight	- 40 employees participated - Experience the joy of living a vegan life
Local care	2022	Humanity and culture activities	- We collected second-hand toys and donated one batch of new/second-hand toys to New Taipei City Toy Bank. - Second-hand item exchange - 45 items in total - Donation of electronics: Benefiting 3 social welfare organizations - Employees were encouraged to participate in the Huashan Social Welfare Foundation's New Year dishes raising activity. - We continue to hold invoice raising activity, where 577 invoices were collected (as of November 2022)
		Operation of protecting the local area	- Adoption of organic coffee plants - NTD 60,000
Local care	2023	Vegan Delight	- A total of 51 people participated in a vegan meal event for employees.
		Operation of protecting the local area	- Adoption of organic coffee plants - NTD 60,000
		Lecture on dementia	- A total of 51 people participated in a vegan meal event for employees.
		Blood donation campaign	- Employees were encouraged to participate in blood donations. For every 250 c.c. of blood donations, the Company can be exchanged for 2 hours of volunteer leave, and 500 c.c. of blood can be exchanged for 4 hours of volunteer leave. - Total annual participants: 93 - Total volunteer leave hours: 282 hours - Total blood donated: 35,250 CC
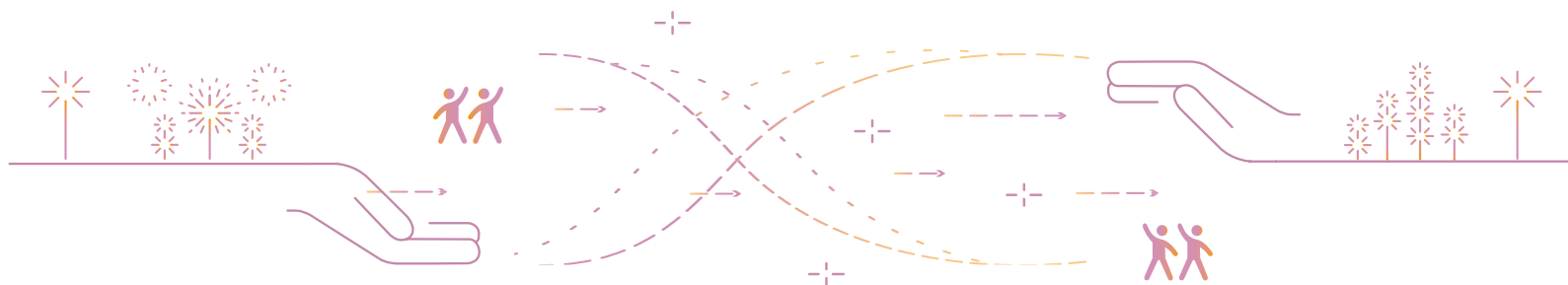
5.2 Apacer is with You and Cares for the Local Environment

Apacer upholds the principle of "Deliver on promises, strive to be better, advance together", demonstrating the spirit of "Being good partners". By working with different units or local non-governmental organizations (NGOs) to promote the "Apacer is with You" project. We hope to expand influence through different aspects of care.

Blood donation campaign

In light of the severe blood shortage in early 2023 in Taiwan's blood banks, Apacer promotes the method of donating blood in exchange for volunteer leaves, hoping to encourage employees to take voluntary actions and make practical contributions to society. The blood donation activity lasted for an entire year and received 93 donors, with a total volume of 35,250 c.c. of blood. Apacer provided 282 hours of paid volunteer leave to those employees.

Coffee tree adoption

Gufeng Coffee Manor, which is located in Gukeng, Yunlin, is 1300 meters above sea level and is suitable for growing coffee beans. In addition to adopting organic pesticide-free fertilizer and environmentally friendly cultivation methods, the owner of the manor, Lai Yan-Ho, also reserves an exclusive area for Taiwan's endemic protected bird, Lophura swinhoii, to strike a balance between crops and ecological conservation.

Apacer has been cooperating with the Nantou Branch of the Agency of Rural Development & Soil and Water Conservation (Nantou Branch of ARDSWC) since 2022 to adopt 20 coffee trees at Gufeng Coffee Manor and use the coffee beans to make drip bag coffee from the charity factory.

Dementia care

People with dementia can experience memory loss, which is similar to when a memory error occurs in a device that blocks access to data. For this reason, Apacer began to pay attention to this issue in 2023. First, we organized internal "Dementia Lectures". We invited Chen Yun-Ching, Secretary General of Taiwan Alzheimer's Disease Association, to give a lecture on dementia in Apacer. Themes on the day include the AD-8 scale to screen very mild dementia warning signs, care, and resource sharing, from which all the participants benefited a lot.

Art and culture sponsorship

This year, Apacer sponsored the First OneSong International Music Competition - String Quartet. It is the only event in the world that features Taiwanese music and the creation of Taiwanese composers as the competition item. Apacer hopes to make more of Taiwan's beautiful musical works heard around the world through sponsorships.

The coffee will be gifted to customers, suppliers important partners. In 2023, Apacer continued its adoption projects and held a coffee tree adoption ceremony on December 18, 2023, together with the Nantou Branch of ARDSWC and Gufeng Coffee Manor, hoping to realize sustainability and continue to take care of the livelihood of the farmers through the cooperation between the Company and local farmers.
delete this whole sentence

Apacer at the ceremony of adopting coffee trees. From left to right: Lai Yan-Ho, Manager of Gufeng Coffee; Austin Chen, Apacer's Chairman; Chen Tsun-Kai, Director of the Nantou Branch of ARDSWC; Chang Chia-Kun, General Manager of Apacer

● Charitable donations/Sponsorships

Apacer believes that the value of donations are not limited to the amount of money. Donations can also connect with society and solve problems. We maximize the value of each donation and deliver a positive impact on society.
By the end of 2023, Apacer has donated a total of NTD 2.05 million to local communities, charitable organizations, and arts and cultural organizations.

Table of cumulative donations over the years

Donation/Sponsorship	Receiving unit	Project action	Amount donated (NTD)
Art and culture sponsorship	Tainan Municipal North District Daguang Elementary School	For three consecutive years, Apacer's sponsorship has been used for the operation of art clubs and external performances.	500,000
	OneSong Orchestra	Sponsorships are used for competition preparation and promotion purposes.	100,000
Athletics education	Municipal Yulin Junior High School Track and Field Team	For five consecutive years, Apacer's sponsorship has been used to cover player training and equipment replacement.	297,220
Local community	Tucheng District Nature Landscape Conservation Association, New Taipei City	Apacer has commissioned the association to plan the One-day Volunteer activity for four consecutive years.	32,000
	Gu Feng Coffee	We adopted coffee trees and make the harvested coffee beans into drip bag coffee through the charity factory.	120,000
Other	Charitable foundations, social welfare organizations, etc.	Apacer helped people in need with their problems and improved their living quality by donating supplies and money to social welfare organizations in need.	1,009,358
Total amount of donation			**2,058,578**
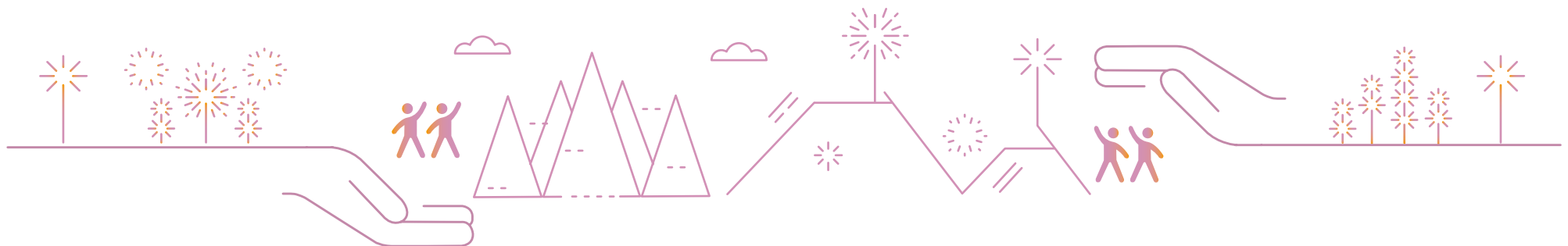
Appendix

● Appendix 1: GRI Standards Disclosure Table

The following tables refer to the GRI Standards: 2021 version and correspond to the contents of this report. As shown in the declaration of external verification, the relevant information has been verified to meet the requirements of GRI Standards for the external verification list.

Declaration	Apacer Technology Co., Ltd. made reporting according to the GRI Standards from January 1, 2023 to December 31, 2023.
Use of GRI1	GRI 1: Basic in 2021
Applying of GRI standards	N/A

GRI 2: General Disclosure in 2021

Disclosure item		Description	Reference	Notes
Organization and reporting practices	2-1	Organization details	1.1 About Apacer	
	2-2	Entities included in the organization's sustainability reporting	About the Report	
	2-3	Reporting period, frequency, and contact person	About the Report	
	2-4	Restatements of information	4.1 Personnel Overview	The information has been restated on P82 in the 2022 Sustainability Report as the number of employees reinstated should be 5 female employees. Please refer to "CH4.1" for details
	2-5	External assurance	About the Report 1.2 Ethical Corporate Management and Corporate Governance Appendix 4: Declaration of Third-party Independent Assurance Opinion	
Events and workers	2-6	Events, value chains, and other business relationships	1.3 Product Diversification and Operational Performance 3.1 Sustainable Supply Chain Management	
	2-7	Employee	4.1 Personnel Overview	
	2-8	Non-employee workers	4.2 Employee Safety and Health	

GRI 2: General Disclosure in 2021

Disclosure item		Description	Reference	Notes
Governance	2-9	Governance structure and composition	Sustainability strategy development 1.1 About Apacer 1.2 Ethical Corporate Management and Corporate Governance	
	2-10	Nomination and selection of the highest governance body	1.2 Ethical Corporate Management and Corporate Governance	
	2-11	Chairman of the highest governance unit	About the Report 1.2 Ethical Corporate Management and Corporate Governance	Chairman & CSO
	2-12	Role of highest governance body in overseeing impact management	1.2 Ethical Corporate Management and Corporate Governance	
	2-13	Person in charge of impact management	Significance analysis	
	2-14	Highest governance body's role in sustainability reporting	Sustainability strategy development 1.2 Ethical Corporate Management and Corporate Governance	
	2-15	Conflicts of interest	1.2 Ethical Corporate Management and Corporate Governance	
	2-16	Communication of key significant events	1.2 Ethical Corporate Management and Corporate Governance	
	2-17	Group intelligence of the highest governance unit	1.2 Ethical Corporate Management and Corporate Governance	
	2-18	Performance evaluation of the highest governance body	1.2 Ethical Corporate Management and Corporate Governance	
	2-19	Remuneration policy	1.2 Ethical Corporate Management and Corporate Governance	
	2-20	Remuneration Determination Process	1.2 Ethical Corporate Management and Corporate Governance	
	2-21	Annual total compensation ratio	4.4 Talent Cultivation and Remuneration System	Please refer to 4.4. Remuneration Management

GRI 2: General Disclosure in 2021

Disclosure item		Description	Reference	Notes
Strategies, policies and practices	2-22	Statement of sustainable development strategy	Sustainability strategy development	
	2-23	Policy commitment	ESG commitments in all aspects are available on our website. Supplier procurement policies are available on the website	
	2-24	Inclusion of policy commitments	Chapter I: A Partner that Leads to Innovation Chapter II: A Good Partner for a Green Environment Chapter III: A Good Partner That Shares Progress and Growth Chapter IV: A Friendly and Healthy Workplace Partner	
	2-25	Procedures for remediating negative impacts	Chapter I: A Partner that Leads to Innovation Chapter II: A Good Partner for a Green Environment Chapter III: A Good Partner That Shares Progress and Growth Chapter IV: A Friendly and Healthy Workplace Partner	
	2-26	Mechanisms for seeking advice and raising concerns	1.2 Ethical Corporate Management and Corporate Governance 3.2 Customer Relationship Management 4.3 Employee Benefits and Communication	
	2-27	Regulatory compliance	-	The Company has no violations of relevant laws and regulations.
	2-28	Membership in associations	1.4 Innovative R&D	
	2-29	Stakeholder engagement policy	Stakeholder Engagement	
	2-30	Group agreement	-	Not applicable. The Company does not have collective agreements, but the opinions of the unions and labor-management meetings will still be considered.

Disclosure item		Description	Reference	Notes
Material Topics				
GRI 3: Material topics 2021	3-1	Process for determining material topics	Significance analysis	
	3-2	List of material topics	Significance analysis	
Material topic: Corporate governance				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter I: A Partner that Leads to Innovation	
Material topic: Operational risk management				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter I: A Partner that Leads to Innovation	
Material topic: Information security				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter I: A Partner that Leads to Innovation	
Material topic: Economic performance				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter I: A Partner that Leads to Innovation	
	201-1	Direct economic value generated and distributed by the organization	1.3 Product Diversification and Operational Performance	
	201-3	Confirmed benefit obligations and other retirement plans	4.4 Talent cultivation and remuneration system	
Material topic: R&D innovation				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter II: A Good Partner for a Green Environment	

Disclosure item		Description	Reference	Notes
Material topic: Energy management				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter II: A Good Partner for a Green Environment	
GRI 302 Energy	302-1	Energy consumption within the organization	2.2 Climate Change Risk Management	
	302-3	Energy intensity	2.2 Climate Change Risk Management	
	302-4	Reducing energy consumption	2.2 Climate Change Risk Management	
Material topic: Greenhouse gas management				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter II: A Good Partner for a Green Environment	
GRI 305 排放	305-1	Direct (Scope 1) GHG emissions	2.2 Climate Change Risk Management	
	305-3	Indirect (Scope 2) GHG emissions from energy	2.2 Climate Change Risk Management	
	305-3	Other indirect (Scope 3) GHG emissions	2.2 Climate Change Risk Management	
	305-4	GHG emission intensity	2.2 Climate Change Risk Management	
	305-5	GHG emission reduction	2.2 Climate Change Risk Management	
Material topic: Green product design, raw material management				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter II: A Good Partner for a Green Environment	
GRI 301 Materials	301-3	Recycled products and the packaging materials	2.4 Green Products	
Material topic: Sustainable supply chain management				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter III: A Good Partner That Shares Progress and Growth	

Disclosure item		Description	Reference	Notes
GRI 308 Supplier Environmental Assessment	308-1	New suppliers screened using environmental standard	3.1 Sustainable Supply Chain Management	
GRI 414 Supplier Social Assessment	414-1	New suppliers screened using social standard	3.1 Sustainable Supply Chain Management	
	414-2	Negative social impacts in the supply chain and actions taken	3.1 Sustainable Supply Chain Management	
Material topic: Hazardous substance management				
GRI 3 : Material topics 2021	3-3	Material topic management	Chapter III: A Good Partner That Shares Progress and Growth	
Material topic: Occupational health and safety				
GRI 3 : Material topics 2021	3-3	Material topic management	Chapter IV: A Friendly and Healthy Workplace Partner	
GRI 403 Occupational Safety and Health	403-1	Occupational safety and health management system	4.2 Employee Safety and Health	
	403-2	Hazard identification, risk assessment and incident investigation	4.2 Employee Safety and Health	
	403-3	Occupational health service	4.2 Employee Safety and Health	
	403-4	Worker participation, consultation, and communication on occupational health and safety	4.2 Employee Safety and Health	
	403-5	Worker training regarding occupational health and safety	4.2 Employee Safety and Health	
	403-6	Worker's health promotion	4.2 Employee Safety and Health 4.2 Employee Safety and Health	
	403-7	Prevention and mitigation for occupational health and safety impacts directly linked to business	3.1 Sustainable Supply Chain Management 4.2 Employee Safety and Health	
	403-8	Workers covered by the occupational health and safety management system	4.2 Employee Safety and Health	
	403-9	Occupational injury	4.2 Employee Safety and Health	
	403-10	Occupational disease	4.2 Employee Safety and Health	

Disclosure item		Description	Reference	Notes
Material topic: Talent attraction and retention				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter IV: A Friendly and Healthy Workplace Partner	
GRI 401 Employment Relations	401-1	Newly hired employees and resigned employees	4.1 Personnel Overview	
	401-2	Benefits provided to full-time employees (excluding temporary or part-time employees)	4.3 Employee Benefits and Communication	
	401-3	Parental leave	4.1 Personnel Overview	For the statistics, please refer to the table: Application for unpaid parental leave and reinstatement rate of Apacer headquarters and subsidiaries in Taiwan
Material topic: talent cultivation				
GRI 3： Material topics 2021	3-3	Material topic management	Chapter IV: A Friendly and Healthy Workplace Partner	
GRI 404 Training and Education	404-1	Average training hours of each employee every yea	4.4 Talent Cultivation and Remuneration System	
	404-2	Programs for improving employee competency and transition assistance	4.4 Talent Cultivation and Remuneration System	
	404-3	Percentage of employees who regularly receive performance and career development inspections	4.4 Talent Cultivation and Remuneration System	

● Appendix 2: Sustainability Accounting Standards Board (SASB) Indicator Comparison Table

Industry: Semiconductors

Indicator code	Disclosure indicators	Comparison disclosure			Chapter comparison
Disclosure topic: Greenhouse Gas Emissions		**2021**	**2022**	**2023**	
TC-SC-110a.1	(1) Total emissions in Scope 1 (Unit:CO_2-e)	681.39	125.212	132.51	2.2 Climate Change Risk Management
	(2) Total emissions of PFASs (Unit: %)	0	0	0	
TC-SC-110a.2	Discussion regarding long-term and short-term strategies or plans for managing Scope 1 emissions, emission reduction targets, and performance analysis thereof.	Please refer to Climate and Energy Chapter: Green Plants, Energy Saving Improvements			
Disclosure topic: Energy Management in Manufacturing		**2021**	**2022**	**2023**	
TC-SC-130a.1	(1) Total energy consumption (unit: Gigajoule (GJ)	13,497	13,223	12,863	2.2 Climate Change Risk Management
	(2) Ratio of power grid consumption in total energy consumption (Unit: %)	100	100	100	
	(3) Percentage of renewable energy consumption in total energy consumption (Unit: %)	0	0	0	
Disclosure topic: Water Management		**2021**	**2022**	**2023**	
TC-SC-140a.1	(1) Total water consumption (Unit: thousand cubic meters)	9.18	9.88	9.12	2.3 Waste and Water Management
	(2) Percentage of water consumption in areas with high or extremely high water pressure at the baseline (Unit: %)	100	100	100	
	(3) Total water consumption (Unit: thousand cubic meters)	-	5.69	4.70	
	(4) Percentage of water consumption in areas with high or extremely high water pressure at the baseline (Unit: %)	N/A	100	100	
Disclosure topic: Waste Management		**2021**	**2022**	**2023**	
TC-SC-150a.1	(1) Total amount of hazardous waste produced (Unit: metric tons)	6.1995	6.2	6.6	2.3 Waste and Water Management
	(2) Percentage of hazardous waste recycled (Unit: %)	100	100	100	

Indicator code	Disclosure indicators	Comparison disclosure			Chapter comparison
Disclosure topic: Employee Health & Safety		2021	2022	2023	
TC-SC-320a.1	Please describe the methods used to evaluate, monitor, and reduce employees' exposure to harmful hazards	Four major actions for occupational safety and health management			4.2 Employee Safety and Health
TC-SC-320a.2	Total amount of loss arising from legal actions related to employee health and safety violations	0	0	0	
Disclosure topic: Recruiting & Managing a Global & Skilled Workforce		2021	2022	2023	
TC-SC-330a.1	(1) Percentage of employees who are foreign nationals (Unit: %)	90%	90%	90%	4.1 Personnel Overview
	(2) Percentage of employees who are overseas (Unit: %)	12%	12%	11%	
Disclosure topic: Materials Sourcing		2021	2022	2023	
TC-SC-440a.1	Please describe the risk management approach for the use of key raw materials	Disclosure in 2023			3.1 Sustainable Supply Chain Management
Disclosure topic: Intellectual Property Protection & Competitive Behavior		2021	2022	2023	
TC-SC-520a.1	Total amount of loss arising from legal actions related to anti-competitive practices	0	0	0	1.2 Ethical Corporate Management and Corporate Governance
Operating indicators		2021	2022	2023	
TC-SC-000.A	Total Production (Unit: Thousand)	14,934	12,909	14,534	N/A
TC-SC-000.B	Percentage of production at self-owned facilities (Unit: %)	26	32	32	

● Appendix 3: Corporate Governance Evaluation: ESG Indicators Disclosure

Indicator code	Indicator item	Disclosure indicators	Comparison disclosure	Chapter comparison
Environmental issues				
Greenhouse gas emissions	Direct (Scope 1) GHG emissions	Ton CO_2	132.55	
	Amount of indirect (Scope 2) GHG emissions from energy	Ton CO_2	1,768.58	
	Amount of other indirect (Scope 3) GHG emissions	Ton CO_2	389.153	
	Greenhouse gas emission intensity	Ton CO_2/turnover	0.25	
	Strategies, methods, and goals for GHG management	Qualitative narrative	Currently, more than 90% of the Company's carbon emissions are purchased electricity. In line with the net-zero goal policy, the Company establishes a plan every five years to invest in electricity, gradually conducting decarbonization, with 2025 as the baseline year.	
Energy Management	Renewable energy utilization rate	Renewable energy/total energy	0	
	Energy efficiency	Qualitative narrative	N/A	Unused renewable energy
	Policy on the use of recycled materials	Qualitative narrative	N/A	
Water Resource	Water Consumption	Metric ton	9120	Apacer's water source comes from the Shihmen Reservoir, which is surface water. The Company's product manufacturing processes do not require water, so all water consumed is for daily use.
	Water use intensity	Water consumption/ Turnover	0.0011 metric tons/NTD 1,000	
	Water resource management or reduction targets	Qualitative narrative	None	
Waste	Hazardous waste amount	Metric ton	6.6	
	Non-hazardous waste quantity	Metric ton	37.7	
	Total weight (hazardous + non-hazardous)	Metric ton	44.3	
	Waste intensity	Waste volume/turnover	0.0000058 metric tons/NTD 1,000	
	Waste management or reduction goals	Qualitative narrative	We increased the proportion of recycling and handling general waste, setting up new physical compartments for garbage classification, and improve the recycling and disposal of employee bento boxes.	

Indicator code	Indicator item	Disclosure indicators	Comparison disclosure	Chapter comparison
Social issues				
Human resource development	Average employee salary	NTD/person	$X	
	Average employee benefits	NTD/person	$X	
	Average salary of non-head full-time employees	NTD/person	$X	
	Median salary of non-head full-time employees	NTD/person	$X	
	Percentage of female supervisors in Management	ratio	7%	
	Number of people in occupational accidents	No. of person(s)	5	
	Occupational accident rate	ratio	0.9%	
Governance issues				
Board of Directors	Number of seats in the Board of Directors	Number	6 seats	
	Number of independent directors	Number	3 seats	
	Percentage of female directors	ratio	11%	
	Directors' Board meeting attendance rate	ratio	96%	
	Directors and supervisors' further education hours comply with the ratio of further education key points	ratio	100%	
Investor communication	Number of investor conferences held in the year	Number of sessions	3	Three times in 2023: Q1, Q3, and Q4

● Appendix 4: Indicator Disclosure for Regulations Governing the Preparation and Filing of Sustainability Reports by Listed Companies

Sustainability disclosure indicators - Semiconductor and electronic components

Serial No.	Indicator	Indicator type	Annual disclosure status	Department	Remarks
	Semiconductor and electronic components				
I.	Total energy consumption, percentage of purchased electricity, and utilization rate of renewable energy	Quantification	Total amount of energy: 12,863.098 Externally purchased electricity: 100% Renewable energy: 0%	Gigajoule (GJ), percentage (%)	
II.	Total water intake and consumption	Quantification	9120	Thousand cubic meters(m³)	
III.	Weight of hazardous waste generated and recycle percentage	Quantification	6.6 /100%	Metric ton(t), Percentage(%)	
IV.	Describe the type of occupational disaster, the number of people involved, and the rate	Quantification	5 人 / 0.9%	Rate (%), quantity	All were traffic accidents
V.	Disclosure of product life cycle management: Weight including scrapped products and electronic waste, and recycle percentage	Quantification	4.264 metric tons/-%	Metric ton(t), Percentage(%)	-Apacer does not dispose of any products -Waste comes from defective products in the manufacturing process. The statistics only include the clearance and transportation of PCB waste. Therefore, this data is explained and the data on the recycling rate is not available.
VI.	Description of risk management associated with the use of critical materials	Qualitative description	3.1 Sustainable Supply Chain Management (Material Topic)	N/A	
VII.	Total amount of loss arising from legal actions related to anti-competitive regulations	Quantification	No related incidents in 2023	Reporting currency	
VIII.	Output of main products based on product category	Quantification	5,563 thousand DRAM modules 8,971 thousand SSDs	Varies by product type	

● Appendix 5: Declaration of Third-party Independent Assurance Opinion

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獨立保證意見聲明書

宇瞻科技 2023 年永續報告書

英國標準協會與宇瞻科技股份有限公司(簡稱宇瞻科技)為相互獨立的公司,英國標準協會除了針對宇瞻科技 2023 年永續報告書進行評估和查證外,與宇瞻科技並無任何財務上的關係。

本獨立保證意見聲明書之目的,僅作為對宇瞻科技 2023 年永續報告書所界定範圍內的相關事項進行保證之結論,而不作為其他之用途。除對查證事實提出獨立保證意見聲明書外,對於其他目的之使用,或閱讀此獨立保證意見聲明書的任何人,英國標準協會並不負有或承擔任何有關法律或其他之責任。

本獨立保證意見聲明書係英國標準協會審查宇瞻科技提供之相關資訊所作成之結論,因此審查範圍乃基於並侷限在這些提供的資訊內容之內,英國標準協會認為這些資訊內容都是完整且準確的。

對於這份獨立保證意見聲明書所載內容或相關事項之任何疑問,將由宇瞻科技一併回覆。

查證範圍

宇瞻科技與英國標準協會協議的查證範圍包括:

1. 本查證作業範疇與宇瞻科技 2023 年永續報告書揭露之報告範疇一致。
2. 依照 AA1000 保證標準 v3 的第 1 應用類型評估宇瞻科技遵循 AA1000 當責性原則(2018)的本質和程度,不包括對於報告書揭露的資訊/數據之可信賴度的查證。

本聲明書以英文作成並已翻譯為中文以供參考。

意見聲明

我們總結宇瞻科技 2023 年永續報告書內容,對於宇瞻科技之相關運作與永續效則提供了一個公平的觀點。基於保證範圍限制事項,宇瞻科技所提供資訊與數據以及抽樣之測試,此報告書並無重大之不實陳述。我們相信有關宇瞻科技的環境、社會及治理等績效資訊是被正確無誤地呈現。報告書所揭露之永續績效資訊展現了宇瞻科技對識別利害關係人的努力。

我們的工作是由一組具有依據 AA1000 保證標準 v3 查證能力之團隊執行,以及策劃和執行這部分的工作,以獲得必要之訊息資料及說明。我們認為就宇瞻科技所提供之足夠證據,表明其符合 AA1000 保證標準 v3 的報告方法與自我聲明依循 GRI 永續性報導準則係屬公允的。

查證方法

為了收集與作成結論有關的證據,我們執行了以下工作:

— 對來自外部團體的議題相關於宇瞻科技政策進行訪談,以確認本報告書中聲明書的合適性;
— 與管理者討論有關利害關係人參與的方式,然而,我們並無直接接觸外部利害關係人;
— 訪談 13 位與永續性管理、報告書編製及資訊提供有關的員工;
— 審查有關組織的關鍵性發展;
— 審查內部稽核的發現;
— 審查報告書中所作宣告的支持性證據;
— 針對公司報告書及其相關 AA1000 當責性原則(2018)中有關包容性、重大性、回應性及衝擊性原則之流程管理進行審查。

結論

針對 AA1000 當責性原則(2018)之包容性、重大性、回應性及衝擊性與 GRI 永續性報導準則的詳細審查結果如下:

包容性

2023 年報告書反映出宇瞻科技已持續尋求利害關係人的參與,並建立重大永續主題,以發展及達成對永續具有責任且策略性的回應。報告書中已公正地報告與揭露環境、社會及治理的訊息,足以支持適當的計畫與目標設定。以我們的專業意見而言,這份報告書涵蓋了宇瞻科技之包容性議題。

重大性

宇瞻科技公布對組織及其利害關係人之評估、決策、行動和績效會產生實質性影響與衝擊之重大主題。永續性資訊揭露使利害關係人得以對公司之管理與績效進行判斷。以我們的專業意見而言,這份報告書適切地涵蓋了宇瞻科技之重大性議題。

回應性

宇瞻科技執行來自利害關係人的期待與看法之回應。宇瞻科技已發展相關道德政策,作為提供進一步回應利害關係人的機會,並能對利害關係人所關切之議題作出及時性回應。以我們的專業意見而言,這份報告書涵蓋了宇瞻科技之回應性議題。

衝擊性

宇瞻科技已鑑別並以平衡和有效之量測及揭露方式公正展現其衝擊。宇瞻科技已經建立監督、量測、評估和管理衝擊之流程,從而在組織內實現更有效之決策和結果管理。以我們的專業意見而言,這份報告書涵蓋了宇瞻科技之衝擊性議題。

GRI 永續性報導準則

宇瞻科技提供有關依循GRI永續性報導準則2021之自我宣告,並對每個涵蓋其行業準則和具相關性的GRI主題準則之重大主題,其揭露項目依循全部相關要求的相關資料。基於審查的結果,我們確認報告書中參照GRI永續性報導準則之永續發展相關揭露項目已核報告、部分報告或省略。以我們的專業意見而言,此自我宣告涵蓋了宇瞻科技的永續性主題。

保證等級

依據 AA1000 保證標準 v3 我們審查本聲明書為中度保證等級,如同本聲明書中所描述之範圍與方法。

責任

這份永續報告書所屬責任,如同責任信中所宣稱,為宇瞻科技負責人所有。我們的責任為基於所描述之範圍與方法,提供專業意見並提供利害關係人一個獨立的保證意見聲明書。

能力與獨立性

英國標準協會於 1901 年成立,為全球標準與驗證的領導者。本查證團隊係由具專業背景,且接受過如 AA1000AS、ISO 14001、ISO 45001、ISO 14064 及 ISO 9001 之一系列永續性、環境及社會等管理標準的訓練,具有稽核員資格之成員組成。本保證係依據 BSI 公平交易準則執行。

For and on behalf of BSI:

Peter Pu, Managing Director BSI Taiwan

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