

# Sustainability Report 2022



***ASPEED***



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About This Report

Letter from the Editor

Welcome to the Sustainability Report of ASPEED Technology Inc. (or “ASPEED Technology”). The report covers corporate governance, environmental, and social sustainability pledges and actions. Through open and transparent information disclosures, it shows members of the general public and stakeholders the hard work and achievements of ASPEED Technology in the area of sustainability.

Report Disclosure Period

The report features information from 2022 (January 1<sup>st</sup> to December 31<sup>st</sup>, 2022) and was both published and announced on the ASPEED Technology website in June 2023. ASPEED Technology will compile and publish the Sustainability Report annually, content covers specific practices and achievements relating to corporate governance, environmental, and social material topics of concern for stakeholders.

Report Scope

Information in the report primarily covers ASPEED Technology’s sustainable operation achievements in Taiwan; it does not include information relating to the Company’s branch office in the United States. Financial data follow International Financial Reporting Standards (IFRS), which are accepted by the Financial Supervisory Commission, and were audited by Deloitte. All monetary data are expressed in New Taiwan Dollars.

Compilation Principles

The report was prepared in accordance with the latest 2021 Core Option of the Global Reporting Initiative Standards (GRI Standards) and Sustainability Accounting Standards Board (SASB), includes a GRI Standards and a SASB comparison table that shows which chapters contain related information. Also taken into consideration when preparing the report were the Taiwan Stock Exchange Corporation“Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies” and the “Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies.” The report

describes ASPEED Technology’s sustainability achievements and results to interested stakeholders.

Report Management Methods

Company department supervisors approved information used in the report. The Sustainability Committee then organized and compiled the information into draft form. Reviews conducted in accordance with administrative procedures concluded with approval by the company president, followed by publishing of the final report.

Publishing Information

Report disclosure period	January 1 <sup>st</sup> to December 31 <sup>st</sup> , 2022
Report publishing cycle	Once per year
Current report publishing period	June 2023
Next report publishing period	Scheduled for June 2024

- The key visual of the 2022 Sustainability Report was created using the midjourney system mega plan subscription, and in accordance with the midjourney terms of use.

Contact Information

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ASPEED Technology Website



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## Foreword

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# A Letter from the President

2022 was full of challenges and opportunities. Thanks to our strong corporate resilience, flexible market insights and robust customer relationships, we have achieved a new record of 18 consecutive years of growth since our inception, with an increase in annual operating revenue and net profit after tax by 43.23% and 60.38%, respectively. Looking ahead, ASPEED will focus on strengthening corporate resilience to reduce risks and improve corporate governance, constantly investing in green research and We are committed to nurturing and retaining talents in the IC design industry, stiving to become a contributor and creator of “technological civilization”.

Ever since its inception, ASPEED has been focusing on the niche market in the SoC field. BMC SoC, our core products, are expanded in various aspects to fit into the future trends and demands. We have deepened our core technologies to create a platform for comprehensive development, integrating and developing into two major product lines: Cloud & Enterprise Solutions and Smart AV Solutions. In respect of Smart AV Solutions, we have incorporated sustainable development into our new product applications, and are moving towards multi-angle development such as unmanned inspection of smart factories, smart cities, virtual education, virtual entertainment, and even Digital Twin. In the future, ASPEED will continue to invest in R&D resources to expand its core technologies, develop new applications and extend its application scenarios with enhanced sustainability concepts.

Since the release of the first Sustainability Report and the establishment of Sustainability Committee in 2020, we budget annually for ESG development, and conduct regular review on ASPEED’s sustainability strategies and short-to-medium term plans, making adjustments as needed and carrying out specific strategies and programs to promote sustainability. Our ESG is developing in the three directions of strengthening corporate resilience, focusing on green energy-saving core technologies, and sustainable talents in Taiwan: In respect of “corporate governance”, we build a complete sustainable governance framework and system, and optimize our organizational management

to maintain ASPEED Technology as a model of corporate excellence with integrity and honesty. In 2022, voluntarily adopted the Task Force on Climate-related Financial Disclosures (TCFD) recommendations to identify the risks and opportunities posed by climate change and disclosed the results in its annual sustainability report. In respect of “environment”, our design capabilities have contributed to green energy conservation as our software and hardware have improved the power-saving performance of our main SoC products, which demonstrate our dedication to the development of the low-carbon semiconductor industry. Apart from on-going GHG inventories, we will also reduce GHG emissions in the semiconductor supply chain through SBTi science-based carbon reduction targets and renewable energy procurement to move towards net zero. In respect of “social participation”, ASPEED places a high priority on sharing the achievements with its employees, with an emphasis on the cultivation of outstanding semiconductor talents and internal retention of talents. We pay constant efforts in building a diverse and inclusive workplace.

Corporate sustainability is a journey that requires a lasting commitment. As ASPEED Technology grows year by year, we realize that the only way for constant expansions and breakthroughs is to keep pushing ourselves forward and maintain our corporate resilience. Approaching the 19<sup>th</sup> year of establishment, ASPEED Technology will continue to shoulder its responsibilities in the semiconductor industry chain. We will provide full disclosure of our work on ESG every year, and we wish ASPEED Technology further success on its journey to sustainability.

By enhancing energy-saving R&D through core technology, cultivating sustainable technology talent in Taiwan and establishing robust corporate governance to foster social inclusion and benefit sharing, ASPEED aims to strengthen its corporate resilience and move towards the next stage of sustainable growth.



ASPEED Technology  
Chairman and President





# A Letter from the Chief Operating Officer

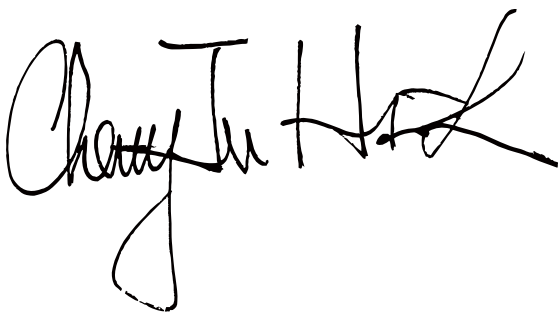
The changes and challenges in the semiconductor industry over the past year have made us realize that only with strengthened resilience and sustainable development can our operations move forward without being affected by market changes. For ASPEED Technology, sustainable development means not only our commitment to the social environment, but also a momentum for our continuous growth. We integrate ESG practice into our daily operations and adhere to the Company's sustainability goals. Featuring the approaches which I set out when joining ASPEED in 2022, we blend in the concept of sustainability in our daily operations from a business perspective. We remain focused on sustainable supply chain management, digital transformation and information security enhancement as well as low-carbon green operations, systematically developing towards the set management strategies and carrying out review and adjustment on a regular basis.

As a fabless IC design company, ASPEED must work more actively towards a responsible supply chain, which is demonstrated by not only our selection of qualified suppliers, but also the exertion of our influence to help them working with ASPEED in building a green and sustainable semiconductor supply chain. There will also be constant addition of sustainability indicators into the annual supplier evaluations following the Responsible Business Alliance (RBA), including green environment, human rights protection, and green manufacturing. In the future, ASPEED will develop towards Fabless Lite 2.0, where sustainable supply chain management will play a more important role. After one year of implementation, the digital transformation project has reached the initial stage of digitization of production operation and digital management of supply chain. The next stage of development will be towards data management and data analysis to enhance the value of business management comprehensively. In respect of low-carbon green operations, the Board of Directors has passed the carbon management program in 2022 for us to achieve a goal of net zero carbon emissions. Besides, energy conservation and carbon reduction will be implemented through daily measures and continuous promotion to employees.

Apart from business operations, ASPEED also considers the concept of sustainability in developing new product applications and strategic planning so as to stimulate the creation of more new application scenarios. The applications of our self-developed 360-degree image stitching SoC, the video conferencing applications created during the pandemic and the latest immersive experience cover smart factory inspection and audit, unmanned scenario patrol, smart city construction and management. In particular, the application of immersive smart factory enables us to develop brand new applications with 3D modeling technology and AR/VR immersive technology. In joint efforts with cooperative partners, we aim at the successful upgrade and innovation of smart factories. Leveraging the immersive experience and the advantages of virtual reality, we can achieve remote virtual inspection and maintenance of production lines, and an increase in the efficiency of mobility and management, thus creating an automated and unmanned brand new experience and coverage for futuristic smart factories.

Looking ahead, in adherence to the aspiration of "Innovation Without Boundaries", ASPEED will be consistent in the sustainability strategies set out by the Company. In pursuit of business performance, we will remain committed to sustainable development with the use of core technologies to enhance green and power-saving R&D. We work constantly on digital transformation, in-depth cultivation of sustainable talents and promotion of an inclusive workforce, as a continuation of the achievements of ASPEED over the past 18 years to strive for corporate sustainability.

Only with strengthened resilience and sustainable development can our operations move forward without being affected by market changes.



ASPEED Technology  
Chief Operating Officer





# 03

## About ASPEED Technology

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2022 ESG Performance 16

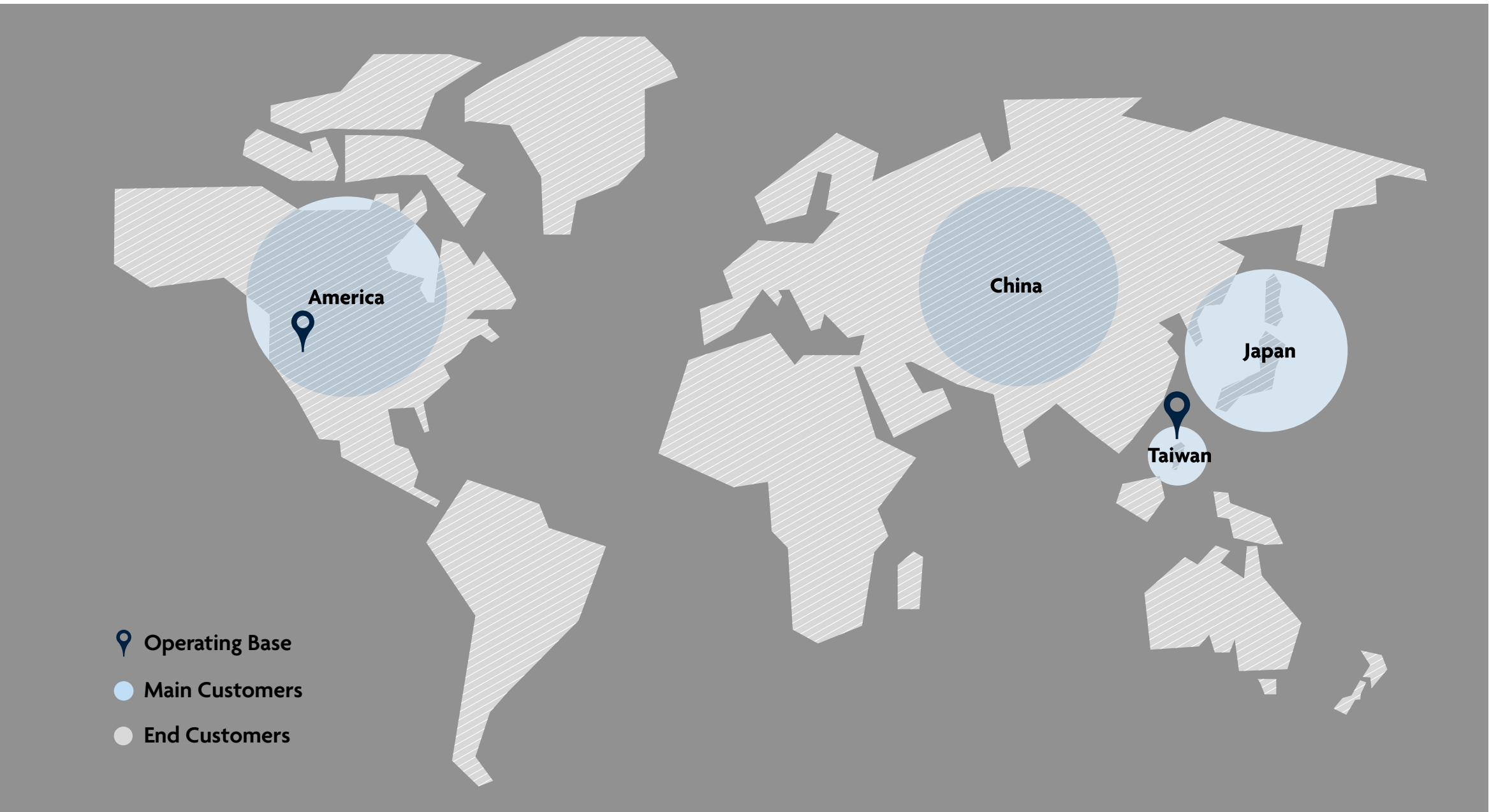
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Company Introduction

ASPEED Technology Inc. is a leading fabless IC design company and a top pioneer of SoC (System on Chip) solutions, provides high quality technique and service. ASPEED Technology is devoted to developing proprietary innovative technologies that quickly respond to customer needs. ASPEED Technology's R&D areas include two major product lines: Cloud & Enterprise Solutions and Smart AV Solutions. Cloud & Enterprise Solutions include BMC SoC, Bridge IC and Platform Firmware Resilience IC; while Smart AV Solutions include AVoIP Extension SoC, Cupola360 Multi-Image Stitching SoC and Cupola360+ related software.

Forbes included ASPEED Technology on its Asia's 200 Best Under a Billion list for ninth consecutive years from 2014, underscoring how we are a partner worthy of our customers' confidence. In 2022, we were selected by Taiwan Institute of Directors Corporate Development Research Center (CDRC) as Taiwan Best-in-Class 100. In 2016, ASPEED Technology announced the acquisition of Broadcom's Emulex Pilot™ BMC SoC business. In 2018, we officially released the Cupola360 Multi-Image Stitching Processing SoC and software solution, which expanded our product lines into images and graphics.



Operational Philosophy

Upholding an operational philosophy that includes humanistic management, respect for worker autonomy, and promotion of innovative R&D together with teamwork, ASPEED Technology succeeds in satisfying customer needs to become a long-term cooperative partner that customers trust. Looking ahead, ASPEED Technology will continue to demonstrate our core technological advantages while providing suitable products for clients and consumers. With high quality services and technologies, we will further realize our mission of providing global enterprises and public with outstanding technology and become the creator of technological civilization.

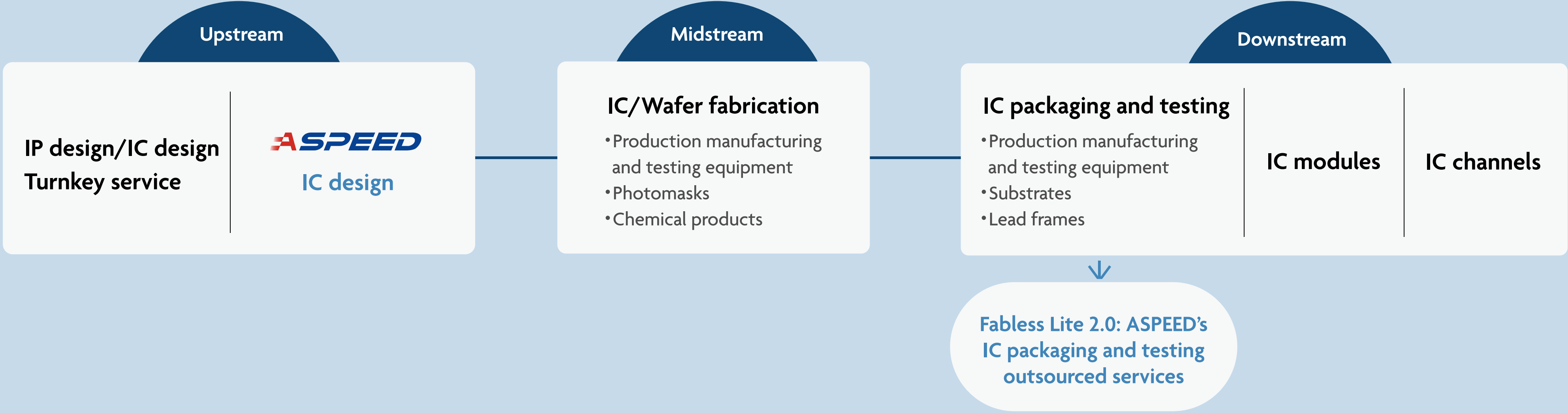




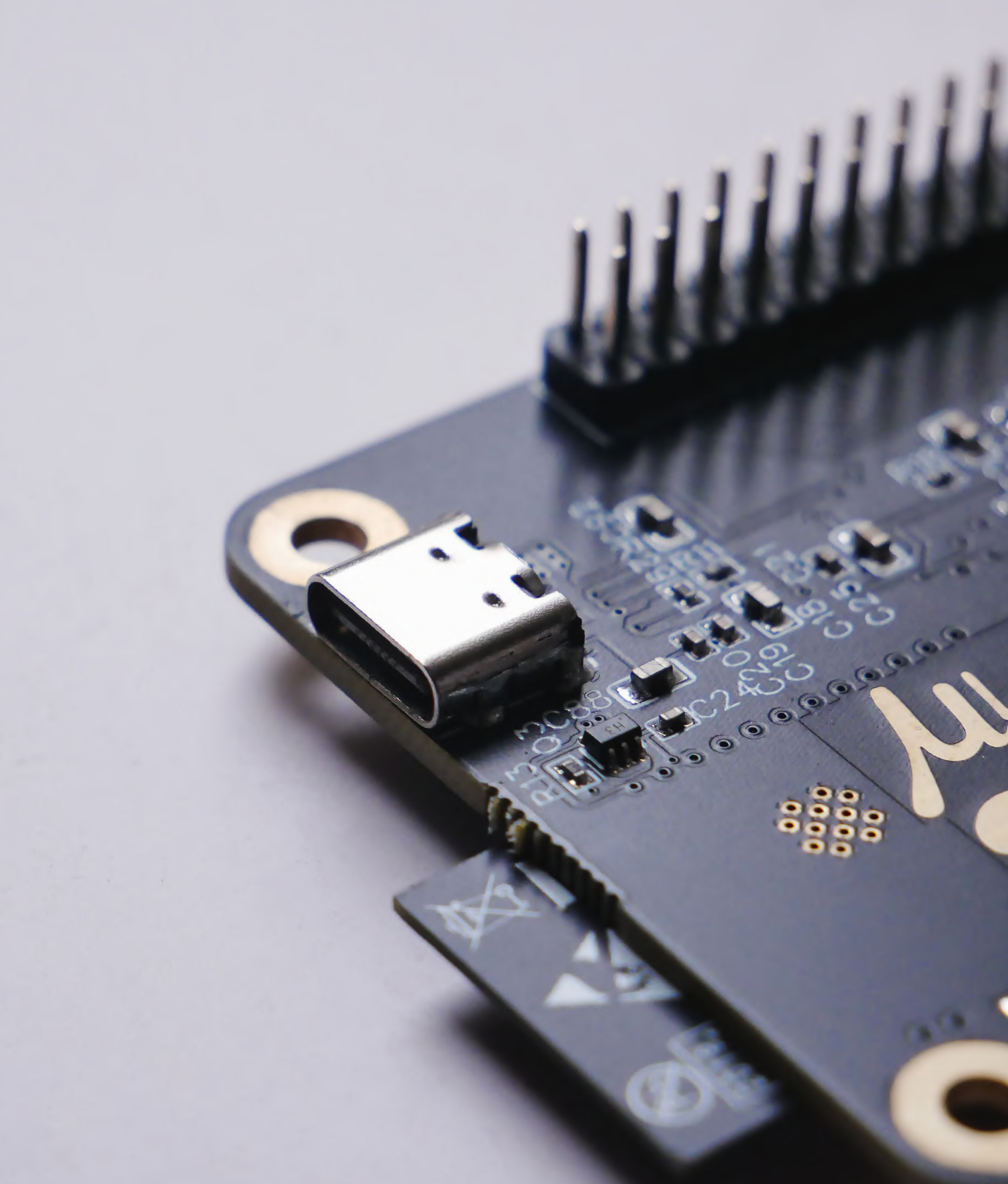
General Information	
Company Name	ASPEED Technology Inc.
Date of Establishment	November 15 <sup>th</sup> , 2004
Business ID number	27490748
OTC Market Listing	April 30 <sup>th</sup> , 2013 (ticker: 5274)
Headquarters Location	4-1 Fl., No. 1, Sec. 3, Gongdao 5th Rd., East District, Hsinchu City
Capitalization	NTD378 million
Revenues	NTD5.210 billion (2022)
Industry	Semiconductors
Employees	106
Main Products and Services	Multimedia IC, computer peripheral IC, ICs for high-end consumer electronics

### ASPEED Technology’s Role in the Semiconductor Industry Chain

Taiwan’s semiconductor industry has a fully developed system, with leading manufacturers together composing a vertical division of labor that promotes specialized development. The semiconductor industry can generally be divided into upstream IC design firms, midstream IC wafer manufacturers, and downstream IC packaging and testing firms. Ever since its inception, ASPEED Technology is clearly positioned as an upstream fabless IC design company that specializes in high-end IC design. Large-scale foundries as well as testing and packaging firms manufacture ASPEED Technology’s IC designs. ASPEED Technology then markets and sells the finished IC products to domestic and foreign customers. BMC, the main products of ASPEED, play a key role in the cloud server industry and have a global customer base. The remote management of product applications and the low power consumption of the products will help customers’ data centers reduce power consumption and carbon emissions, creating value for the semiconductor supply chain in line with today’s low carbon trend. In response to the changing industry chain and market, ASPEED Technology started to transform its Fabless Lite 2.0 model gradually from 2022; in addition to IC design, we will further coordinate our own IC packaging and testing services to provide a more flexible operation model to face the highly changing semiconductor industry.












## Main Products and Services

ASPEED Technology specializes in SoC design, a niche market with high gross profits. By combining our R&D advantages with strengths in both hardware and software, we provide innovative, differentiated products that have a high value for our customers.

## Main Products and Services

Cloud & Enterprise Solutions		<b>BMC SoC</b>	Applications include remote monitoring and host system management, such as server motherboard management controllers, server backplane controllers, server graphics chips, as well as remote network keyboard, mouse, and monitor controllers
		<b>Bridge IC</b>	A small dedicated processor with built-in memory and storage space, paired with BMC under the Open Compute Project (OCP) architecture to extend the monitoring and management of BMC
		<b>PFR SoC</b>	PFR (Platform Firmware Resilience) SoC provides enterprise platform firmware security and comprehensive protection against attacks
Smart AV Solutions		<b>AVoIP Extension SoC</b>	Applications include professional integrated AV, remote personal computer extensions, remote AV extensions, remote USB extensions, AVoIP matrix switchers, TV walls, and digital signage
		<b>Cupola360 Multi-Image Stitching SoC</b>	Applications include 360-degree video conferencing systems, consumer cameras, immersive experience as well as smart factory and patrolling applications
		<b>Software Services and Digital Mobile Apps</b>	Cupola360 multi-image stitching and smart application-related software services and digital mobile apps



Management Team



**Mr. Chris Lin**  
Chairman and President

Mr. Chris Lin, the chairman and president of ASPEED Technology, has many years of experience in the SoC field. In 1993, as a member of Silicon Integrated Systems (SiS), Lin built a multimedia products R&D team. In May 2003, Lin led establishment of SiS spin-off XGI Technology Inc., where he was responsible for graphics chip development and served as general manager. Lin founded ASPEED Technology in 2004 and devoted the Company to BMC development. Lin was responsible for all aspects of the business, including product planning, production, sales, and marketing. In 2016, Lin led the acquisition of Broadcom’s Emulex Pilot™ BMC SoC business, which turned ASPEED Technology into the world’s largest supplier of BMC SoC. In 2020 & 2021, National Yang Ming Chiao Tung University recognized Lin as a distinguished alumnus, and he was also honored with the Outstanding ICT Elite Award in 2021.



**CJ Hsieh**  
Chief Operating Officer

Mr. CJ Hsieh, the chief operating officer of ASPEED Technology, graduated from University of Southern California with a Master’s degree in Electrical Engineering. With nearly 30 years of experience in IC design and semiconductor industries, Mr. Hsieh held senior management positions in global operations, procurement, R&D, and sales at various companies. Prior to joining ASPEED Technology, Mr. Hsieh served as the general manager of Intel Innovation Technologies Limited, the global vice president of Lantiq, and the associate director of Faraday Technology. Besides his role as the chief operating officer of ASPEED Technology, Mr. Hsieh is co-chairman of the TEST Committee, SEMI Taiwan, and the member of Advisory Committee of Taiwan International Semiconductor Executive Summit, TISES. In 2022, Mr. CJ Hsieh was also recognized by SEMI with the Industry Contribution Award.



**Luke Chen**  
Vice President of Sales

Mr. Luke Chen, a graduate of the EMBA program at National Chengchi University, previously was an assistant vice president of marketing at SiS and a deputy general manager of marketing at NITS Technology Inc. Chen has a strong academic and professional background in product marketing and business development, which aids his present duties as the vice president of sales at ASPEED Technology.



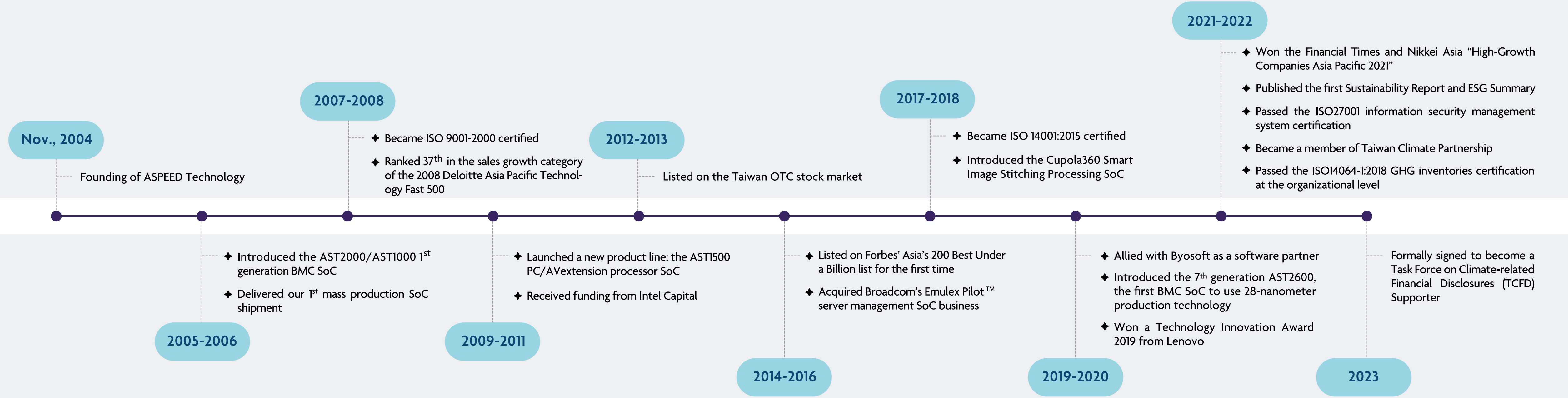
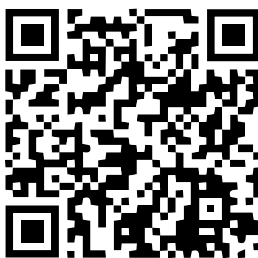
**Hung-Ju Huang**  
Vice President of R&D

Mr. Hung-Ju Huang, a graduate of the Electrical Engineering Master of Science at National Cheng Kung University, has extensive experience in hardware R&D, one of the founding members of ASPEED Technology. Huang previously was a senior R&D manager at SiS and an assistant vice president of R&D at XGI Technology Inc. He was the vice president of R&D at ASPEED Technology. Huang has demonstrated success in research and development. Having reached the retirement age, he resigned as the vice president of R&D in August 2022 and continued to serve as an R&D consultant.



Company Milestones

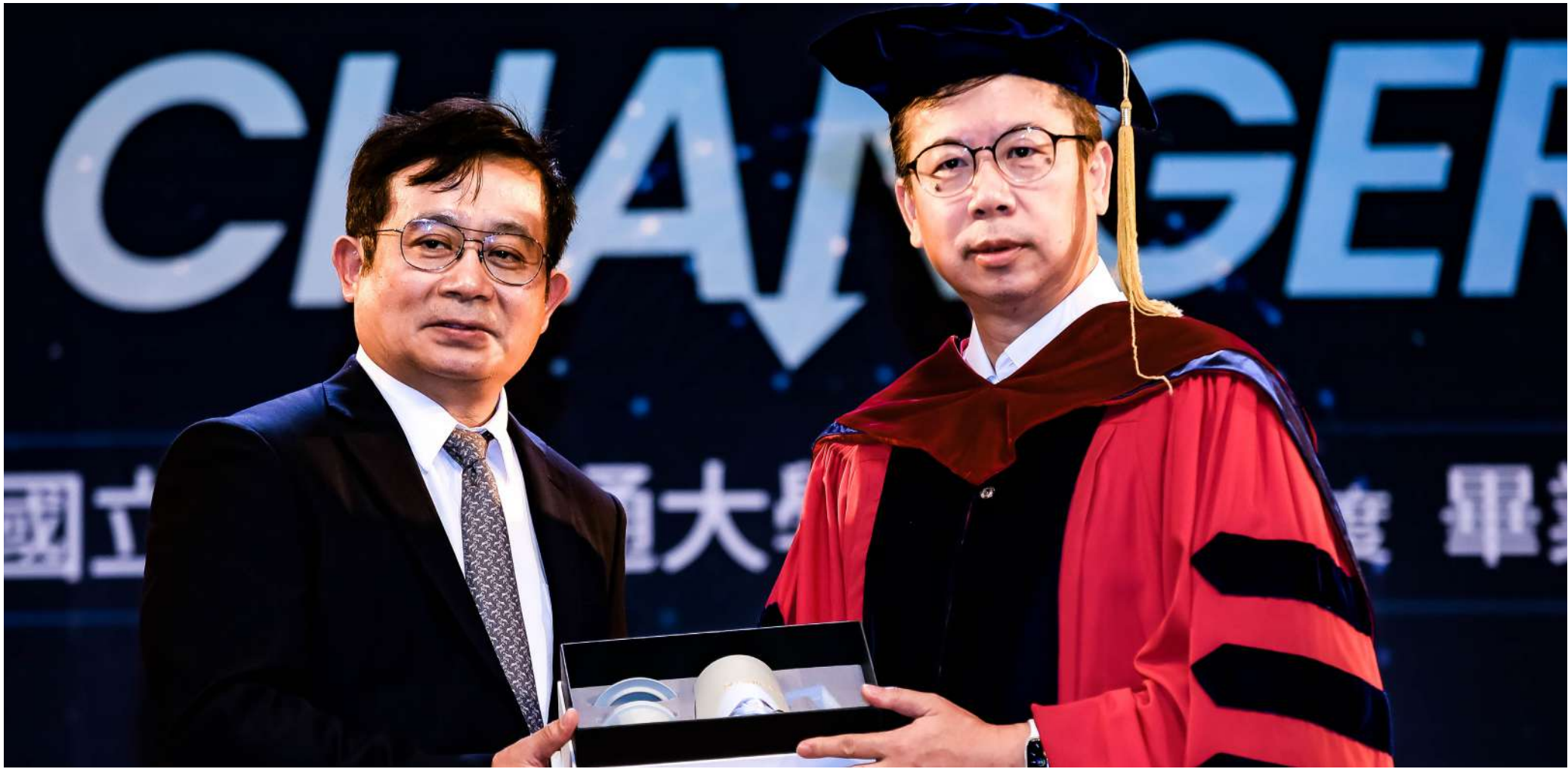
The Ministry of Economic Affairs approved the establishment of ASPEED Technology in Hsinchu Science Park, Taiwan on November 15<sup>th</sup>, 2004. For more information on ASPEED Technology's milestones, please visit:





Recognition  
and Honors in  
Recent Years

The hard work and confidence of partners inside and outside the company led ASPEED Technology to be ranked 37<sup>th</sup> in the sales growth category of the 2008 Deloitte Asia Pacific Technology Fast 500 in just our fourth year of business. In 2009, our AST1500 BMC SoC won a Best Choice of COMPUTEX TAIPEI 2009 Award. In 2018, ASPEED Technology's operation performance ranked the 21<sup>st</sup> in the top 5000 firms by China Credit Information Service Ltd. Forbes included us on its Asia's 200 Best Under a Billion list for ninth consecutive years since 2014. We demonstrate strong corporate resilience amid a volatile economic environment. In 2021, Financial Times and Nikkei Asia included us as one of the Asia Pacific High-Growth Companies. In 2022, we were selected by Taiwan Institute of Directors and Business Development and Research Center as Taiwan Best-in-Class 100. Our chairman, Mr. Chris Lin, was honored with the Outstanding ICT Elite Award due to this contribution in IT industry. Our Chief Operating Officer, Mr. CJ Hsieh, was recognized by SEMI with the Industry Contribution Award. In the future, we will continue to aim for self-improvements as we contribute to public welfare and social development.



\*NYCU recognized Mr. Chris Lin as a distinguished alumnus.

2008  
|  
2009

- ◆ Ranked 37<sup>th</sup> in the sales growth category of the 2008 Deloitte Asia Pacific Technology Fast 500
- ◆ Our AST1500 BMC SoC won a Best Choice of COMPUTEX TAIPEI 2009 Award

2014  
|  
2017

- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list

2018  
|  
2019

- ◆ Ranked 21<sup>st</sup> for business performance in the China Credit Information Service Taiwan Top 5,000 Large Enterprise List
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list

2020  
|  
2021

- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ National Yang Ming Chiao Tung University recognized Chairman Chris Lin as a distinguished alumnus
- ◆ Won a Technology Innovation Award 2019 from Lenovo
- ◆ National Tsing-Hua University recognized Chairman Chris Lin as a distinguished alumnus
- ◆ Included in the Financial Times and Nikkei Asia "High-Growth Companies Asia Pacific 2021"
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ Chairman Chris Lin won a 2021 ICT Month Outstanding ICT Elite Award
- ◆ Ranked 67<sup>th</sup> for business performance in the China Credit Information Service Taiwan Top 5,000 Large Enterprise List

2022

- ◆ Chief Operating Officer, Mr. CJ Hsieh, recognized by SEMI with the Industry Contribution Award
- ◆ Listed on Forbes' Asia's 200 Best Under a Billion list
- ◆ Won an "Excellent Supplier Award" from MiTAC Computing Technology



Public Association Participation

Since its inception, ASPEED Technology has been actively participating in industry alliances in the semiconductor industry or technology product areas to achieve a complementary effect within the industry. In recent years, in view of the importance of sustainability issues and in response to the expectations of our stakeholders and international customers, we have gradually begun to support sustainability-related alliances. In 2022, we participated in the Taiwan Climate Partnership established by industry leaders, and actively participated in seminars, forums, and online courses organized by the alliances to contribute to green environment and climate issues.



Organization Name	Participation Status	Role
Taipei Computer Association	Joins annual exhibitions and other related events held by the Taipei Computer Association. Also is an active participant in association affairs	Member
OpenBMC Alliance	Active participant in the Open Compute Project and open-source BMC firmware. Continues to develop customer solutions that work across heterogeneous systems	Member
OCP (Open Compute Project)	Participates in annual summits and seminars organized by the OCP to share and discuss the design and development of hardware devices in the data center	Member
AVIXA (Audiovisual and Integrated Experience Association)	Participates in Audiovisual and Integrated Experience Association and the exhibition events organized by the Association	Member
Taiwan Climate Partnership	Participates in the technology industry-led Taiwan Climate Partnership in response to stakeholders' requests for ASPEED Technology's active involvement in climate issues; and to demonstrate the importance ASPEED Technology places on climate change issues by actively involving in the seminars, forums, and online courses organized by the Partnership	Group member
TCFD (Task Force on Climate-related Financial Disclosures) Working Group	Responds to the TCFD initiative, officially signs to become a TCFD Supporter	Supporter
<div><div> OpenBMC</div><div> OPEN COMMUNITY</div><div> Taiwan Climate Partnership 台灣氣候聯盟</div><div> TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES</div></div>		





Governance

Ranks <b>No.1</b> global market share of BMC SoC	<b>94.74%</b> customer satisfaction
<b>43.23%</b> ↑ operating revenue NTD5.210 billion <b>60.38%</b> ↑ net income NTD2.106 billion	For <b>18</b> consecutive years achieved record revenues and profit since founding
NTD <b>678</b> million of R&D fee (13.01% of operating revenue), 5 consecutive years of growth	<b>58</b> total domestic and international patents (including 31 in Taiwan)
<b>ISO9001:2015</b> Quality Management Systems Certification <b>ISO27001</b> Information Security Management Certification	<b>ISO14001:2015</b> Environmental Management System certification <b>ISO14064-1:2018</b> GHG Inventory and Certification
<b>100%</b> <ul style="list-style-type: none"><li>signed the Supplier Social Responsibility Pledge required by customers</li><li>legal compliance: Adhered to all regulations, including air, water, waste, energy, management, noise, RoHS, Reach and HF</li><li>of our suppliers agreed to not use any conflict minerals</li></ul>	
<b>0</b> <ul style="list-style-type: none"><li>complaints and penalties related to ethical corporate management</li><li>complaints and penalties related to information security</li><li>complaints and penalties related to customer privacy</li><li>complaints and penalties related to environmental issues</li><li>complaints and penalties related to human rights</li></ul>	
Listed on Forbes' Asia's 200 Best Under a Billion list for <b>9</b> consecutive years	



Social

NTD <b>13.7982</b> million accumulated sponsorship	NTD <b>4.22</b> million median salary of non-management employees
NTD <b>4.588</b> million average salary of non-management employees	Per capita welfare spending increased by <b>25.77%</b> year-on-year, up for the third consecutive year
NTD <b>4.552</b> million average salary of all employees, ranking first among OTC listed companies. NTD <b>522</b> million employee benefits welfare (51.54% ↑)	
<b>100%</b> of employees received information security education and training <b>100%</b> of employees received integrity management education and training	
For <b>8</b> years sponsored the Global View Education Foundation's "Plant a seed of reading for children" Sponsorship for Taitung's substitute teacher support program of Education Support for Taiwan Association	
<b>4</b> -year programs for higher education <ul style="list-style-type: none"><li>National Tsing Hua University's Sunrise Scholarship program from 2020 to 2023</li><li>National Yang Ming Chiao Tung University's Chair Professor sponsorship plan from 2020 to 2023</li><li>National Tsing Hua University's Junior Chair Professor sponsorship plan from 2021 to 2024</li></ul>	
<b>2,345</b> hours total training hours in 2022	



Environment

<b>93.21%</b> Energy saving compared to AST2000, the 7th generation AST2600 reduce 187,975.96 metric tons of CO2e emissions
<b>61.34%</b> Energy saving compared to AST2500, the 7th generation AST2600 reduce 23417.58 metric tons of CO2e emissions
<b>775.4021</b> metric tons CO2e / per million piece: Greenhouse gas emissions intensity
<b>171.11</b> metric tons / per million piece: Water use intensity
Local procurement rate increased to <b>90.55%</b>

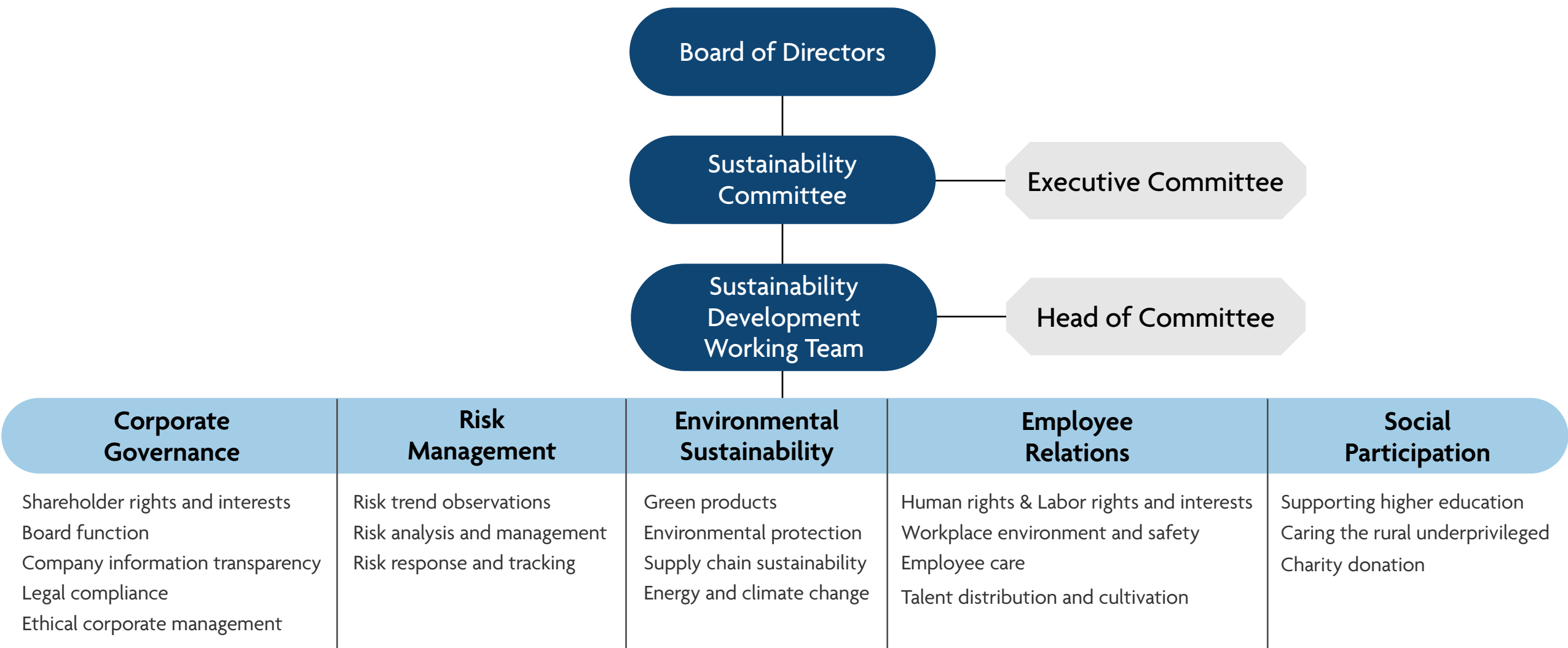


Operation and Objectives of Sustainability Committee

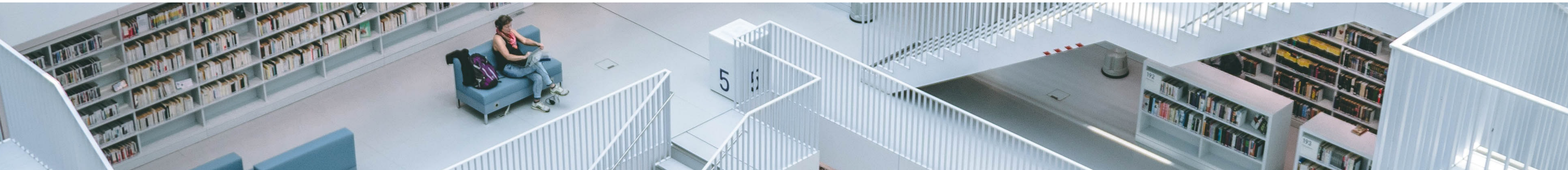
As a Fabless IC design company, ASPEED Technology recognizes the importance of pursuing sustainable development as we continue to make profits. In 2020, we established a CSR Working Team and converted it into the Sustainability Committee under the Board of Directors in 2021 as a key decision maker for ASPEED’s sustainable development. The committee is headed by the vice president of sales who convenes and chairs meetings of the Sustainability Committee. Under the committee will be the Sustainability Development Working Team, which, in addition to regularly overseeing the performance of corporate sustainability-related activities, is even responsible for incorporating sustainable development into the decision-making process for corporate operations and important strategies, leading the five work teams of “Corporate Governance”, “Risk Management”, “Environmental Sustainability”, “Employee Relations” and “Social Participation” to coordinate the implementation of each aspect.

The Sustainability Development Working Team under ASPEED Technology’s Sustainability Committee is responsible for gathering the concerns from various stakeholders and keeping abreast of the development trends of domestic and foreign laws and policies. A meeting is held biannually for each work team to report on their operation. We conduct regular review on ASPEED’s sustainability strategies and short-to-medium term plans to make adjustments as needed. A meeting was held in each of the first and second half of 2022, covering:

- 1. Report on the progress of the Sustainability Development Working Team.
- 2. In light of the domestic and international regulatory policy trends, a review on the sustainability strategies for 2021 and adjustment on the three-year short-term goals.
- 3. Final Review of the 2021 Sustainability Report (Second Half Meeting). The Sustainability Committee reports to the Board of Directors once in each of the first and second half of the year. On the board meeting in March and November 2022, the committee presented the sustainability strategies and objectives, performance of annual sustainability projects, results of GHG inventories, implementation of TCFD projects, report on 2021 Sustainability Report and ESG Summary and submission for approval, while at the same time commits to the Board for its continued promotion and implementation of sustainability strategies and objectives.



ASPEED ESG & Sustainability Development





Sustainability Strategies

ASPEED Technology uses core technologies to enhance green and power-saving R&D. By focusing on building a talented sustainable technology workforce in Taiwan, a robust system of corporate governance, and an inclusive society with shared benefits, we strengthen the corporate resilience of ASPEED Technology towards the next stage of sustainable growth.

Sustainability Blueprint

	Strategic Development	Achievements in 2022	Goals for 2023-2024
Governance	<b>Solidifying corporate governance and strengthening corporate resilience</b> <ul style="list-style-type: none"><li>Building a complete corporate sustainable governance framework and system</li><li>Strengthening risk management strategies</li></ul>	<ul style="list-style-type: none"><li>Strengthening the structural diversity and supervisory obligations of the Board of Directors</li><li>Promoting the whistleblower system</li><li>Use the Task Force on Climate-related Financial Disclosure (TCFD) framework to evaluate the impact of climate change on risk management and responses associated with corporate governance, strategies, and financial risks</li><li>Initiating the digital transformation program</li></ul>	<ul style="list-style-type: none"><li>Completion of a third-party supervised whistleblower reporting system.</li><li>Increasing the number of female board members in the 8th Board of Directors to strengthen the diversified structure</li><li>Considering linking ESG performance indicators to executives' compensation</li><li>Continuously promoting the second phase of the digital transformation program</li></ul> <p>* See the section of "Sustainable Operation Deployment" for details</p>
Environment	<b>Focusing on green energy-saving core technologies</b> <ul style="list-style-type: none"><li>Regularly performing incoming GHG inventories and passing third-party verification</li><li>Power saving and carbon reduction, formulating carbon reduction targets and actions</li><li>Strengthening core R&amp;D and improving power consumption by chips</li></ul>	<ul style="list-style-type: none"><li>Joining Taiwan Climate Partnership and participating in various affairs</li><li>Passing the ISO14064-1 :2018 GHG inventories at the organizational level</li><li>Responding to the Carbon Disclosure Project (CDP), the Responsible Business Alliance (RBA), and other international initiatives and ratings</li></ul>	<ul style="list-style-type: none"><li>Constantly conducting GHG inventories and expanding the scope of the Scope 3 inventory</li><li>Setting and applying for the SBTi SME scientific carbon reduction net zero goal</li><li>Strengthening R&amp;D to improve energy consumption of 8th generation BMC chips</li><li>Purchasing renewable energy</li></ul>
Social	<b>Building a talented sustainable technology workforce in Taiwan</b> <ul style="list-style-type: none"><li>Developing core values of sustainability and promoting ESG for all employees</li><li>Strengthening the cultivation of talents and seeking to advance women in technology industry</li></ul>	<ul style="list-style-type: none"><li>Emphasizing diversity and equality in workplace, implementing corporate diversity and inclusion. Specifying the D&amp;I policy in the work rules of employees</li><li>Organizing workshops on sustainable talents, employees involvement in cultivating female technology talents</li></ul>	<ul style="list-style-type: none"><li>Creating compensation packages with market competitiveness and internal equality</li><li>Organizing cultivation activities for female technology talents</li><li>Planning a series of ESG courses to establish the sustainable awareness among all ASPEED employees</li></ul>





## Identification of Material Topics

ASPEED Technology's Sustainability Development Working Team uses qualitative and quantitative methods to collect feedback from various stakeholders for sustainability issues analysis. The material topics become an important basis for promoting sustainability strategies and objectives.

In response to the new GRI 2021 material topics, the Company will increase its focus on the actual and potential negative and positive impacts on the environment, economy, and human rights from internal and external stakeholders. We also have long tracked and circularly managed various sustainability issues from internal and external stakeholders. Starting from 2022, ASPEED adjusted the analysis process of material topics by updating the list of sustainability issues every three years and gathering the concerns from external stakeholders. Each year, we collect internal feedback on the negative and positive impacts of sustainability issues, taking into account the level of concern of internal and external stakeholders in order to identify the material topics for the year.

ASPEED Technology has compiled a list of 20 sustainability issues of concern to stakeholders and conducted a negative and positive impact assessment for each issue. By considering the possibilities of occurrence and the impact of the sustainability issue on the business, the impacts and possibilities of each sustainability issue on ASPEED Technology (including stakeholders' opinions) was evaluated. Based on the impact of the Company's own activities on the three aspects, i.e., external economy, environment, and society, we also conducted an impact and possibility evaluation (see Chapter 8 Appendix for details). The multi-dimensional analysis has identified three negative material topics: "Corporate governance and ethical corporate management", "Information security and privacy" and "Intellectual property rights protection and deployment", and two positive material topics: "Operational performance and financial performance" and "Technological and R&D innovations" for 2022. In order to actively implement ASPEED's sustainability strategies and commitment, the Sustainability Development Working Team has resolved to include "Employee benefits and care" as a material topic. The chairman then approved these as the Company's six material topics and the focal points of disclosures in this year's report, which provides a detailed explanation of response strategies, achievements, and performance for each topic. The report also includes appropriate disclosures of management measures and performance for the insignificant secondary topics.



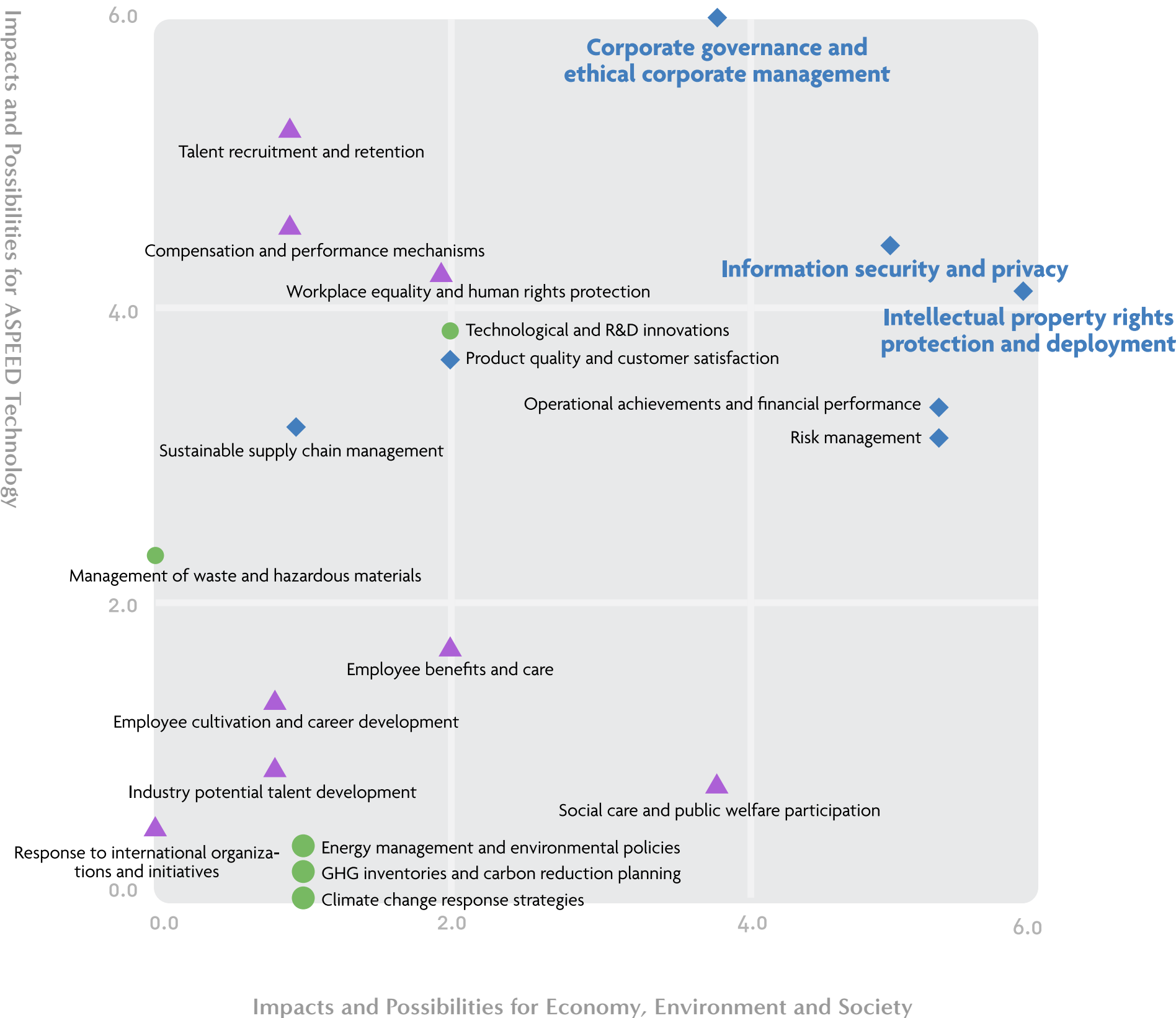
Material Topics and Value Chains and Material Topics Management Policies

● Direct Impact    ○ Indirect Impact

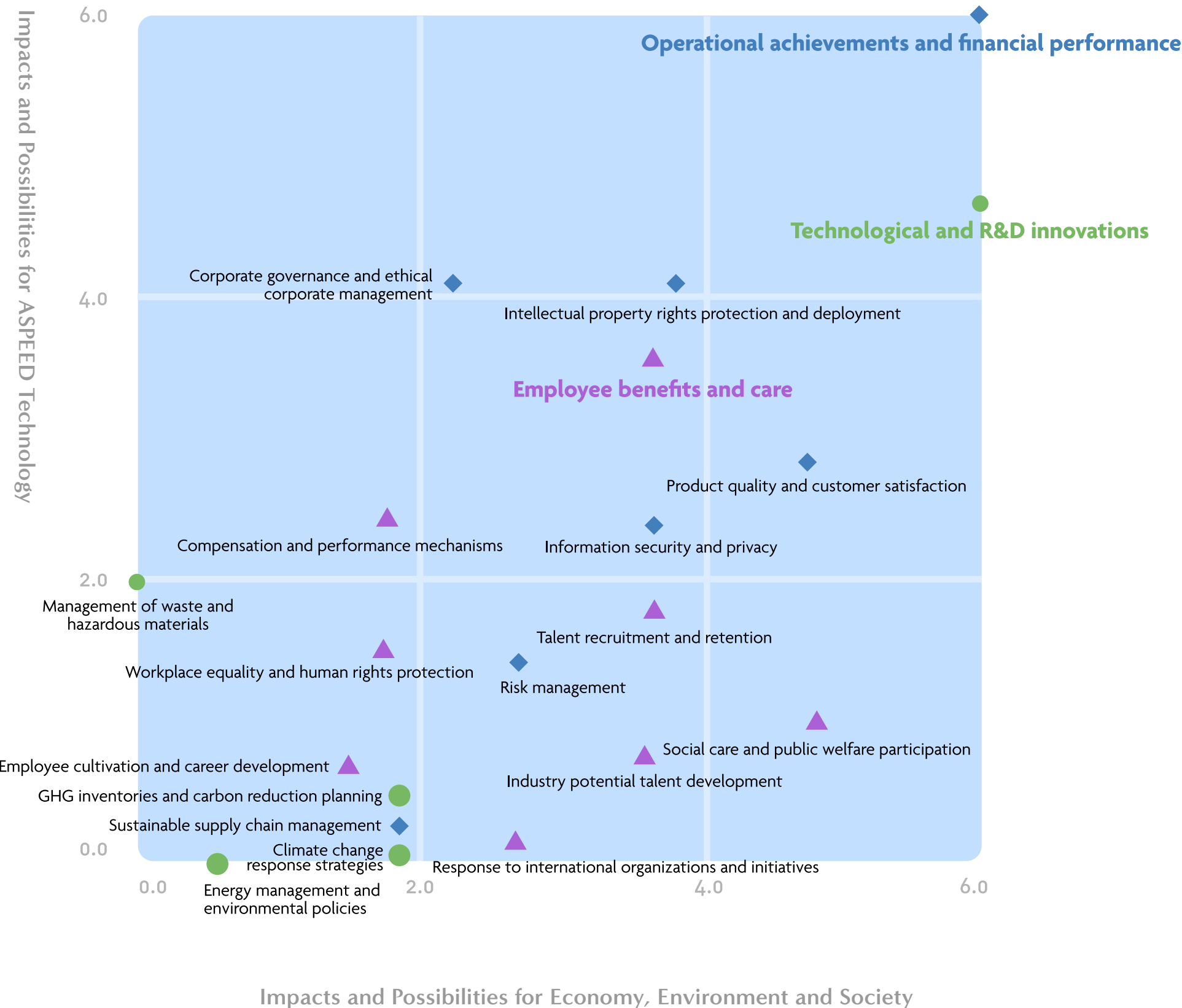
Material Topics in 2022	Identified Impact Results	GRI Topic-specific Standards	Impact on the Value Chain			Description of Impact	Management Policies
			Suppliers	R&D Design	Customer Use		
Corporate governance and ethical corporate management	Negative impact	205 Anti-corruption 206 Anti-competitive behavior	●		●	ASPEED Technology’s robust corporate governance system and its implementation, including: ethical corporate management, legal compliance, rights and interests of shareholders, and other aspects, which will have a direct impact on shareholders and other stakeholders.	5.1 Corporate governance and ethical corporate management
Information security and privacy	Negative impact	418 Customer Privacy		●	●	ASPEED Technology’s adherence to business ethics and personal information protection and its implementation, including: maintaining customer information to ensure that customer privacy is respected and protected, which will have a direct impact on the business itself, its customers and other stakeholders.	5.4 Information security
Intellectual property rights protection and deployment	Negative impact	Self-formulated Topic		●	●	ASPEED Technology’s protection of intellectual property rights deployment, which will affect ASPEED Technology’s continued leadership in product development and will have a direct impact on the business itself, its customers, shareholders and other stakeholders.	4.2 Intellectual property rights protection and preservation
Operational performance and financial performance	Positive impact	201 Economic Performance 207 Tax	●	○	●	Sustainable profits are ASPEED Technology’s promise to shareholders and society; raising product competitiveness and sustaining profits each year will help ensure sustainable operations of business.	5.2 Operational performance
Technological and R&D innovations	Positive impact	302 Energy Self-formulated Topic	○	●	●	As a fabless IC design company, ASPEED Technology is developing green and energy-saving products that are friendly to the environment and customers, improving the green specifications of products and reducing the impact on the environment, which are in line with the company’s sustainable development path and beneficial to the external society.	4.3 Green Breakthroughs
Employee benefits and care	Positive impact	102 General Disclosures		●		ASPEED Technology offers excellent compensation packages to attract and retain high-quality talents. At the same time, our people-oriented work system and environment keep everyone on the same page so that we can work together towards achieving sustainable growth.	6.3 Employee care
		201 Economic Performance		●			
		401 Employment		●			
		403 Occupational Health and Safety	●	●			
		404 Training and Education		●			
		405 Diversity and Equal Opportunity		●			



Materiality Matrix for Negative Impacts



Materiality Matrix for Positive Impacts



◆ Governance

- Corporate governance and ethical corporate management
- Risk management
- Intellectual property rights protection and deployment
- Operational achievements and financial performance
- Product quality and customer satisfaction
- Information security and privacy
- Sustainable supply chain management

● Environment

- Climate change response strategies
- Energy management and environmental policies
- GHG inventories and carbon reduction planning
- Management of waste and hazardous materials
- Technological and R&D innovations

▲ Social

- Workplace equality and human rights protection
- Talent recruitment and retention
- Employee cultivation and career development
- Compensation and performance mechanisms
- Employee benefits and care
- Industry potential talent development
- Social care and public welfare participation
- Response to international organizations and initiatives



# 04

## Innovation for a Sustainable Future

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Green Breakthroughs 30



Mission and core spirit of “technology civilization”

The meaning represented by science and technology is not only R&D and manufacturing, but also its mission and spirit is to develop advanced technologies and products that can solve human life problems through innovation, continuously promote the progress of human civilization and life improvement and create the core value of sustainable technology civilization. As a pioneer and leader in innovative SoC solutions, ASPEED is committed to continuously improving R&D capabilities to create better products and contributing to the advancement of human society. Therefore, while taking profit from operations into account, we also think about how to create the most suitable products and consider the sustainable development of the environment and society, and contribute to the global sustainable development from chip design and development, manufacturing supply chain, product value, daily operation to the application area of new

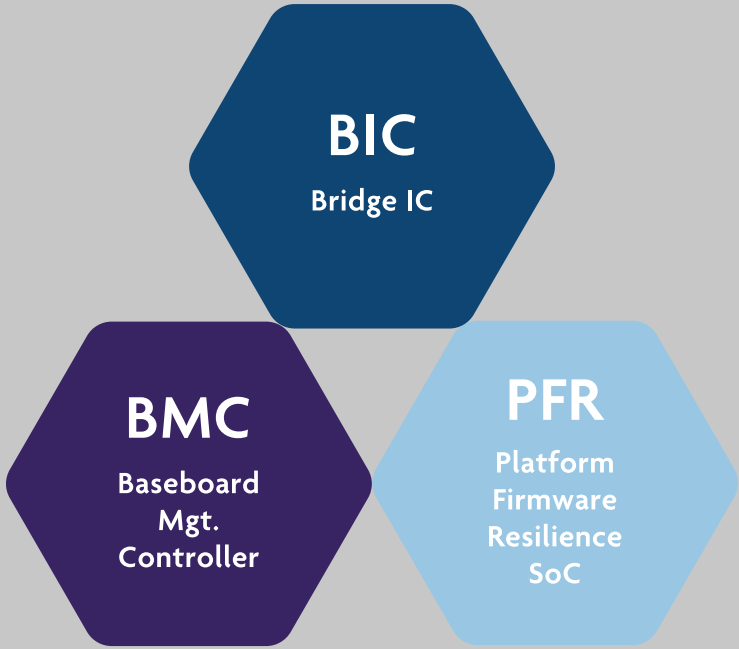
products. The corporate culture of ASPEED does not aim at pursuing short-term profit products. We insist on investing in R&D and innovation, and combine core technology with sustainable development to become a contributor and creator of “sustainable technology civilization”.

Diversified product portfolio to create platform synergies

ASPEED has been focusing on niche market of chip R&D, and used to develop the Baseboard Management Controller (BMC SoC) and image-related SoCs. In order to effectively expand product portfolio, we gradually develop from previous product selling to platform building, which will then be developed into two major product lines: Cloud & Enterprise Solutions and Smart AV Solutions.

Cloud & Enterprise Solutions

Product line covers Baseboard Management Controller SoC (BMC SoC), Bridge IC and Platform Firmware Resilience SoC; in addition to the original cloud server application, the product application has expanded to switches, storage equipment, and AI operations, and has developed unlimited possibilities based on product depth and customer breadth.



Smart AV Solutions

Applications

- Video Wall
- Pro AV
- Digital Signage
- Command Center and more....



Applications

- ImmersiveX
- Video Conference
- Live 3D Digital Twin



It integrates the imaging-related SoCs and software developed by ASPEED Technology into a comprehensive efficiency concept with a focus on smart audio-visual application platform. The product line includes AvolP Extension SoC, Cupola360 Spherical Image Processor and Cupola360+ related software; in addition to the existing applications of video conferencing and AvolP high-definition transmission control, through the combination of Cupola360 image processors, AvolP SoC and optimization of software development, customers can easily enjoy immersive and diverse applications, and promote multi-angle development such as unmanned inspection of smart factories, smart cities, and virtual education and entertainment.



Building a future life with immersive experience applications

ASPEED Technology has continuously made breakthroughs in technological innovation. By leveraging our independently developed 360-degree image processor, we have applied it to 360-degree cameras for ImmersiveX Experience, and further improved the application domain to the Digital Twin by combining the 3D modelling technology. The application covers smart factory inspection and audit, unmanned field patrol, smart city construction and management, remote virtual education, virtual tourism and entertainment. The physical needs have been reduced through ImmersiveX Experience, which not only reduces the mobility of management personnel and improves management efficiency, but also reduces carbon emissions and energy

consumption required for transportation and on-site visits, which is in line with the trend of the post-pandemic era development and the focus of green energy saving. In general, ASPEED Technology wants to create new products and new applications through core technologies, and to change the traditional model to the evolution of technological civilization. In the future, we will continue to provide competitive and innovative niche chips for innovative application fields, so as to maintain corporate resilience and sustainable development.

Real-time Immersive Experience





Green Innovation for Safety

ASPEED Technology contributes to green energy saving with its design strength, and enhances the power-saving efficiency of main chip products from the soft and hardware side, so as to invest in the development of low-carbon industry. We continue to invest in R&D resources, upgrade the R&D of major chips from generation to more advanced semiconductor process to strengthen the energy-saving and power-saving efficiency of chips. In the development of new businesses and product applications, we also incorporate factors that will reduce energy consumption and environmental impact, stimulate the creation of more new domain applications, and list green innovation as one of the trade secrets review projects. In the future, in addition to strengthening the concept planning of sustainable development in product layout, we will also work towards the vision of enhancing corporate resilience and intensive sustainable development in production and operation.

Implementation Description of Digital Transformation Project in 2022

Type	Implementation Description of Digital Transformation Project in 2022	Efficiency
Warehouse management	Assist warehouse personnel to optimize the process and control the on-going inventory manufacturing, and conduct quantitative and amount analysis	Annual working hours saved by <b>180</b> hours
Financials	Financial reconciliation system and statement management, gross profit analysis	Annual working hours saved by <b>350</b> hours
Shipment management	Assist in performing shipment booking inspection, documentary vouchers and labelling output	Annual working hours saved by <b>640</b> hours
Order system	Optimize order system to effectively assist order inquiries and changes	Annual working hours saved by <b>180</b> hours
Procurement	Procurement management, production process and material enquiry	Annual working hours saved by <b>156</b> hours

Digital Transformation and Low-Carbon Operation

Phase One	<p>The ASPEED Technology's Digital Transformation Project has been gradually implemented since 2021 to improve operational efficiency and solve problems of traditional processes through digital technology. The first phase of the digital transformation project was mainly to systematically build digital operations. In 2022, the content focused on the digitalization of production and operation and the analysis of supply chain digital management data, to create maximum value for ASPEED and customers:</p> <ul style="list-style-type: none"><li>• Systematic integration of data and conduction of database management analysis to facilitate digital supply chain management and customer behavior model analysis</li><li>• Digitalization of enterprise resource planning (ERP) system</li><li>• Construction of information data platform</li></ul>
Phase Two	<p>The second phase is expected to introduce a comprehensive system, including:</p> <ul style="list-style-type: none"><li>• BPM digital signature and electronic verification system: Accelerate the verification process, reduce the time and cost of internal paper signature verification of the Company, and optimize and control the verification process</li><li>• The BI (Business Intelligence) system and AI (Artificial Intelligence) digital tools carry out data and chart analysis and judgement, so as to assist in improving the efficiency of enterprise operation and management in light of various unforeseen circumstances</li><li>• DCC Document Management System: Control all documents, strengthen document management and protection, and improve the document control process</li></ul>

Starting from 2022, we have changed our chip labels from ink printing to laser labels to reduce environmental pollution caused by printing during the manufacturing process. In terms of production and operation, we continue to promote digital transformation, systematically build digital operation, strengthen cloud-based long-distance office, supply chain digital management and data analysis, and integrate sustainable issues from R&D, product innovation, field application to daily operation, so as to exert sustainable influence in an all-round way.



International marketing and talent cultivation

- ◆ Expand core technologies, develop new applications and extend application fields to develop new product lines and new customers and increase the market share of existing products.
- ◆ Strengthen corporate operation system, actively enhance organizational efficiency, improve sales management system and establish a global technology cooperation and service network.
- ◆ Carry out in-house staff’s education and training on sustainability and strengthen sustainability awareness. Organized the TCFD workshop, GHG awareness courses, information security and other education and training in 2022.
- ◆ Nurture professional marketing talents and deepen customer relationship, so as to grasp the changes and development of product application market.
- ◆ Continue to actively recruit and nurture high-tech talents, make use of break-through core technologies to promote product sustainability and improve international market visibility.
- ◆ Jointly develop and strategically ally with leading international manufacturers and international partners to gradually expand international market.

\*Please refer to Section 6.2 Talent Development for details



\*Attend the Year-end Dinner Party held by Monte Jade Science and Technology Association



\*Mr. Chris Lin in ARM Tech Symposium



Intellectual property rights protection and deployment	
Identified Impact Result	Negative Impact
GRI Topic-specific Standards	Self-formulated Topic
Performance Indicators	<ul style="list-style-type: none"><li>• Number of patent applications and grants</li><li>• Number of trade secret registration system applications and grants</li></ul>
2022 Results	<ul style="list-style-type: none"><li>• Received 9 patents; applied for 27 patents; successful year-over-year target achievement</li><li>• Established a trade secret registration system for the Company and officially launched in 2023</li><li>• Built an intellectual patent portfolio management for new products</li></ul>
2023 Objectives	<ul style="list-style-type: none"><li>• Gradually increase the number of patent applications and applying countries</li><li>• Establish a digitalized patent management system</li><li>• Establish systematic education and training on intellectual property</li></ul>

In the face of the global development of enterprise operations, the protection of intellectual property rights can be regarded as an important part of the global economic and trade layout, and is the key to the sustainable development of enterprises. Innovation and R&D are the most important asset and mission of ASPEED Technology. We attach great importance to the acquisition and protection of intellectual property rights and patents of key technologies. In terms of patent distribution, we will continue to increase the quality and quantity of patents through the development of core technologies and high-quality products. Since its establishment in 2004, ASPEED Technology has devoted considerable efforts in obtaining and protecting patents and has encouraged its R&D team to actively obtain key patents. Following the establishment of a full-time Legal Management Division in 2021, in addition to evaluating the feasibility of

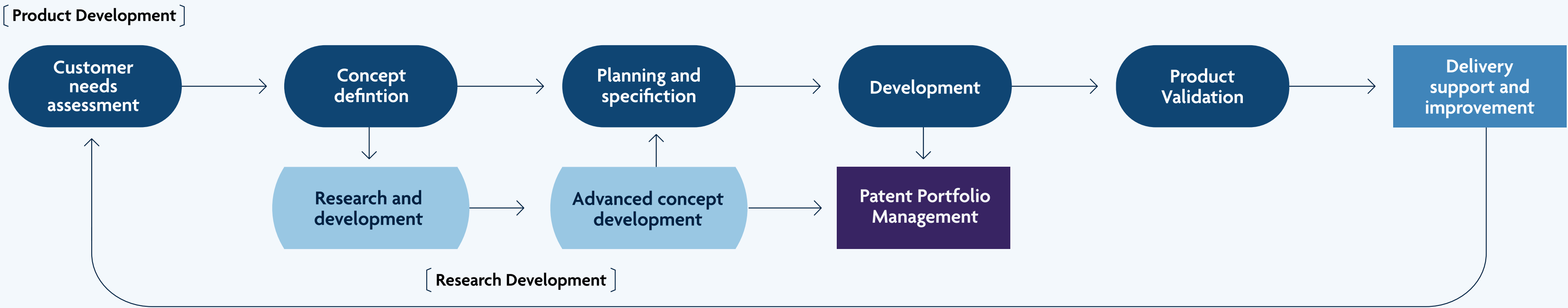
patent applications and taking charge of domestic and foreign patent applications, we also embark on the planning of the intellectual property portfolio and the trade secret registration system, develop internal assessments and enhance bonus for patent applications, and actively encourage employees to innovate and develop. In 2022, we adhered to short-term and medium-to long-term development strategies, and make ASPEED Technology to adopt a more systematic approach to protect technological innovation and intellectual property rights, and continue to make efforts to build a long-term intelligent property rights layout. Looking ahead, ASPEED Technology will continue to improve the penetration and acquisition of SoC hardware and software R&D talents in the area of patents and intellectual properties, significantly enhancing the intellectual property layout of chips, thereby enhancing ASPEED Technology’s corporate value and international visibility.

Protection Strategies for Intellectual Property Rights

Timeline	Strategy
Short-term development	<ul style="list-style-type: none"><li>• Establish a digitalized patent management system</li><li>• Optimize patent review and evaluation procedures to improve patent quality</li><li>• Cooperate with the Administration Division to establish systematic intellectual property rights-related education and training</li></ul>
Long-term development	<ul style="list-style-type: none"><li>• Continue to ensure that ASPEED’s technology is completely protected during development through building intellectual patent portfolio management for new products</li><li>• Design a diverse innovation mechanism supplemented by a graded evaluation process to motivate employees to make invention applications</li><li>• Establish links between patent proposals and trade secrets registration and management systems to ensure that intangible key secrets which are more suitable for trade secrets protection are detailed in the centralized management system</li><li>• Gradually increase the number of patent applications and applying countries to expand the protection of intellectual property rights and global layout</li></ul>



Management Process of Intellectual Patent Portfolio for New Products



By 2022, ASPEED Technology had acquired 58 patents, consisting of 31 patents in Taiwan, 22 in the United States, and an additional five from Broadcom's Emulex Pilot™ business. In 2022, the Company achieved its patent acquisition and application targets, including having acquired six four new Taiwan patents. The Company currently has 9 patent applications underway in Taiwan, 10 applications in the United States and 9 applications in China. Our patent applications cover a wide range of technologies found in core products, including seamless stitching and rotating of panoramic images as well as core technologies for image displays and tracking in wide-angle/panoramic image meeting systems.

Key achievement	2020	2021	2022	2022 achievement
Patent application	5	24	27	• Number of applications raised to 27 • Number of acquisitions was 9 • Patent application countries covered Taiwan, the United States and China
Patent acquisition	3	4	9	

\* The number of patents acquired in each year depends on the processing period and progress of patent application countries





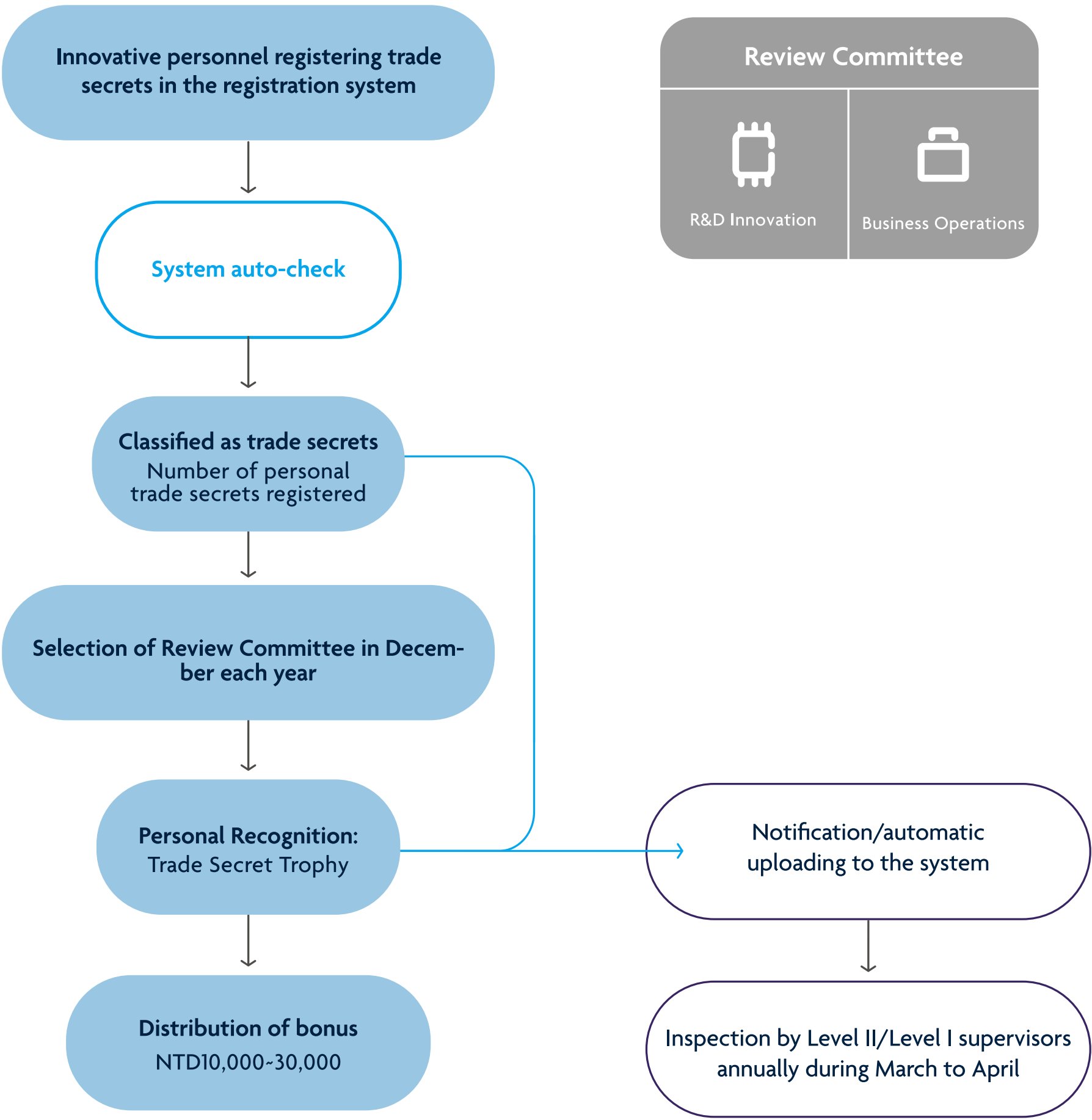
Trade Secret Registration System—Green Proposals Incentive Mechanism

In order to better protect the intangible assets and technology inventions within the Company with economic value that are not patentable, the trade secret registration system was specially planned in 2021 and launched in 2022. At the same time, the linkage between the patent proposal and the trade secret registration and management system was also established to ensure that the intangible key secrets which are more suitable for trade secret protection are all detailed in the centralized management system. Each year, members of the Review Committee are assigned by the Chairman of the Board and include professionals in the legal and R&D fields, and conduct an evaluation once a year. In order to be more integrated for sustainable development and internal green technology R&D and innovation of the Company, the trade secret registration system of ASPEED Technology specially incorporates a green innovation proposal incentive mechanism. The evaluation mechanism includes whether it is in line with green design, green manufacturing and green innovation application. It is targeted at whether it can improve energy efficiency and whether it has a unique contribution to the circular economy, and the above indicators will be one of the items for the Gold Award, Silver Award, and Quality Award. In the future, it is expected that green innovation will be divided into independent projects, and employees will be encouraged to carry out green innovation-related innovation R&D.

Operation of the Trade Secret Registration System

Key achievement	2022
Number of applications for quality trade secret in R&D and innovation	11
Number of applications for quality trade secret in business operations	1
Number of Gold Award	0
Number of Silver Award	1
Number of Quality Award	8

Operation of the Trade Secret Registration System





Technological and R&D innovations	
Identified Impact Result	Positive impact
GRI Topic-specific Standards	<ul style="list-style-type: none"><li>• 302 Energy</li><li>• Self-formulated Topic</li></ul>
Performance Indicators	<ul style="list-style-type: none"><li>• R&amp;D fees</li><li>• Green product R&amp;D</li></ul>
2022 Results	<ul style="list-style-type: none"><li>• R&amp;D fees amounted to NTD678 million in 2022, an increase of 23.95% over 2021</li><li>• AST2600 BMC SoC saved 23,417.58 metric tons of carbon dioxide emissions a year compared to the previous generation</li><li>• Gradually shifting to chip surface laser printing shipment to enhance green production</li><li>• Incorporate green innovation R&amp;D into the trade secret registration system</li></ul>
2023 Objectives	<ul style="list-style-type: none"><li>• Continue raise the proportion of R&amp;D expenses</li><li>• Continue to reduce GHG emissions of major chips</li><li>• Enhance the importance of green innovation and R&amp;D, set up independent selection awards in the trade secret registration system</li><li>• Product innovation and application into green energy saving</li></ul>

Green Innovation

As for green environmental protection and energy saving, our efforts are not only focused on the implementation of supplier management and reduction of environmental risks caused by our own operations, but also focused on the green R&D of products, how to contribute to sustainable development with our own design strength, including energy-saving and power-saving technology of chips, product application in new green fields and trade secret development. We actively encourage our employees to consider green R&D.

With the increasing installation of data centers and cloud computing, the energy-saving and power-saving technology of BMC SoCs can help reduce power consumption during operation, and auxiliary cloud service at the data center can effectively reduce the staff mobility cost, energy consumption and carbon emissions of enterprises, striving to contribute to the low-carbon development of the overall industry. In addition, in the development of new product application fields, we will also develop towards reducing energy consumption, including the ImmersiveX virtual domain application developed by innovative technology, the inspection and audit of smart factories, etc. This will not only save energy consumption for transportation and on-site visits, but also help improve the overall factory environmental safety and employee occupational safety; while remote virtual education can create more multifaceted learning, making learning opportunities less dependent on time.

In the trade secret registration system established in 2022, we have also included green R&D innovation as one of the evaluation indicators. Through these evaluation indicators, we encourage R&D employees to take green innovation into consideration when carrying out innovative development. It is expected that in 2023, a separate award for green innovation will be set up. The current selection criteria include:





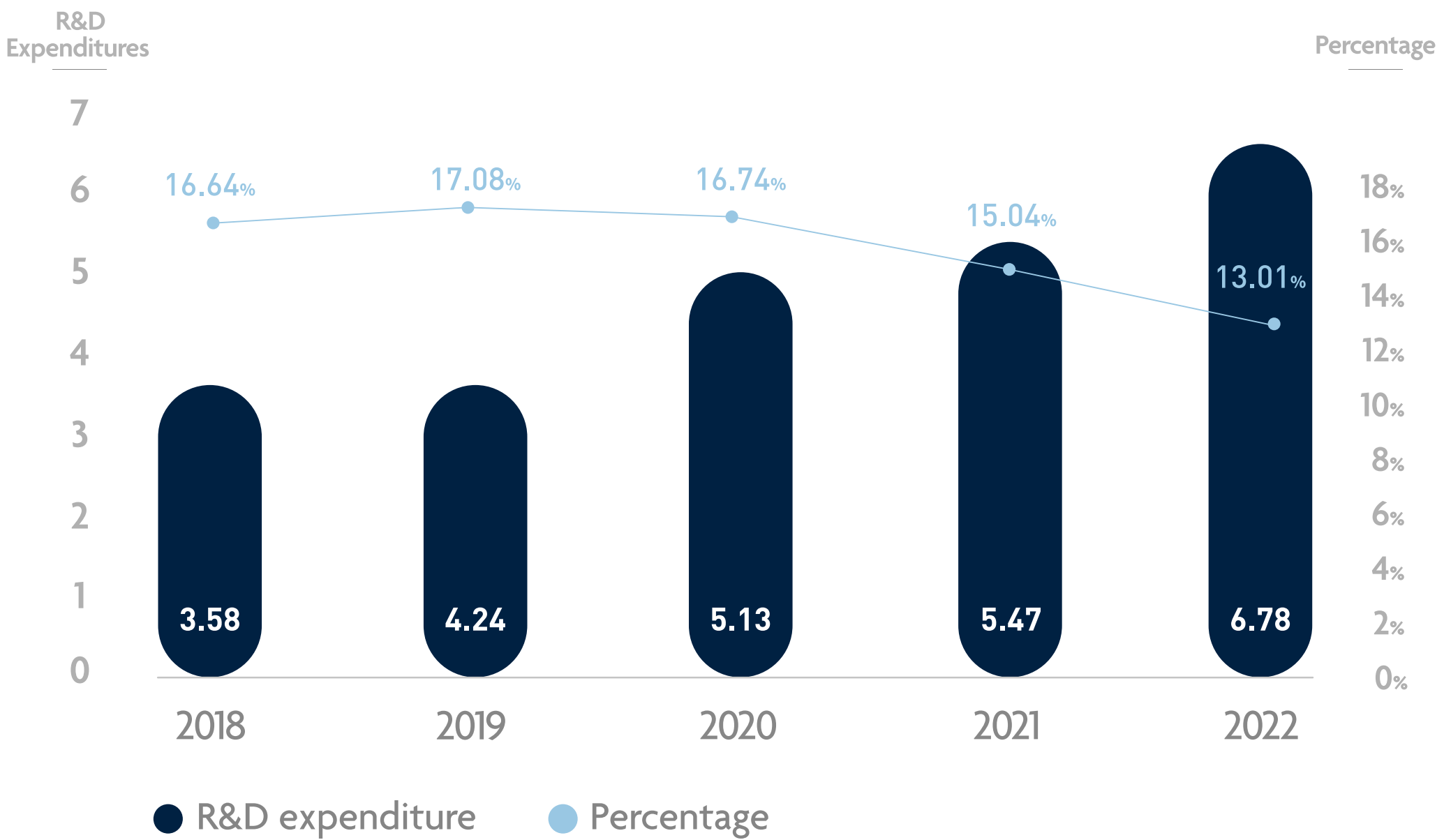
Green R&D

BMC SoC has been the most important product of ASPEED Technology. Since the first generation of AST2000, it has progressed to the seventh generation of BMC SoC—AST2600, using ARM Cortex A7 dual-core processor, which is the first BMC SoC in the industry to introduce 28nm advanced technology; with the adoption of new design technology and the new generation of semiconductor process, the computing capacity has been greatly improved, striving to bring faster and more computing power per unit of power consumption. Based on this view, ASPEED is committed to strengthening the power reduction of each generation of chips for the same complexity of computing tasks, thereby helping save energy consumption; meanwhile, on the application side, we can reduce the number of products used and optimize the computing power, effectively reducing the overall power consumption. On top of the efforts in hardware, ASPEED Technology is also dedicated to saving energy in software design, introducing energy-saving and power-saving design to all chips, using independent module design for chip driver, and dozens of drivers on a single chip can be activated individually according to the needs of server during operation. Besides, unused drivers will directly enter sleep mode to avoid any electricity consumption. In the product of server management chips, ASPEED Technology has accumulated many years of experience in development and design and cooperation with customers, aiming to build a server management chip that meets the green development direction with high performance, high security and low power consumption. We will continue to provide low-power consumption green and energy-saving chips to our customers and the whole industry chain through our R&D efforts in both software and hardware. In 2022, the chip manufacturing process gradually switched to laser printing on the chip surface instead of the traditional surface ink printing process to reduce pollutants and waste generated during the production process. In 2022, a total of 26.68% of chips shipments have been processed by using the laser printing method, which will reduce considerable ink pollution. In the future, we will switch to laser printing for comprehensive shipping.

ASPEED Technology believes that R&D is at the core of our business and has been putting resources on R&D in recent years. In 2022, R&D expenditure amounted to NTD678 million. The overall proportion of R&D

expenditure to revenue fell slightly due to a 43.23% significant growth in revenue in 2022, but the investment amount increased significantly by 23.95% compared with last year. In the future, ASPEED Technology will continue to invest in human resources and funding for R&D every year, and focus on the development of new technologies and new products.

R&D expenditures in the past five years (Unit: NTD100 million)





Energy-efficient

In product applications, assuming that ASPEED Technology's first generation of BMC SoC AST2000 uses an 80% workload as the benchmark, each generation of single BMC SoC's power consumption is decreasing on a generation basis while reaching the same benchmark. For example, the 7<sup>th</sup> generation AST2600 BMC SoC can save up to 93.21% of power consumption per year compared with the first generation AST2000 while achieving the same workload.

When comparing the 7<sup>th</sup> generation AST2600 BMC SoC with its predecessor AST2500, a single SoC can save up to 61.34% of power consumption on average per year, while still achieving the same workload. Based on the shipment volume of AST2600, the main product of ASPEED Technology, in 2022, it could reduce approximately 374,454,097 kWh of electricity consumption, equivalent to approximately 190,597.14 metric

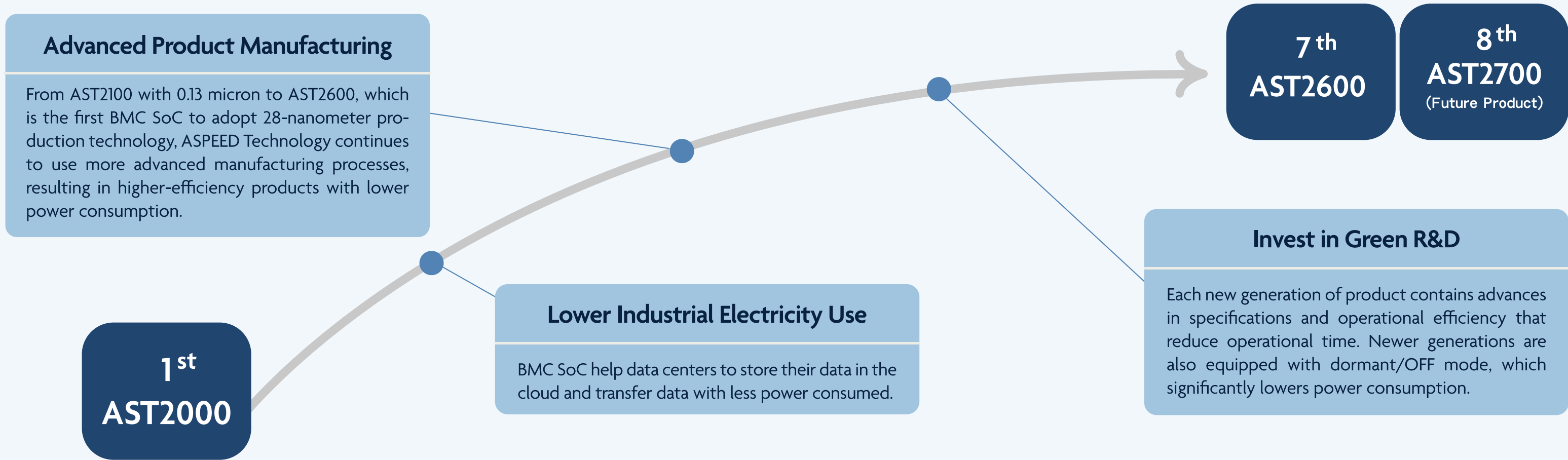
tons of carbon dioxide emissions ,or about the equivalent of the carbon absorbency of 227,290 acres of U.S. forests in one year. compared with AST2000, Compared with AST2500, AST2600 can reduce approximately 23,744.12 metric tons of carbon dioxide emissions a year, equivalent to approximately 28,315 acres of U.S. forests annual carbon absorbency in one year.

\* Based on the 2021 electricity carbon emission factor of 0.509 kg of CO2e per kWh, as announced by the Bureau of Energy, Ministry of Economic Affairs

\* Used 2022 AST2600 deliveries to calculate total carbon emissions savings for the year

\*Used the Greenhouse Gas Equivalencies Calculator, from the US Environmental Protection Agency, to calculate carbon absorption capacity

BMC SoC – High efficiency and low power consumption



Compared with AST2500, AST2600 can reduce approximately **23,744.12** metric tons of carbon dioxide emissions a year.

**=** approximately **28,315** acres of U.S forests annual carbon absorbency in one year.



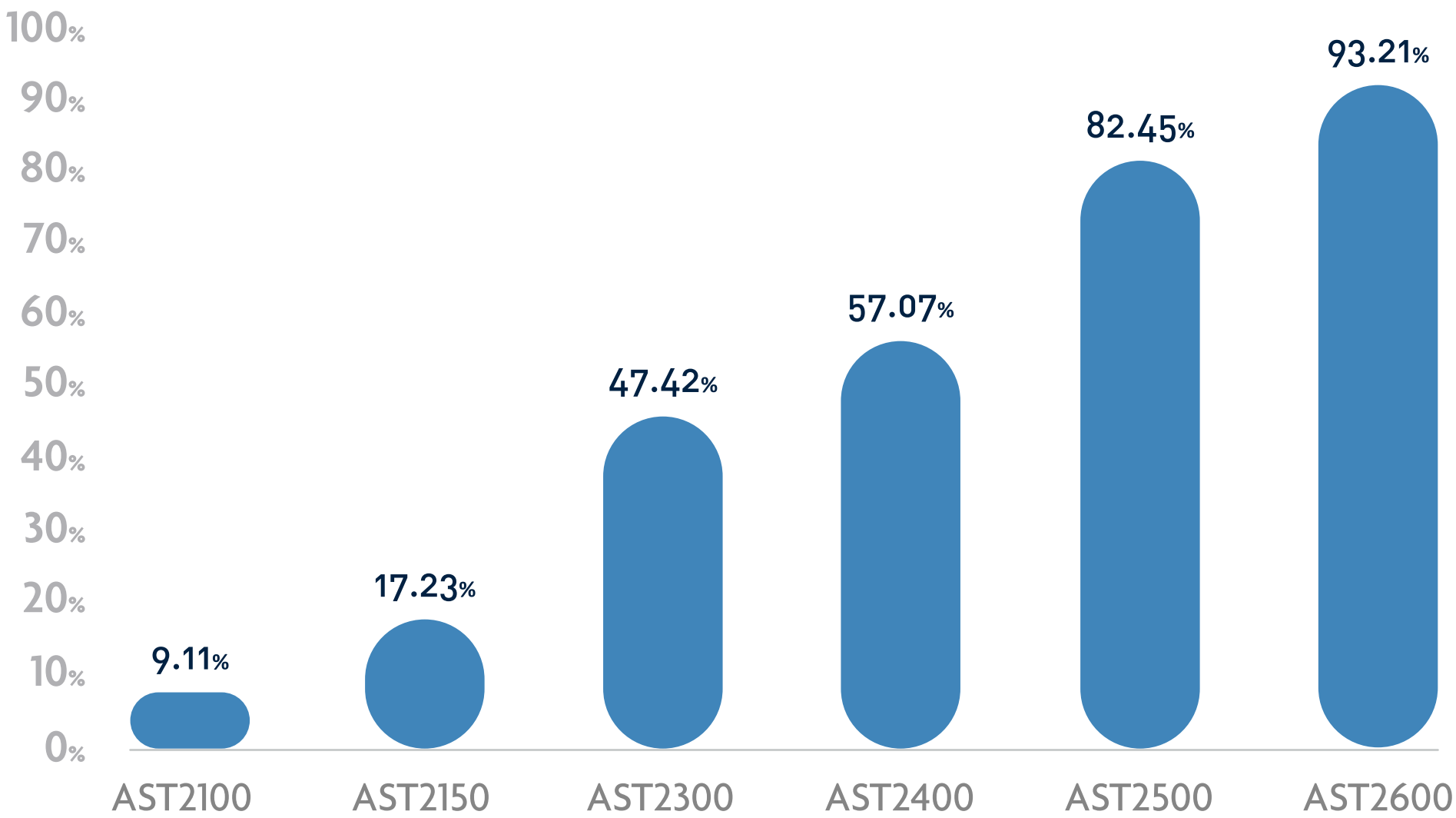


ASPEED Technology’s 2022 Main Products and Their Performance (MIPS/W)

Product	CPU	Performance of a System-Level Processor
AST2600	Dual-core ARM Cortex A7 CPU @ 1.2GHz 32-bit ARM Cortex M3 @ 200MHz	2,381
AST2500A2-GP	ARM1176JZS @ 800MHzHz ColdFireV1 @ 200MHz	1,652.17
AST2520A2-GP	ARM1176JZS @ 800MHzHz	1,357.64
AST2400A1-GP	ARM926EJ-S @ 400MHzHz ColdFire V1 @ 200MHz	580.31
PILOT 4	Dual-Core ARM Cortex A9 @ 500MHz ARM Cortex M3 @ 250MHz	1,149.89
AST1520A1-GP	ARM1176JZS @ 800MHzHz ColdFire V1 @ 200MHz	1,652.17

\* Calculated on AST2600 ARM CA7@1200MHz vs ColdFire V1@200MHz

Energy savings for various generations of BMC SoC to achieve the same computing power as the AST2000 1st generation model used at 80% workload





# 05

## Corporate Governance

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# Viewpoint

## Driving Sustainability Transformation with Digital Governance



The COVID-19 pandemic has transformed not only human lives, but also prompted companies to think more closely about future transformation and changes to adapt to the new post-pandemic working pattern, in which digital transformation plays a vital role. Not only that, due to the wave of green operations, reducing the consumption of manpower, materials and resources through digital technology, these have made digital transformation gradually become a future trend. In the face of this digital transformation, ASPEED will first review the core values of the company's internal operation development and product services, and through interviews

with various divisions to understand the actual needs, then carry out strategic planning and promotion plans, and finally apply technology tools to reduce operating costs and improve operating efficiency. Through digital information technology, we help the Company to give play to its core competitive advantages and strengthen governance performance.

In 2021, ASPEED newly established the Information Science Development Division in response to the demand for digital transformation, which is dedicated to the digital transformation project. The primary goal is to

improve the divisional and cross-divisional operation process through digital technology, so as to greatly improve the operation efficiency; in addition, green operation, paperless operation, far-from-work mode to energy saving and carbon reduction have become the future trend; therefore, the Information Science Development Division will take the lead and, after in-depth interviews with relevant divisions, formulate project priorities to implement the ASPEED Digital Transformation Project in stages. The first phase of the project mainly focuses on the digitization of production and operation, with a stress on database building and supply chain digital management. This phase adopts a systematic approach to integrate data and database, effectively build a data platform for the production and operation offices and relevant divisions including Finance Division and Customer Service Unit to integrate cross-divisional data and analyze systematic data. At the same time, it also introduces the financial system to help account management and gross profit margin analysis. The goal is to assist the whole production and operation offices and relevant divisions to cooperate more efficiently, process digitalization and unification to optimize process and work efficiency. The second phase will focus on the comprehensive digital and data analysis: the integration and implementation of BPM electronic verification system and document management system. In addition, the BI (Business Intelligence) / AI (Artificial Intelligence) digital tools will be adopted to grasp the data of the Company's internal management sales, business, customer service, human resources and information system. Through analysis, more valuable information will be produced, which will help to comprehensively enhance the operating value of the Company.





Corporate governance and integrity operation

Identified Impact Result	Negative Impact
GRI Topic-specific Standards	<ul style="list-style-type: none"><li>• 205 Anti-corruption</li><li>• 206 Anti-competitive Behavior</li></ul>
Performance Indicators	<ul style="list-style-type: none"><li>• Corporate governance evaluations</li><li>• Corporate governance and integrity compliance</li></ul>
2022 Results	<ul style="list-style-type: none"><li>• Improvement in corporate governance related rankings</li><li>• Responding to the TCFD initiative and officially signing to become a TCFD supporter</li><li>• Promoting the anonymous whistleblower reporting system</li><li>• Promoting Digital Transformation Projects</li></ul>
2023 Objectives	<ul style="list-style-type: none"><li>• Consider and approve the remuneration of senior management to be included in the perpetual performance indicators</li><li>• Complete a whistleblower reporting system under third-party supervision</li><li>• Assess and drive the second phase of digital transformation</li></ul>

ASPEED Technology formulated the “Corporate Governance Best Practice Principles” and the “Code of Ethical Conduct” in order to build an effective corporate governance framework and related ethical standards. We uphold transparent operations and closely heed the rights and interests of shareholders and society. In order to aid corporate operations and oversight, we believe that corporate governance should be built on a foundation of a strong, complete Board of Directors in conjunction with supporting committees, including the Audit Committee, the Remuneration Committee, and the Sustainability Committee. To uphold

information transparency, ASPEED Technology passed the “Management of Insider Trading Prevention cum Internal Material Information Handling Procedures” in 2022, and established an investor relations section on the Company website. Investors are able to read and download annual reports, earnings call information, and publicly disclosed financial information. A corporate governance section also provides related legal and regulatory information, including the Articles of Incorporation, corporate governance best practice principles, and a code of ethical conduct. Resolutions made by the Board of Directors and related information are also available on the website. In the future, the Company aims to make information even more transparent, more public, and easier to search.

ASPEED Technology's ongoing Sustainability promotion and corporate governance implementation were recognized when the Company's ranking in the TWSE corporate governance evaluations rose to a higher bracket for two consecutive years since 2020. To further strengthen corporate governance performance and comprehensively improve the level of corporate governance, ASPEED Technology adheres to the Financial Supervisory Commission's “Corporate Governance 3.0—Sustainable Development Roadmap.” The Company uses the TWSE corporate governance evaluation results as a reference for determining areas where improvements are needed, including having already provided more detailed disclosures in annual reports and on the corporate website, and implementing a candidate nomination system for the election of directors and independent directors. Besides already implementing ESG, environmental protection, integrity operation, employee care, social contributions, and information security, ASPEED Technology has obtained ISO27001 international certification for information security management in 2022, implemented employee integrity and anti-corruption initiatives, developed a whistleblower system reporting platform, and strengthened communication between independent directors and internal auditors and accountants. In the future the Company will practice effective corporate governance in all areas, strengthen Board structure and operations, and make information disclosures more transparent. In 2023, the Whistleblower System, which is an externally built and independent director checking mechanism, is expected to be launched to establish an independent reporting platform, and we are committed to increasing the diversity of board members in 2024 for the 8<sup>th</sup> Board of Directors. These measures will incorporate the spirit of sustainability into operations and management while fulfilling sustainability duties.

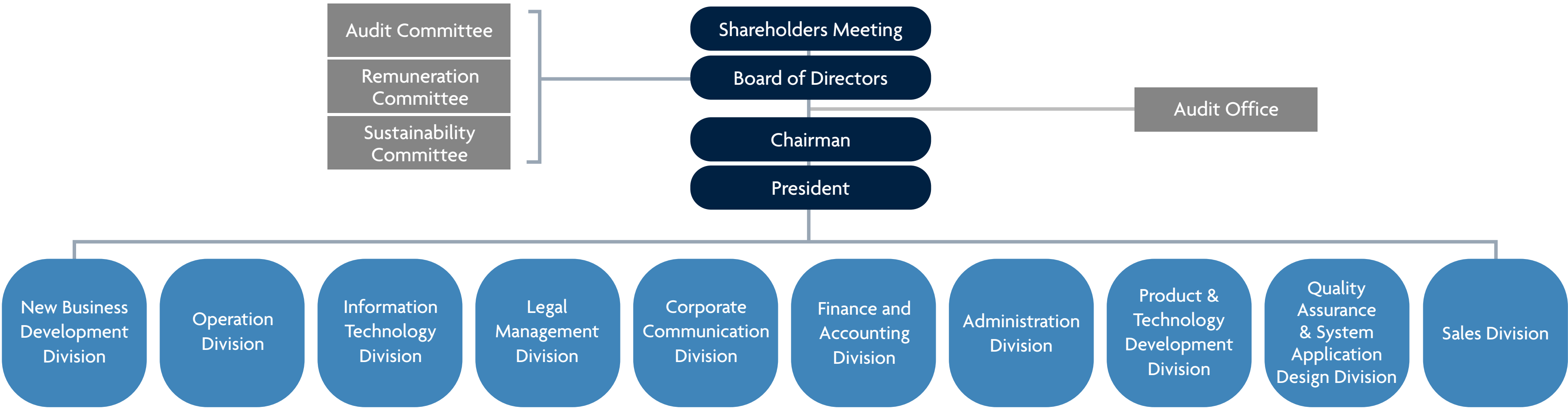


Company Organization

The Board of Directors is the highest administrative unit of ASPEED Technology. The nomination and selection of Board members is conducted by following the “Procedures for the Election of Directors and Supervisors.” Oversight of Company operations, formulation of strategies and guidelines, identification of operational risks, and planning of Sustainability development guidelines are carried out in accordance with the “Company Act,” the “Articles of Incorporation,” and authority assigned by Board decisions.

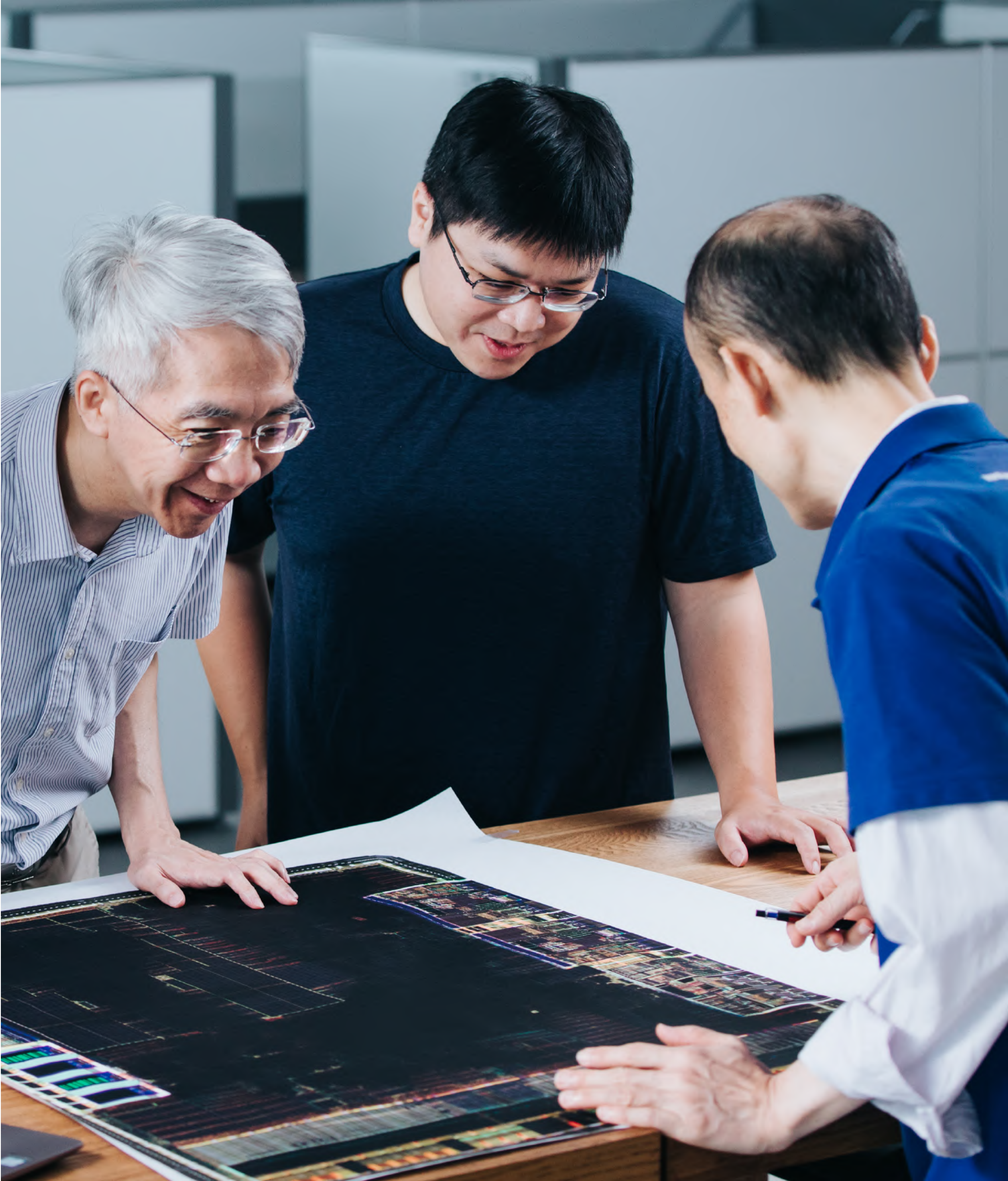
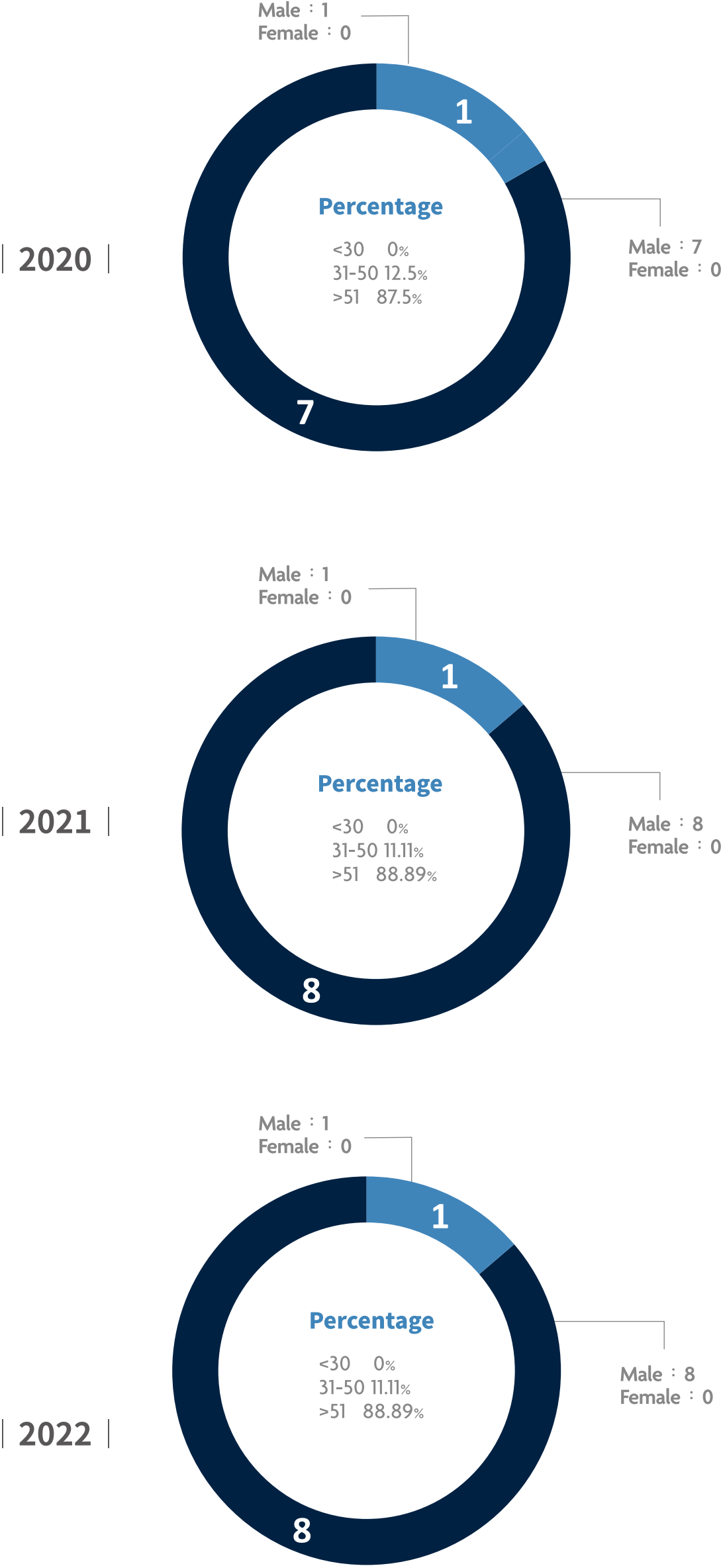
Operations of the Board of Directors

In 2022, ASPEED Technology’s seventh Board was established with the selection of nine directors who will serve until 2024. The directors have diverse professional backgrounds with both practical and academic research experiences, ranging from operations, semiconductor technology, and finance to network and communications information security as well as international M&A. Four of the nine directors are independent and support oversight by serving as the members of the Audit Committee and Remuneration Committee. Required to convene at least once per quarter, the Board met six times in 2022 and the directors had an attendance rate of 98%. Directors undergo training in accordance with the “Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEx Listed Companies” in order to stay updated on the latest legal revisions and emerging issues, so that they are equipped to provide more effective corporate governance. To increase the Board’s effectiveness and improve information transparency, the Company conducted the 2022 internal performance self-evaluations, in accordance with the “Rules for the Performance Evaluation of Board Members”. Each year, the self-evaluations will be conducted in January and reported to the Board in the first quarter. The internal self-evaluations for 2022 was completed in January 2023 and reported to the Board before the end of the first quarter of 2023. Results are used for review and improvement purposes, and serve as a reference for selecting and nominating future directors. In order to continuously refine and strengthen ASPEED Technology’s board structure, we undertake to add at least one female director when the eighth Board is re-elected in August 2024 to strengthen the diversity of board members.





The member of administrative unit from 2020 to 2022  
Unit: person, percentage





Board Members and Continuing Education

Title	Name	Gender	Primary Positions	Board Meeting Attendance Rate	2022 Continuing Education Course Name
Chairman	Chris Lin	Male	<div><div></div><div>· Chairman and President, ASPEED Technology Inc.</div><div>· Director, Linvest Wealth Corp.</div><div>· Director, Linvest Fortune Corp.</div><div>· Director, ASPEED Technology (Samoa) Inc.</div><div>· CEO, ASPEED Technology (U.S.A.) Inc.</div><div>· Director, ASPEED Technology India Private Ltd.</div><div>· Chairman, Cuploa360 Inc.</div></div>	100%	<div><div></div><div>· Building an Intelligent Risk Organization-from Fraud Risk Prevention, Detection, Investigation to Crisis Management (3 hours)</div><div>· The 18<sup>th</sup> (2022) Corporate Governance Summit-Enhancing Directors’ Duties and Implementing Corporate Sustainability (3 hours)</div></div>
Director	Arnold Yu	Male	<div><div></div><div>· Director, Machvision Inc.</div><div>· Director, Autovision Technology Inc.</div><div>· Supervisor, AtechOEM Inc.</div><div>· Director, Stark Technology Inc.</div><div>· Director, ChipAI Co., Ltd.</div><div>· Independent Director, Cipherlab Co., Ltd.</div><div>· Director, ASPEED Technology India Private Ltd.</div></div>	100%	<div><div></div><div>· Release of Reference Guidelines on the Exercise of Powers and Functions by Independent Directors and the Audit Committee and Director and Supervisor Briefing (3 hours)</div><div>· How the Audit Committee Interprets and Uses the Audit Quality Index (AQI) (3 hours)</div></div>
Director	Luke Chen	Male	<div><div></div><div>· Vice President of Sales, ASPEED Technology Inc.</div></div>	100%	<div><div></div><div>· CSR-Corporate Governance from Human Rights Policy (3 hours)</div><div>· Interpretation of Important Decisions on Corporate Governance: Focusing on Directors’ Responsibilities (3 hours)</div></div>
Director	Ted Tsai	Male	<div><div></div><div>· Chairman, Maojet Technology Corp.</div></div>	100%	<div><div></div><div>· CSR-Corporate Governance from Human Rights Policy (3 hours)</div><div>· Interpretation of Important Decisions on Corporate Governance: Focusing on Directors’ Responsibilities (3 hours)</div></div>
Director	Hung-Ju Huang	Male	<div><div></div><div>· Vice President of R&amp;D, ASPEED Technology Inc.*</div><div><small>* On August 31<sup>st</sup>, 2022, the Company announced that Hung-Ju Huang retired from the position of ASPEED Technology’s Vice President of R&amp;D and switched to a role of R&amp;D Consultant.</small></div></div>	100%	<div><div></div><div>· Practice of Trade Secret Protection and Fraud Prevention (3 hours)</div><div>· Case Study of the Operation Rights of the Company (3 hours)</div></div>
Independent Director	Chyan Yang	Male	<div><div></div><div>· Adjunct Professor, Institute of Business and Management, National Chiao Tung University.</div><div>· Independent Director, ACTER Co., Ltd.</div><div>· Supervisor, Chia Chang Co., Ltd.</div><div>· Independent Director, MARS Semiconductor Corp.</div><div>· Independent Director, Associated Industries China, Inc.</div></div>	100%	<div><div></div><div>· Discussion on the Key Issues of M&amp;A integration in the Corporate M&amp;A Process (3 hours)</div><div>· Sustainable Transformation from ESG Management (3 hours)</div><div>· Introduction of the Operation Rights Competition and Court Proceedings (3 hours)</div><div>· Financial Misinformation that Directors are Most Likely to Overlook (3 hours)</div><div>· ESG/CSR and Sustainability Governance in 2022 (3 hours)</div></div>
Independent Director	Dyi-Chung Hu	Male	<div><div></div><div>· Chairman and CEO, Siplus Technology Co.</div><div>· Director, Raytek Semiconductor, Inc.</div></div>	100%	<div><div></div><div>· Practice of Trade Secret Protection and Fraud Prevention (3 hours)</div><div>· Enterprise M&amp;A Practice and Case Studies (3 hours)</div></div>
Independent Director	Sheng-Lin Chou	Male	<div><div></div><div>· Chief Venture Officer (CVO), ICL/Industrial Technology Research Institute</div><div>· Secretary General, Taiwan Association of Information &amp; Communication Standards (TAICS)</div></div>	90%	<div><div></div><div>· How the Audit Committee Interprets and Uses the Audit Quality Index (AQI) (3 hours)</div><div>· 2022 Independent Directors Elite Research and Training Institute – High-level Training Course (3 hours)</div></div>
Independent Director	John C. Lin	Male	<div><div></div><div>· Senior Consultant, Jones Day International Law Firm</div></div>	100%	<div><div></div><div>· The 18<sup>th</sup> (2022) Corporate Governance Summit- Directors’ Duties and Implementing Corporate Sustainability (6 hours)</div><div>· How the Audit Committee Interprets and Uses the Audit Quality Index (AQI) (3 hours)</div></div>



Operation of Audit Committee

ASPEED Technology established the Audit Committee to strengthen the Company’s governance and operations. The committee’s oversight of financial reporting procedures enables it to monitor internal controls and inspect financial reports, so that it can evaluate and guide the Company’s audit related tasks. The Audit Committee assists the Board of Directors in fulfilling oversight of the quality and integrity of the Company’s accounting, auditing, and financial reporting practices. The Audit Committee is composed of all independent directors. The committee may resolve to retain the service of an attorney, certified public accountant, or other professionals to provide advice. It has direct access to the Company’s internal auditors, certified public accountants, and all employees of the Company through meetings, informal discussions, telephone, and email. Each year the Audit Committee and a certified public accountant discuss legal compliance issues and identify areas for further attention. The term of ASPEED Technology’s 2022 second (current) Audit Committee is from July 30<sup>th</sup>, 2021, to July 29<sup>th</sup>, 2024. The committee met four times in 2022 and carried out the following:

2022 the 2nd Audit Committee

Title	Name	Expected Attendance	Actual Attendance	Attendance by Proxy	Attendance Rate %	Remarks
Convenor	Chyan Yang	4	4	0	100%	None
Independent Director	Dyi-Chung Hu	4	4	0	100%	None
Independent Director	Sheng-Lin Chou	4	4	0	100%	None
Independent Director	John C. Lin	4	4	0	100%	None

\*Attending a meeting via video conference is considered equivalent to attending in person.

Operation of the Remuneration Committee

To support corporate governance and strengthen compensation mechanisms for the Company’s directors, supervisors, and managers, ASPEED Technology established the Remuneration Committee in accordance with the “Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Taiwan Stock Exchange or the Taipei Exchange.” The committee charter gives the committee authority to oversee the compensation mechanisms for the Company’s directors, supervisors, and managers. The committee shall faithfully perform its official powers and submit its recommendations for deliberation by the Board of Directors. The “Remuneration Committee Charter” of the Company stipulates that the Remuneration Committee shall comprise at least three members, and shall be appointed by resolution of the Board, one of whom shall be the convener. The Remuneration Committee of the Company is composed of all independent directors. Meetings shall be held at least twice a year. Directors, managers of relevant divisions, internal auditors, accountants, legal advisors or other personnel shall be invited to attend the meeting and to provide necessary information. However, the seats shall go in the discussion and voting. ASPEED Technology’s 2022 fifth Remuneration Committee is composed of four members, including one convener. Its term is from August 11<sup>th</sup>, 2021, to July 29<sup>th</sup>, 2024. In 2022, the Remuneration Committee met four times and members had the following attendance status:

2022 the 2nd Remuneration Committee

Title	Name	Expected Attendance	Actual Attendance	Attendance by Proxy	Attendance Rate %	Remarks
Convenor	Chyan Yang	4	4	0	100%	None
Director	Dyi-Chung Hu	4	4	0	100%	None
Director	Sheng-Lin Chou	4	4	0	100%	None
Director	John C. Lin	4	4	0	100%	None

\*Attending a meeting via video conference is considered equivalent to attending in person.



Independent Directors and Internal Communications

ASPEED Technology’s independent directors use quarterly Audit Committee meetings or communication with accountants through pre-meetings and informal discussions to understand financial reports, review audit results, and discuss legal and regulatory issues relating to finance and accounting, taxation, and securities. When serious issues occur, the directors and accountants convene meetings. In 2022, no serious or unusual issues occurred.

Descriptions of Communications Between Independent Directors and Internal Auditors

Date	Form of Meeting	Resolution	Dissenting Opinion or Qualified Opinion from Independent Directors
2022.03.07	The third meeting of the second session of the Audit Committee	Reviewed the 4 <sup>th</sup> quarter, 2021 internal audit report	None
		Reviewed the 2021 internal control measure statement	
2022.05.09	The fourth meeting of the second session of the Audit Committee – Pre-meeting (separate meeting)	Established the separate communication channels and mechanisms between independent directors and internal auditors	
	The fourth meeting of the second session of the Audit Committee	Reviewed the 1 <sup>st</sup> quarter, 2022 internal audit report	
2022.08.08	The fifth meeting of the second session of the Audit Committee	Reviewed the 2 <sup>nd</sup> quarter, 2022 internal audit report	
2022.11.07	Internal Discussions on Auditing (separate meeting)	Reviewed the 2023 description of audit plan risk assessment	
	The sixth meeting of the second session of the Audit Committee	Reviewed the 3 <sup>rd</sup> quarter, 2022 internal audit report	
		Formulated the 2023 audit plan	

ASPEED Technology's independent directors use quarterly Audit Committee meetings or communication with accountants through pre-meetings to understand financial reports, review audit results, and discuss legal and regulatory issues relating to finance and accounting, taxation, and securities. When serious issues occur, the directors and accountants convene meetings. In 2022, no serious or unusual issues occurred.

Descriptions of Communications Between Independent Directors and Certified Public Accountant

Date	Form of Meeting	Resolution	Dissenting Opinion or Qualified Opinion from Independent Directors
2022.03.07	The third meeting of the second session of the Audit Committee – Pre-meeting	Discussed the latest regulations on finance and accounting, taxation and securities administration	None
	The third meeting of the second session of the Audit Committee	Reviewed results of the 2021 financial report and important items for review	
2022.05.09	The fourth meeting of the second session of the Audit Committee – Pre-meeting	Discussed the latest regulations on finance and accounting, taxation and securities administration	
	The fourth meeting of the second session of the Audit Committee	Reviewed the 1 <sup>st</sup> quarter, 2022 financial report and important financial items	
2022.08.08	The fifth meeting of the second session of the Audit Committee – Pre-meeting	Discussed the latest regulations on finance and accounting, taxation and securities administration	
	The fifth meeting of the second session of the Audit Committee	Reviewed the 2 <sup>nd</sup> quarter, 2022 financial report and important financial items	
2022.11.07	The sixth meeting of the second session of the Audit Committee – Pre-meeting	Discussed the latest regulations on finance and accounting, taxation and securities administration	
		Reviewed the 3 <sup>rd</sup> quarter, 2022 financial report and important financial items	
		2022 appointment of certified public accountant	
		Evaluation of the independence of certified public accountants	
		2022 certified public accountant appointment and fee	



## Internal Audit Responsibilities

Besides establishing an internal audit unit that is overseen by the Board of Directors, ASPEED Technology assigns a management-level internal auditor as needed based on the Company's scale, business conditions, management needs, and legal requirements. In line with internal audit implementation rules, the Audit Committee decides the appointment or dismissal of the internal auditor and the Board of Directors must approve the decision by resolution. The internal auditor is subject to annual evaluations and the Chairman determines his or her compensation.

## Internal Control Practices and Procedures

Based on risk assessment results the internal audit unit produces an audit plan that must then be passed by the Audit Committee and the Board of Directors. Periodic and ad hoc reports on implementation results are made to the committee and the Board. The implementation plan shall include annual self-evaluations of control measures by all internal units followed by an audit of the self-evaluations by the internal audit unit. The overall results shall become the basis for an internal control measure statement by the Board and the president. In 2022, ASPEED Technology established and the Board of Directors approved the "Sustainability Report Preparation and Validation Process", which requires that the previous year's Sustainability Report be prepared annually with reference to general, industry, and materiality criteria published by the Global Reporting Initiatives (GRI), disclosing the economic, environmental, and social material topics and impacts identified by the Company, the items disclosed, and the reporting requirements. The aforementioned sustainability report should include an assessment of relevant environmental, social, and corporate governance risks and establish relevant performance indicators to manage the material topics identified. ASPEED Technology expects to prepare an internally audited sustainability report by June 30<sup>th</sup> of each year beginning in 2023 and to disclose an index of the content of the report against the GRI criteria.

## Ethical Corporate Management

Ethical corporate management is a core value of ASPEED Technology's corporate governance and the highest principle of the Company's conduct. The Company therefore formulated the "Corporate Code of Ethics" and the "Procedures for Ethical Management and Guidelines for Conduct." It includes adherence to ethical corporate management policies as a condition of hire for new employees. When fulfilling work duties, all employees must act honestly and fairly while adhering to government laws and regulations. Board members and senior-level managers must also uphold ethical principles when running the Company. If the Company discovers that a business counterparty, supplier, or other partner conducts business in an unethical manner, we shall immediately terminate the business relationship and abstain from future business relations. These measures ensure effective implementation of our ethical corporate management policy.

The Sustainability Committee's Corporate Governance Group and the Administration Division are responsible for advocacy and implementation of ASPEED Technology's ethical corporate management. They formulate, explain, and consult on the procedures for ethical management and guidelines for conduct, while carrying out related procedures and oversight, including reporting and registration procedures as well as making periodic reports by the Sustainability Committee to the Board of Directors. The division holds regular and ad hoc educational training courses with employees to promote ethical corporate management, so the employees clearly understand related concepts and standards. The division also makes announcements to employees and discusses ways to strengthen ethical corporate management with managers. Employees must fully grasp the importance of ethical corporate management and practice it in their everyday work. When joining the Company, 100% of new employees must sign a guarantee letter stating that they will adhere to the Articles of Incorporation and ethical corporate management principles. Moreover, they pledge to not violate or infringe intellectual property rights. If unethical behavior is found, administrative managers and managers from related departments review the incident, make improvements, and report

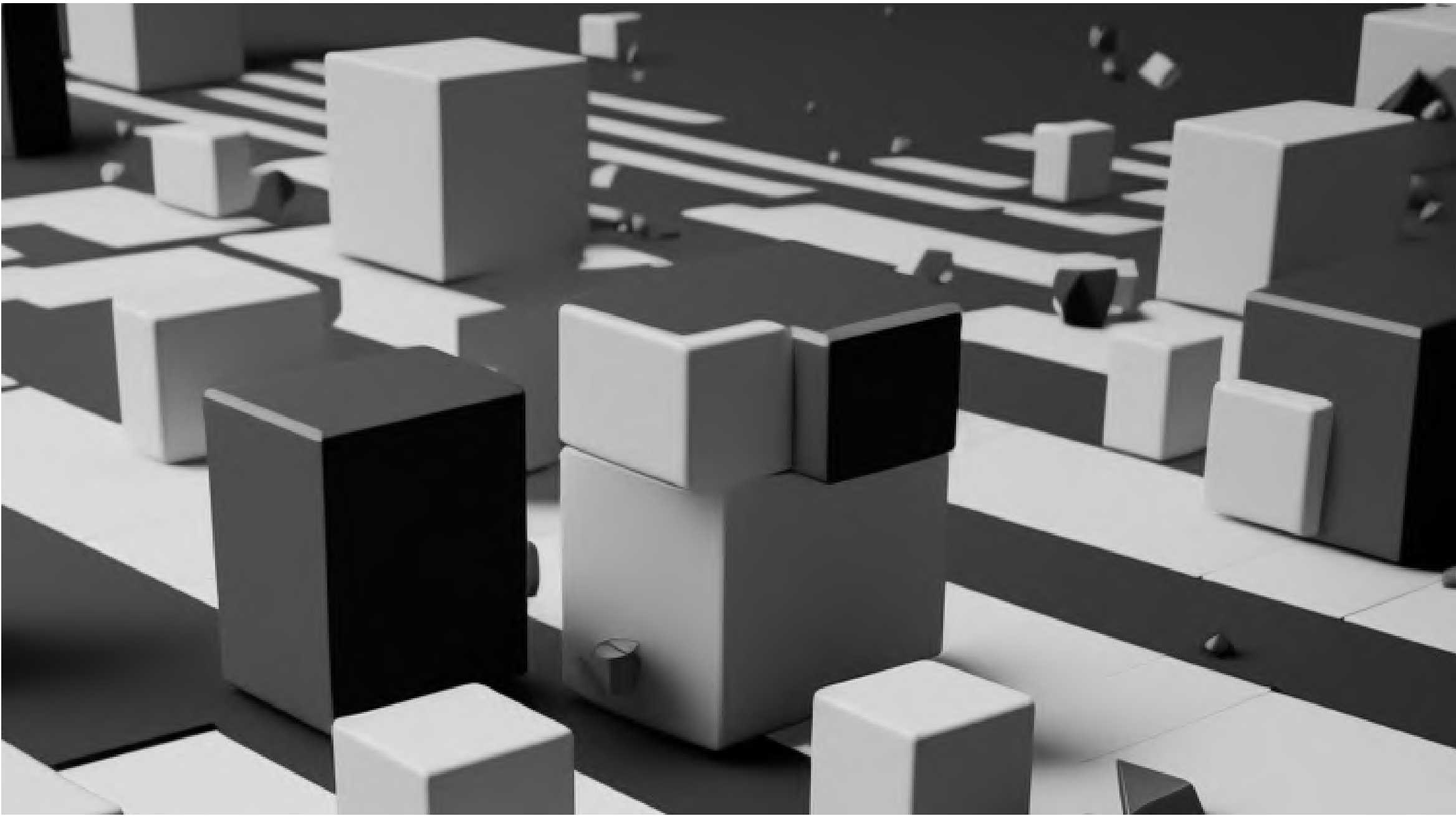


to the Board of Directors. ASPEED Technology has always upheld fairness and justice, which is why we are firmly committed to fair business practices. We are firmly opposed to anti-competitive practices and support anti-trust and anti-monopoly practices. If any inappropriate behavior relating to ethical corporate management, anti-competitive practices, or anti-trust and anti-monopoly practices is discovered, employees and external stakeholders can directly report their findings to [info@aspeedtech.com](mailto:info@aspeedtech.com). In 2022, ASPEED Technology scrupulously abided by laws and social norms. No employees were involved in any work-related bribery or legal troubles, and none faced any work related fines or penalties in Taiwan or overseas. ASPEED Technology recognizes the importance of moral business practices and internal ethical control mechanisms. In 2022, the Company began to plan an anonymous whistleblower system that is overseen by the Company's internal Legal Management Division and audit units. We adopt an impartial and independent third-party reporting system, overseen by independent directors, to prevent internal corruption or unethical behaviors. The system is expected to go live in the second quarter of 2023, enabling ASPEED Technology to move towards a more complete and transparent governance operation.

### Legal Compliance

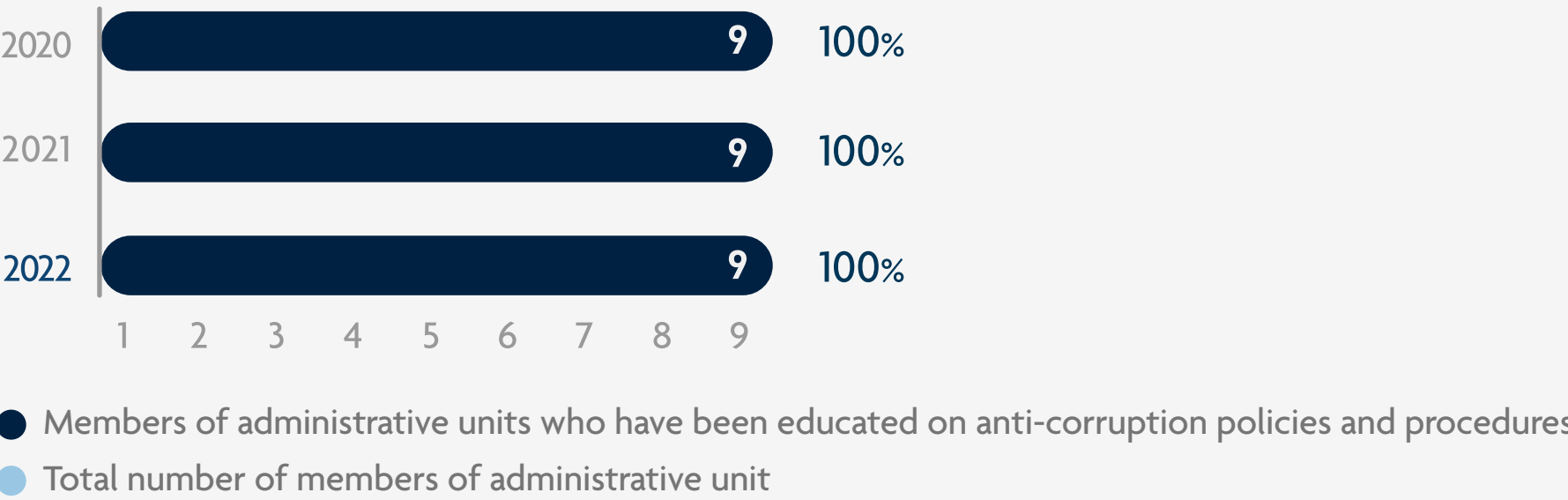
ASPEED Technology attaches great importance to the compliance of regulations in various areas. Regular regulatory inspections are carried out by each unit in accordance with their duties to ensure compliance with relevant laws and regulations, and to pay attention to the development of regulations and respond to the changes in advance. In order to make all employees understand the issues of compliance with laws and regulations, ASPEED Technology enhances the knowledge and ability of employees in business-related policies and regulations by internally promoting the latest regulations and trends, so that employees can obtain new information on regulations and amendments to regulations. Audit measures are taken to ensure that business operations comply with relevant requirements. For those non-compliant parts, investigation will be conducted to find out the reasons, and measures will be taken to control and correct, so as to reduce negative impacts and avoid recurrence. In 2022, the Company started to promote anti-corruption communication among all employees, and held a training course on integrity education for all employees: Anti-corruption and Bribery Risk Management Mechanism Practice Sharing. In the future, we will also strengthen the understanding of regulations through education and training and plan more integrity, anti-

corruption and anti-monopoly related courses, in order to implement employees' emphasis on regulations and ethical corporate management in various fields. Regarding business partners and suppliers, ASPEED has included additional anti-corruption related provisions in its contracts to ensure that business partners and suppliers understand and comply with the anti-corruption standards. In 2022, no anti-competitive litigation happened in ASPEED Technology, nor did it suffer any monetary loss as a result of legal actions against competition.

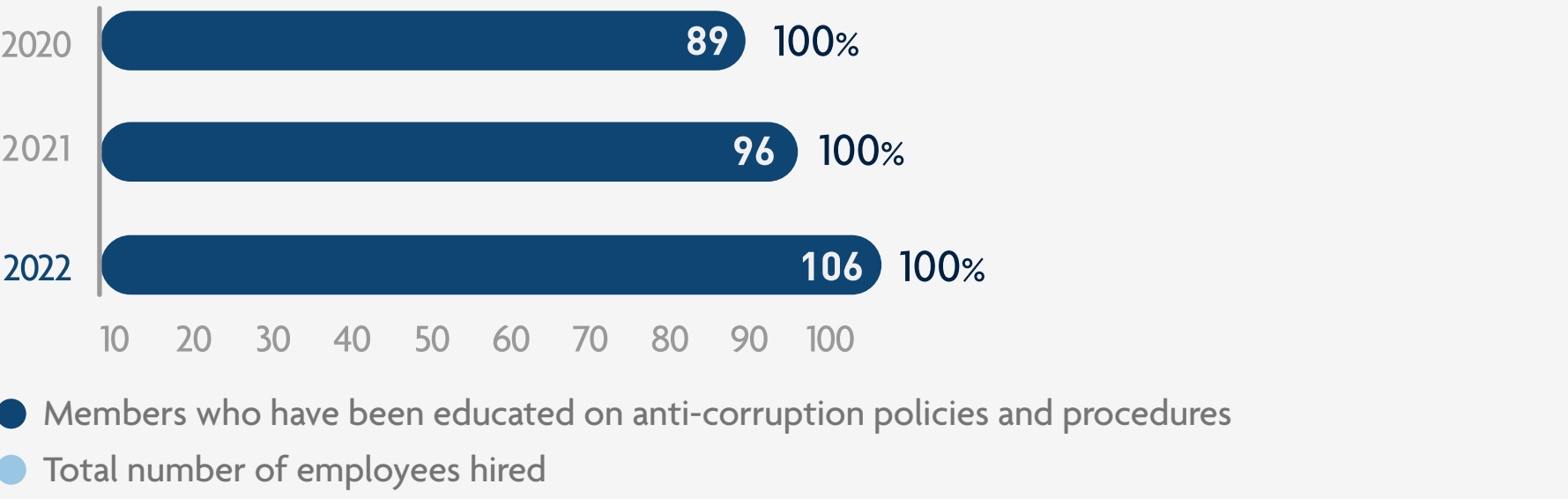




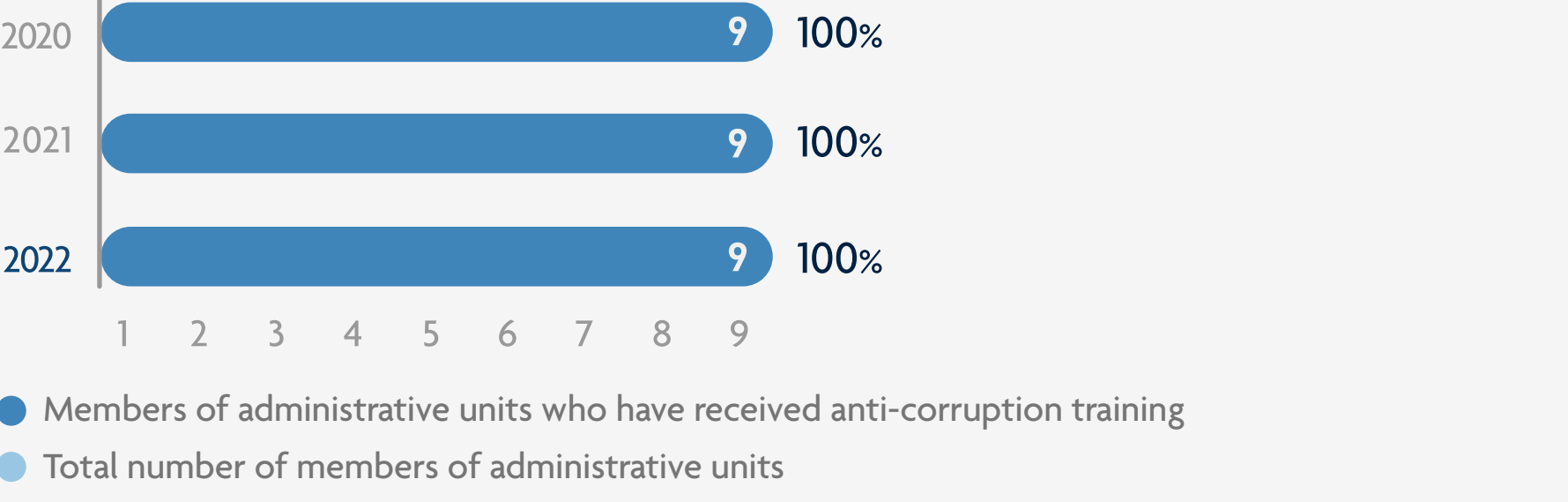
〔A〕 Total number and percentage of members of administrative units who have been educated on anti-corruption policies and procedures (Unit: Number of People)



〔B〕 Total number and percentage of employees who have been educated on anti-corruption policies and procedures (Unit: Number of People)



〔C〕 Total number and percentage of members of administrative units who have received anti-corruption training (Unit: Number of People)



In 2022, all employees of ASPEED Technology have received education and training on ethical corporate management and anti-corruption. The following table sets forth the name and hours of external training courses received by employees in the past three years:

Ethical Corporate Management-related External Training Hours

Year	External Training Course Name	Hours
2022	Anti-corruption and Whistle-blower Protection	2
	Anti-corruption and Bribery Risk Management Mechanism Practice Sharing	3
	Analysis of the PDPA	3
	Corporate Labor Law Compliance Basis	3
	Legal Risk Study on Connected Person Transactions	6
	Corporate Fraud Detection and Prevention Practice: Legal Responsibility, Identification and Big Data Analysis	6
2021	Analysis of Key Corporate Finance Data and Strengthening Crisis Warning Capabilities	6
	Corporate Management Trends – Internal Audit Responses	6
2020	Internal Auditor’s Response to Common Deficiencies in the Preparation of IFRS Financial Reports	6
	Continuing Education Course for Internal Auditors of Public Offering Companies	12
	Discussion on Application of “Commercial Judgment Rule” and Legal Obligations in Economic Crimes (Intermediate)	3

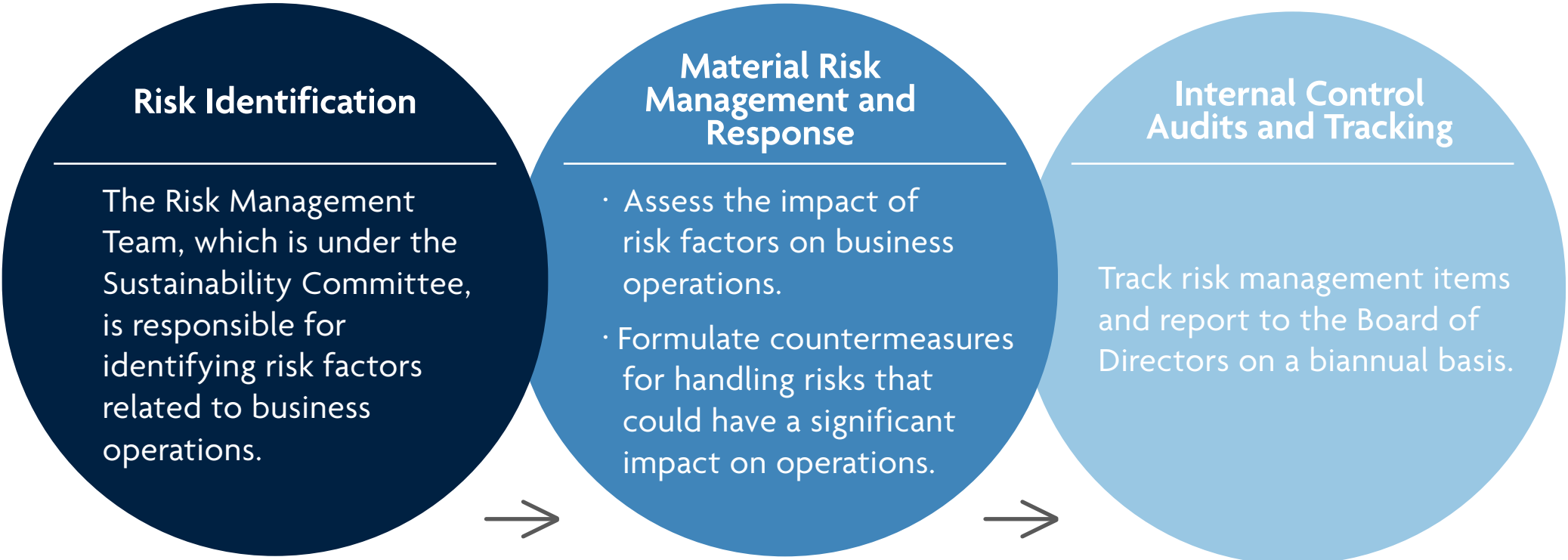
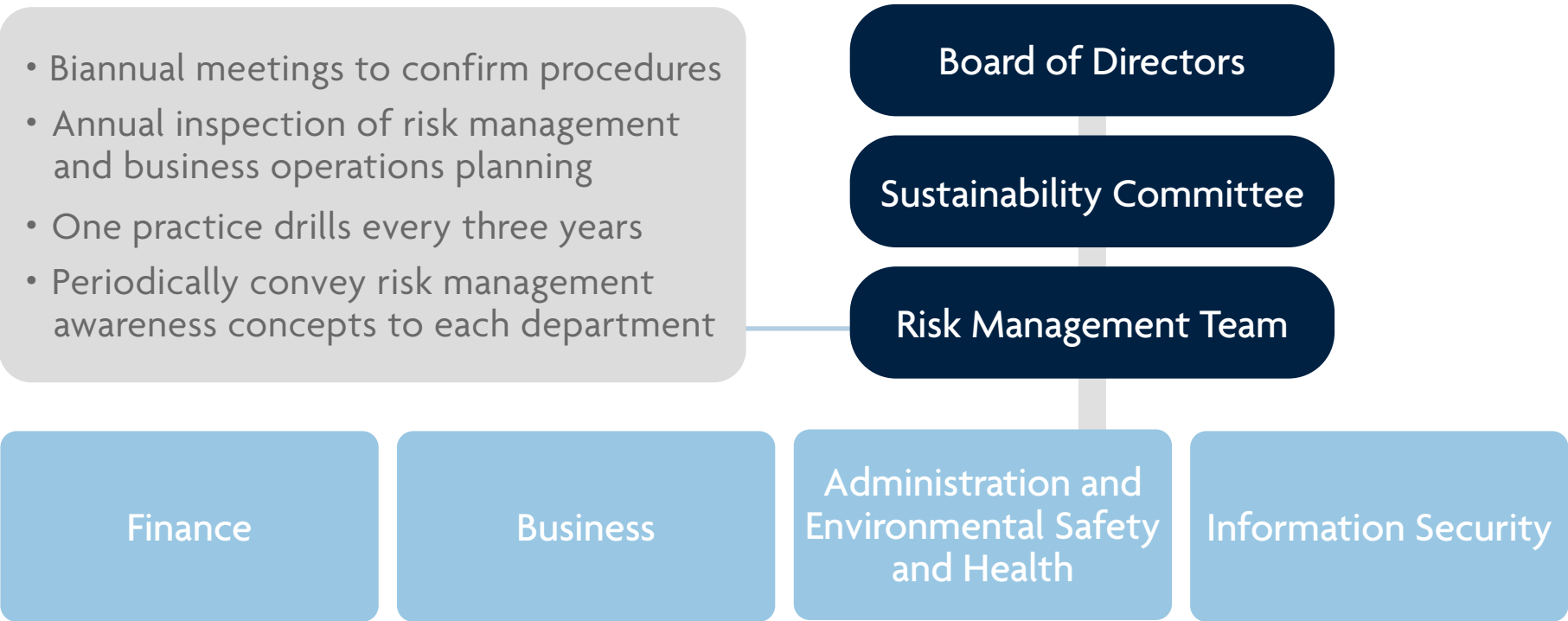


Risk Management Policies

ASPEED Technology is a fabless IC design company. Having adopted a “Fabless Lite 2.0” operating model, our workforce primarily consists of R&D personnel, management and marketing staff, and administrators. We do not routinely engage in foundry production processes. Changes to the global economic environment and the potential internal and external operational impacts of sustainability risks underscore the importance of preventing problems before they emerge. Knowing how to avoid problems and respond to risk is critical. ASPEED Technology therefore formulated the Risk Management Policy, which uses corporate governance, environmental, and social topics as a foundation to identify risks that could have an impact on the Company’s sustainable development. The Company then crafts follow-up response strategies that are in line with primary areas of concern for our stakeholders as well as international trends.

Material Risk Management and Responses

To respond to unpredictable risks that emerge during the course of business and to be on guard against the negative effects of internal and external environmental changes, ASPEED Technology established risk management units that are overseen by the Sustainability Committee, under the Board of Directors. After considering various business continuity standard requests and following internal evaluations, the risk management units implement control and management measures. The management framework primarily involves monitoring, analysis, and confirmation of risks by finance, business, administration, environment & safety, and information security units. They then report on these risks to management and launch response mechanisms. Investor relations, media relations, and public relations staff communicate these issues externally at the appropriate time in order to ease any concerns of stakeholders. By identifying risks, managing organizational and operational risks, and formulating countermeasures, related staff members play a critical role in risk control.



The risk management task force identifies risk, manages risk, and launches risk management response mechanisms.  
Contact: [csr@aspeedtech.com](mailto:csr@aspeedtech.com)



Risk Identification

ASPEED Technology carries out risk identification, analysis, evaluation, response, and tracking based on the Company's internal organization and core business as well as external environmental conditions. Scope covers corporate governance, environmental, and social aspects and other sustainable development areas. In 2022, seven material risk factors we identified were: "market risk", "operation/technology", "occupational safety", "information security", "public health", "climate change risk" and "supply chain management". In response to climate change risks, we have incorporated them into the risk identification procedures in 2022, and revealed four core elements: "governance", "strategy", "risk management" and "indicators and targets" based on the recommendations of TCFD to identify the material risks and opportunities that climate change may cause to ASPEED. At the same time, the risk team regularly considers domestic and international climate change topics, trends, and laws, as well as carbon emissions, and continues to manage and respond to the risks and opportunities posed by climate change shocks.

Risk Type	Risk Factor	Responsible Unit	Operating Impact	Response
Market risk	High risk transaction	Finance & Legal unit	Engaging in high risk, highly leveraged investments, lending of funds to others, endorsement of guarantees and derivatives, etc., where the risk of default may result in financial loss	<ul style="list-style-type: none"><li>The Company has established relevant management measures. The relevant transactions shall be carefully evaluated by the finance and accounting, legal and relevant units for necessity and reasonableness, and are subject to effective approval before proceeding, in order to minimiseminimize the possible loss</li></ul>
	Change in interest rate and foreign currency exchange rate	Finance & Legal unit	Impact of interest rate and foreign currency exchange rate changes on income and expenditures, and financial profit or loss	<ul style="list-style-type: none"><li>Long-term monitoring of international conditions and investment markets. Follow appropriate risk standards when evaluating investments and hedging interest and foreign exchange rates.</li><li>In terms of exchange rate management, the import and export transactions of ASPEED Technology are mainly denominated and calculated in USD, so changes in the NTD/USD exchange rate have certain impact on the profit and loss of the Company. Exchange gains (losses) accounted for (1.47%) and 3.69% of net operating income in 2021 and 2022, respectively, showing that changes in exchange rates did not have a material effect on profit and loss. The Company has dedicated personnel to collect information on changes in international exchange rates and keep in contact with the foreign exchange department of the banks, making reference to the professional consulting services provided by them, and timely currency exchanges to reduce risk exposure in response to the Company's cash requirements. At the same time, depending on the position of foreign currency, hedging is carried out in accordance with the Operating Procedures for Asset Acquisition or Disposal when necessary.</li></ul>
Operation/ Technology	Contractual dispute	Finance & Legal unit	Financial risk and brand impact arising from litigation dispute	<ul style="list-style-type: none"><li>Trim disputes or litigations through contract review process developed by the Legal Management Division and engage external professional lawyers to assist</li></ul>
	Intellectual property risk	Finance & Legal unit	Loss of assets and profits due to infringement of intellectual property rights	<ul style="list-style-type: none"><li>Comply with relevant laws and regulations on intellectual property rights, apply for and maintain and advocate the protection of relevant intellectual property rights</li></ul> * For details, please refer to the section of "Intellectual Property Rights Protection and Preservation"
Occupational safety	Workplace hazards	Administration and environment safety & health unit	Unsafety at workplace affecting employees and operations	<ul style="list-style-type: none"><li>Continue to obtain ISO14001 environmental management system certification</li><li>Regularly conduct hazard identification and risk assessment and control the identified results</li></ul>



Risk Type	Risk Factor	Responsible Unit	Operating Impact	Response
Information security	Unexpected information interruptions caused by hacker attacks or major natural disasters	Information security unit	Cyber attacks and information outflows will affect the protection of internal and external intellectual property information, causing serious problems such as disrupted operations, financial damage or violation of laws and regulations. Long-term damage to goodwill and customer relationships will affect the foundation of sustainable corporate development	<ul style="list-style-type: none"><li>• Continue to obtain ISO27001 information security management certification</li><li>• Set up firewalls, conduct relevant information security education and training, and continuously convey information security concepts to employees</li><li>• Regular annual internal audit on information security and all-staff drill</li><li>• Implement information security recovery drill to test the effectiveness of the information system recovery process and ensure the continuous operation of the Company's systems due to natural disasters or malicious attacks</li></ul> * For details, please refer to the section of "Information Security"
Public health	Large-scale infectious disease outbreaks	Risk management unit	Large-scale infectious disease outbreaks lead to production suspension, which in turn lead to a reduction in the Company's productivity, disrupted operations, shortage of materials in the supply chain and reduction in the pulling power of customers, resulting in operation loss	<ul style="list-style-type: none"><li>• The pandemic prevention team formulates plans and implements pandemic prevention policies according to pandemic changes</li><li>• Conducting group work drill and emergency drill for epidemic upgrade warning</li><li>• Strengthen environmental disinfection, announce and put up signs to remind the factories to continue with epidemic prevention</li><li>• Encourage employees to take vaccines to increase protection</li></ul>
Climate change	Power and water disconnection	Risk management unit	Operational inefficiency caused by power and water disconnection, failure of personnel to work properly or endangering their safety at work may also cause financial impact.	<ul style="list-style-type: none"><li>• Operation-oriented contingency measures for the building where the corporate headquarters is located</li></ul> * For more details on climate change, please refer to the section of "Climate Strategies—TCFD"
Supply chain management	Price hikes due to insufficient production capacity, or unexpected natural disasters such as earthquakes, typhoons, and explosions	Risk management unit	Abnormal events may cause interruptions in the supply of materials, suspension of the processing factories, and delays in delivery to customers, for which the Company is liable for liquidated damages	<ul style="list-style-type: none"><li>• Perform short-, medium- and long-term inventory risk assessments</li><li>• If necessary, procurement-led emergency meeting is held for inventory control</li></ul> * For details, please refer to the section of "Sustainable Supply Chain Management"





### Internal Control Audits and Tracking

ASPEED Technology weighs risks against the Company’s overall objectives in order to formulate operational level goals then uses the risk design control points of each goal as a basis of internal control procedures. The Company also formulates annual internal control audit plans that are implemented and reviewed following approval by the Audit Committee and the Board of Directors. In 2022, there were no major defects in the internal control audits.





Operational performance and financial performance

Identified Impact Result	Positive Impact
GRI Topic-specific Standards	<div><div>• 201 Economic Performance</div><div>• 207 Tax</div></div>
Performance Indicators	Operational performance data
2022 Results	<div><div>• Record revenue and profit for the year: annual revenue of NTD 5.210 billion, up 43.23%, and profit of NTD2.106 billion, up 60.38%, maintaining the performance of annual growth since inception</div></div>
2023 Objectives	<div><div>• Maintain annual revenue and profit growth</div><div>• Enhance product diversification and increase product mix beyond BMC products</div></div>

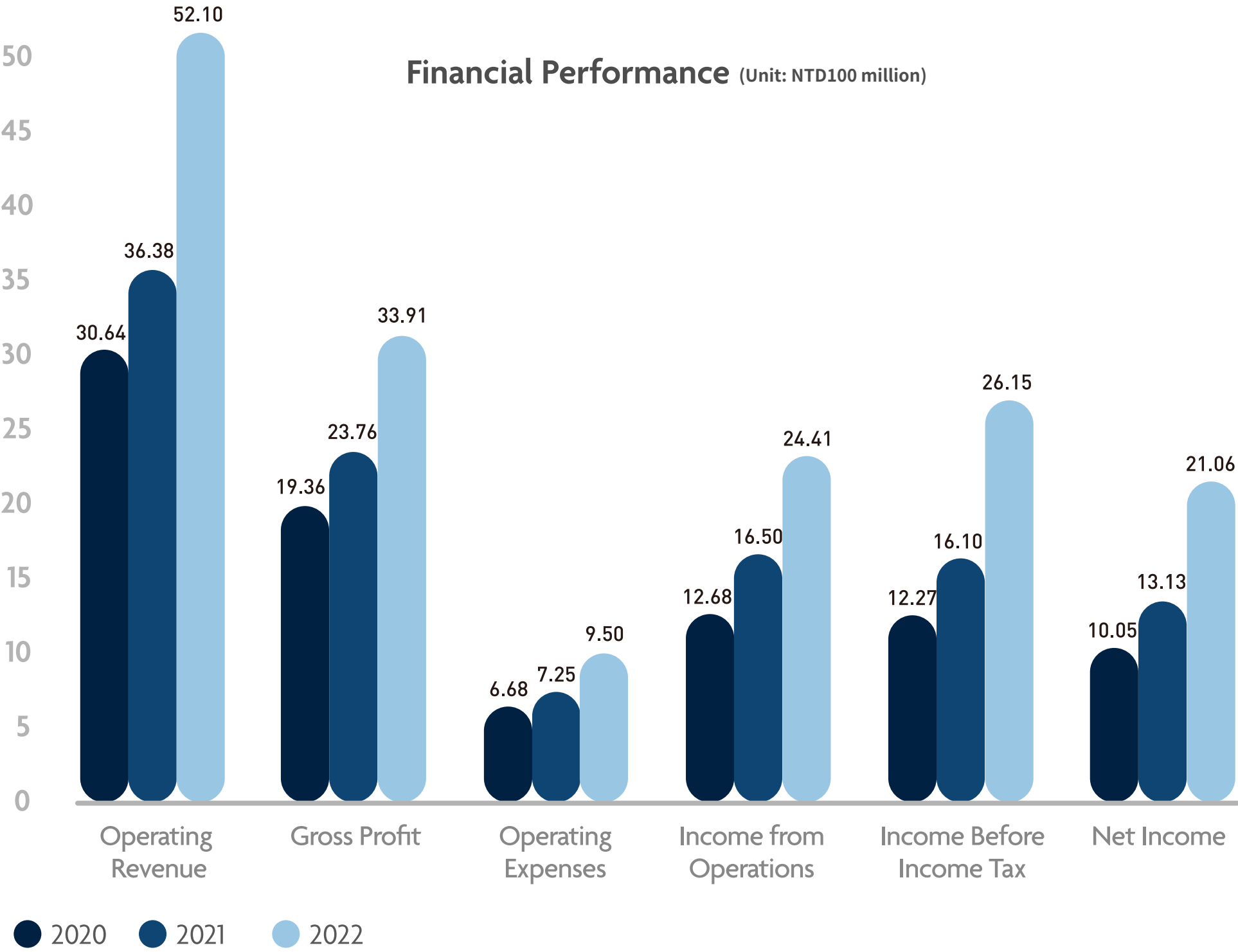
Operational Strategies

Since its establishment, ASPEED Technology has been focusing on niche market in which it specializes in SoC development. It used to focus on BMC and imaging-related SoCs and it has gradually integrated its products with two major platforms: Cloud & Enterprise Solutions and Smart AV Solutions, expanding product mix and efficiency. In order to better understand the market demand and listen to customers' opinions, we jointly develop new product applications suitable for customers. We have added product marketing project management personnel for both product solutions, who are responsible for keeping abreast of market trends and understanding customers' needs, and continue to expand customer breadth and the depth of single customer products.

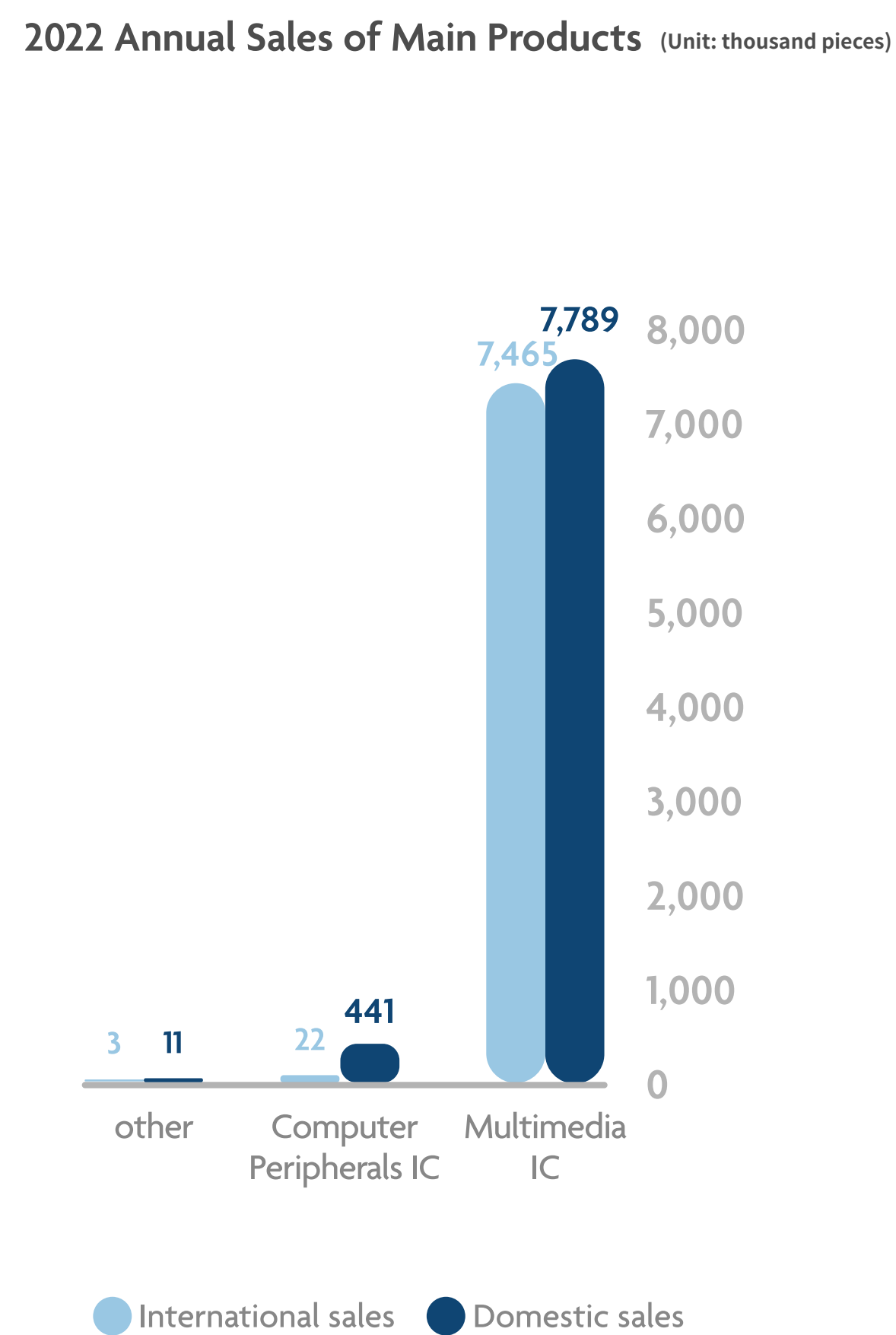
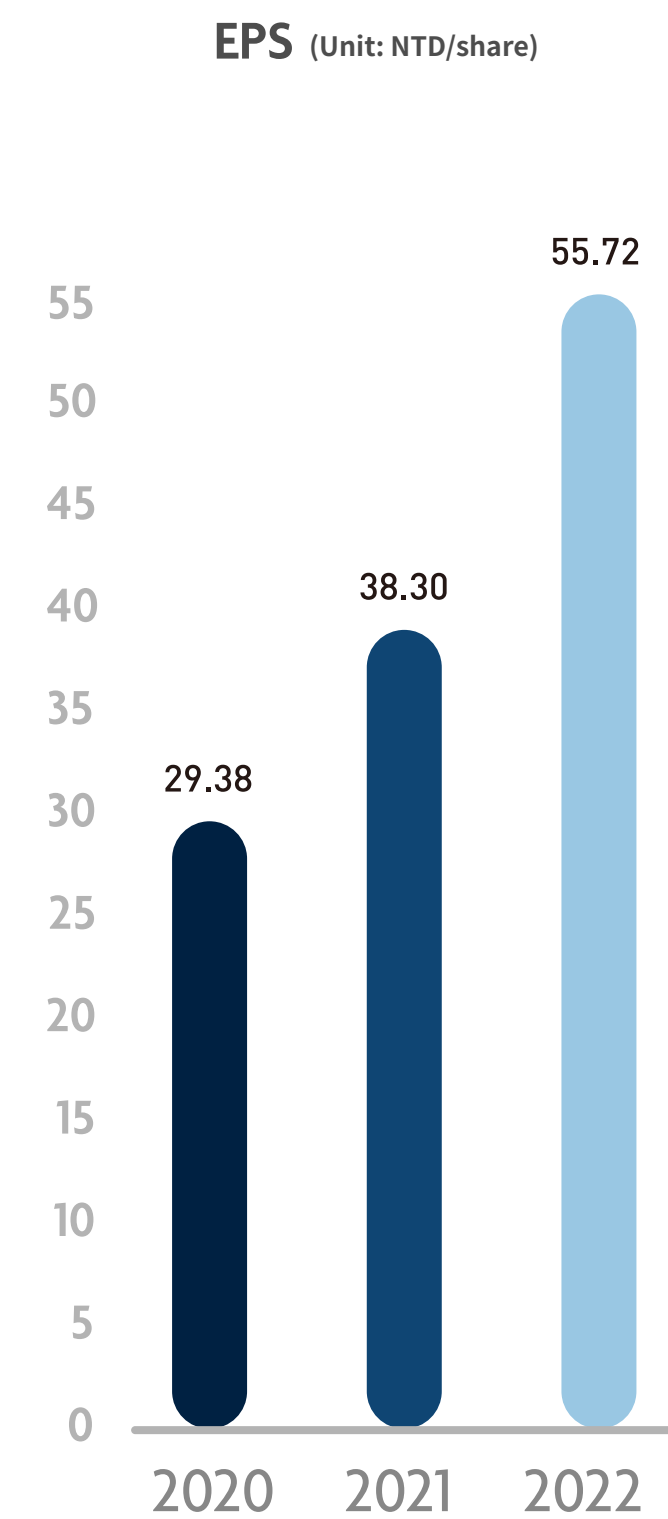
Operational Performance

In 2022, the global semiconductor industry experienced a capacity contraction in the first half of the year and a sudden demand recession in the second half of the year, and the overall economic situation

recovered rapidly. However, with strong corporate resilience, flexible market knowledge and stable customer relationships, ASPEED Technology still achieved a new milestone in operations, and set a new record of 18 consecutive years of growth since its establishment. Operating revenue amounted to NTD5.210 billion and net profit after tax amounted to NTD2.106 billion in 2022, representing an increase of 43.21% and 60.40%, respectively, as compared to 2021. In 2022, ASPEED Technology's gross profit margin was 65.09%, operating profit margin was 46.85%, and EPS was NTD55.72, continuously hitting a record high. In response to the post-pandemic trend and global development, we will strengthen our corporate resilience, continue to invest in R&D and innovation, quickly and flexibly respond to industry and market changes, and continue to maximize the benefits of shareholders to give back to the public.



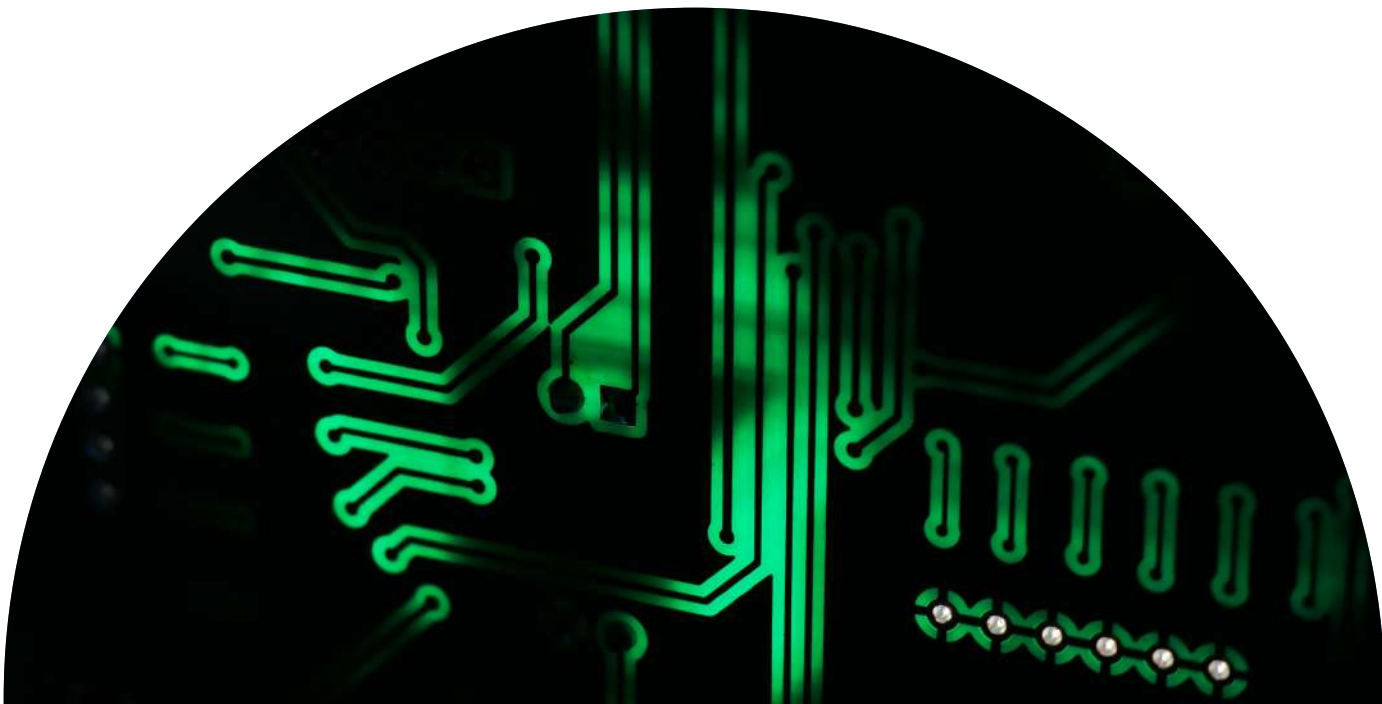




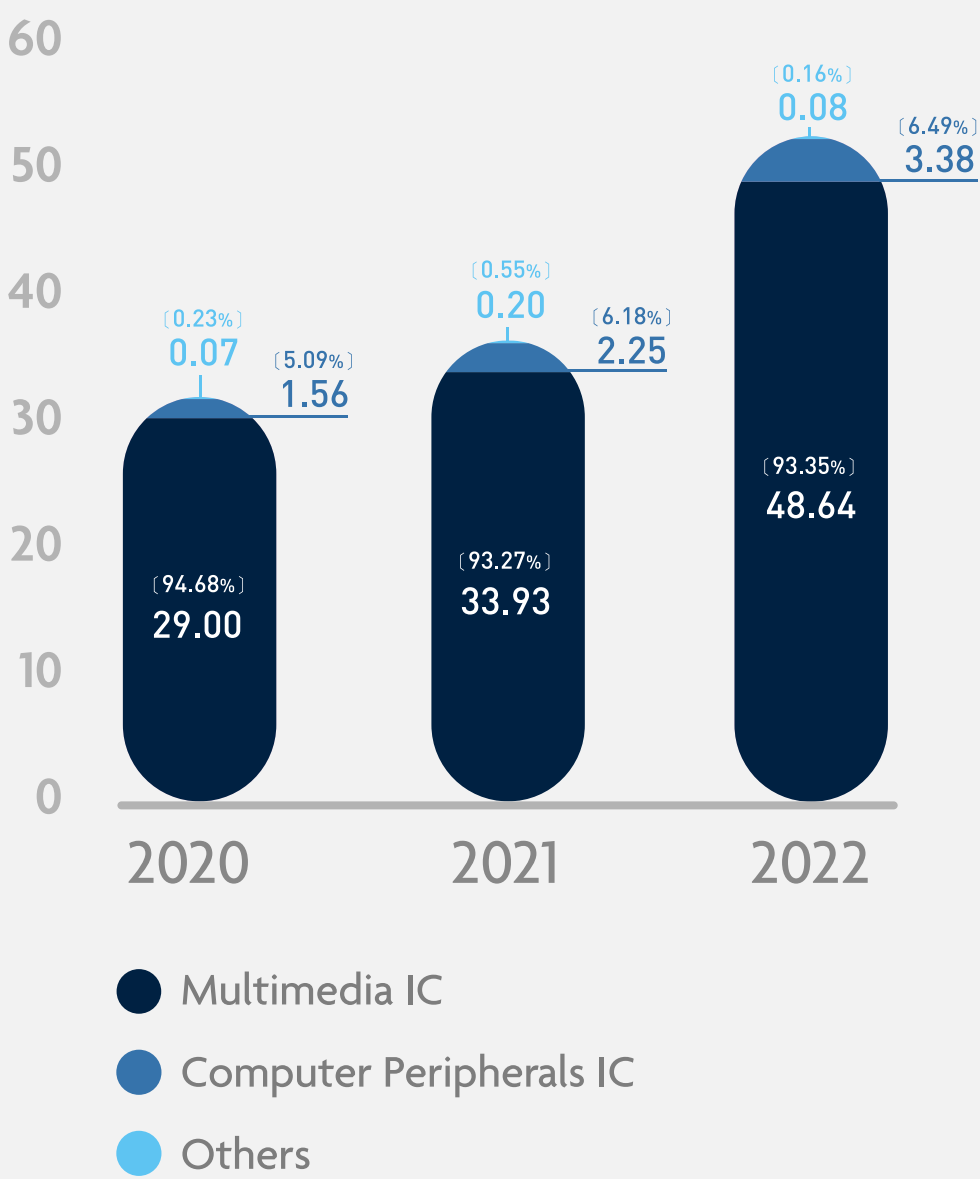


Dividend Policy

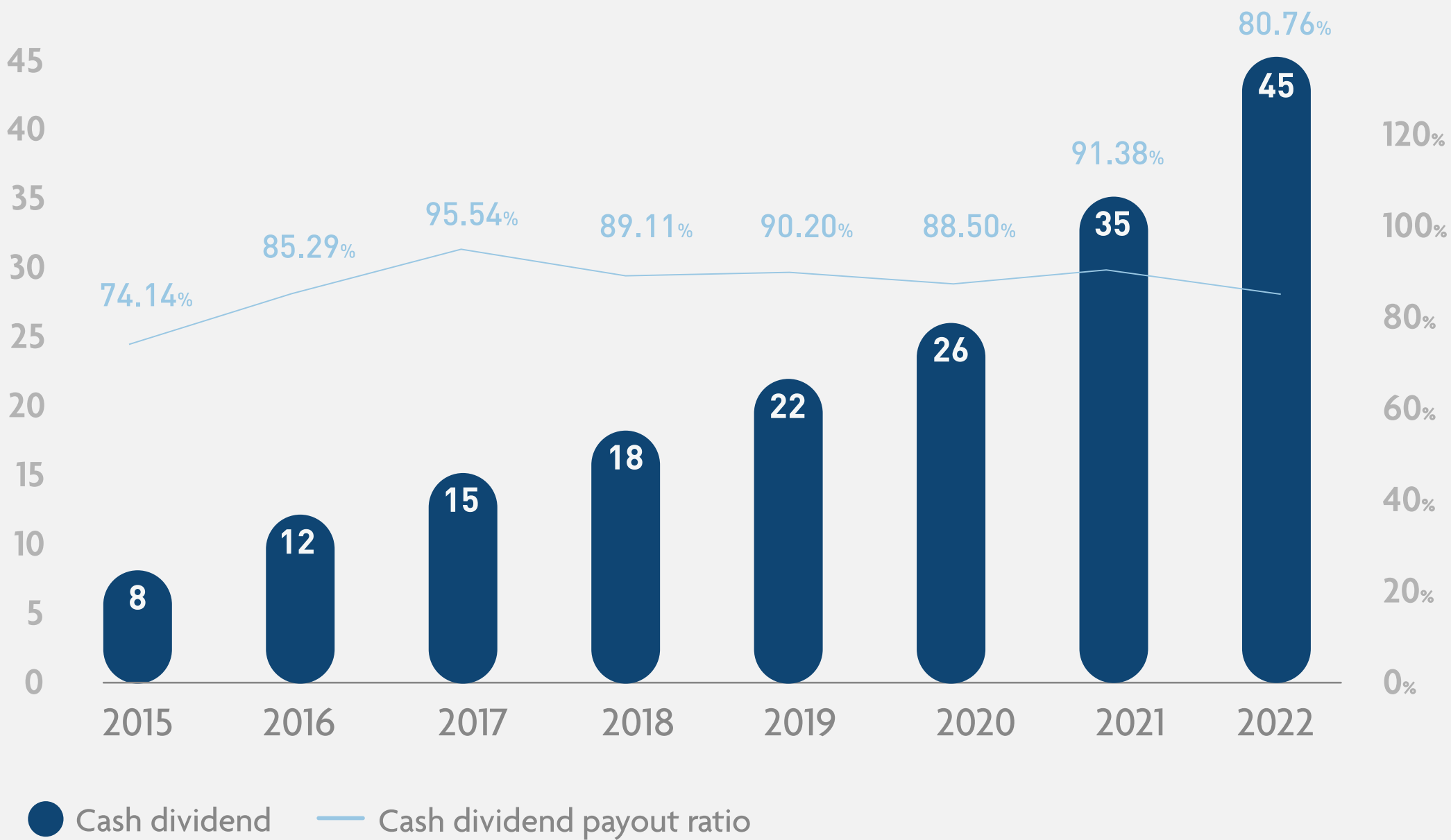
ASPEED Technology's dividend policy is to allocate not less than 10% of its distributable earnings to shareholders' dividends each year, taking into account current and future development plans, the investment environment, capital requirements, domestic and foreign competition, and shareholders' interests. If the accumulated distributable earnings are less than 50% of the Company's paid-in capital, the dividend bonus shall not be distributed. Dividends are paid in cash or stock; the ratio of the cash dividend, however, shall be not less than 10% of total distribution.



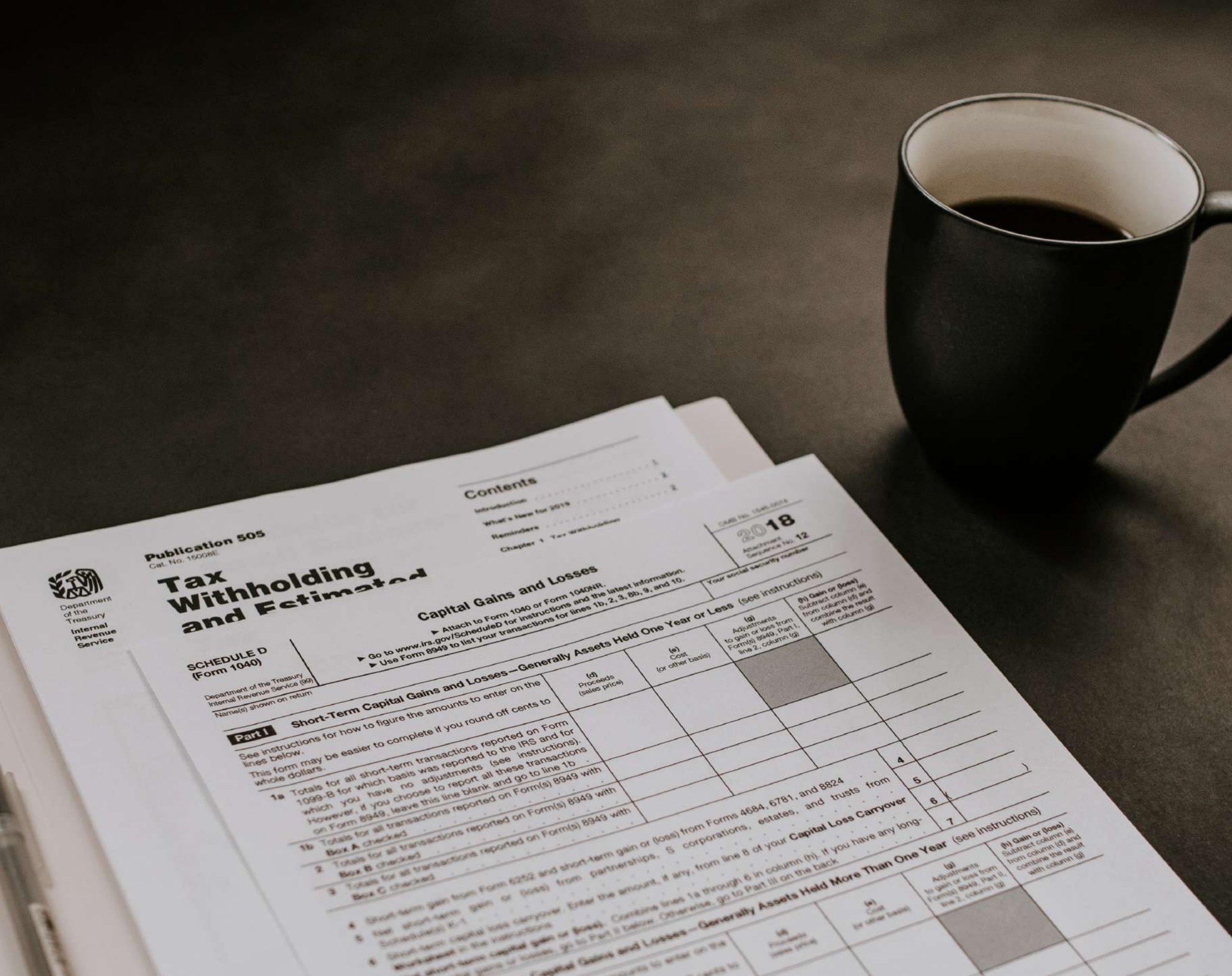
Major products as a percentage of sales (Unit: NTD100 million, percentage)



Dividend Distribution (Unit: NTD, percentage)







Financial data

Taxation Policy

The daily taxation administration operation and management policies of ASPEED Technology are carried out by the Finance and Accounting Division. The Finance and Accounting Division is responsible for the understanding of the changes in domestic and foreign taxation regulations, which is assisted by the Company's internal Legal Management Division and external taxation advisory agencies, and adopts prudent policies for taxation management. We uphold the principle of transparency and integrity of information, and shoulder social responsibilities by paying reasonable taxes in major operating countries.

- Operational decisions are made in compliance with regulations and the impact of tax risk is assessed
- Transactions not in low tax countries for tax avoidance purposes
- The tax information in the financial report is disclosed in an open and transparent manner and in accordance with relevant regulations
- The connected person transaction follows the principle of transfer pricing report published by OECD to determine the connected person transaction following OECD requirements for Base Erosion and Profit Shifting (BEPS) to generate profits for companies with economic substance
- Transparency of information and compliance with regulatory requirements of the tax authorities in the major locations of operations
- Carrying out appropriate risk management and strengthening the tax management capabilities of the major responsible units

Tax information for the past three years (Unit: NTD1,000, percentage)

Key Results	2020	2021	2022	Average
Net profit before tax	1,226,793	1,609,767	2,615,114	1,817,225
Income tax expense	222,104	296,842	509,500	342,815
Income tax rate	18.10%	18.44%	19.48%	18.86%
Income tax paid	221,957	245,789	347,668	271,805



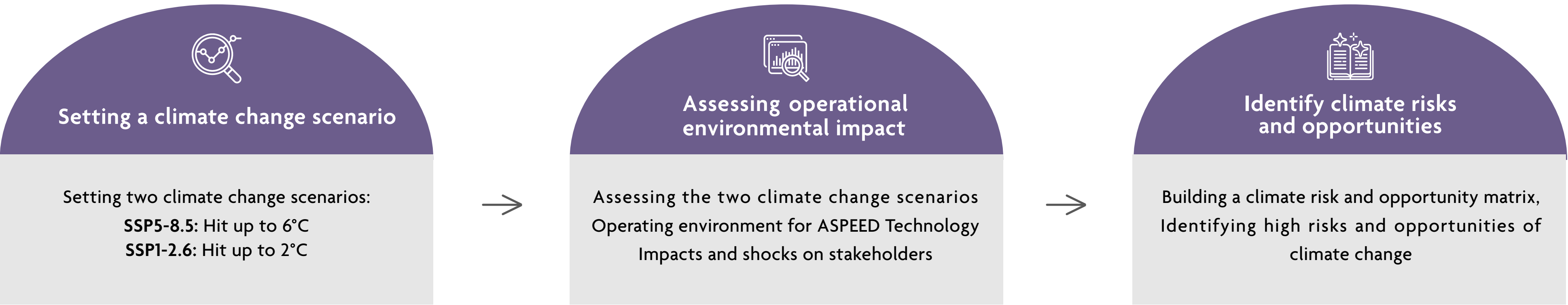
Climate change risk and opportunity management

Global warming and extreme climate have caused significant operational impact on enterprises. The challenges of climate change faced by enterprises are currently one of the most urgent issues. Since 2022, ASPEED Technology has voluntarily adopted the proposed guidance on Task Force on Climate-related Financial Disclosures (TCFD), and revealed four core elements: “governance” , “strategy” , “risk management” and “indicators and targets” in accordance with the recommendations of TCFD to identify the material risks and opportunities that climate change may cause to ASPEED Technology, and put forward relevant response strategies. In April 2023, the Company officially signed as the “Task Force on Climate-related Financial Disclosures (TCFD)” Supporter. We pay close attention to the trend of global climate change and international development. At the same time, we also incorporate climate change issues into the key material issues of corporate sustainable development, and evaluate the impact and impact time within the Company. Meanwhile, based on the results of the analysis, we continue to control and respond to the risks and opportunities posed by the impact of climate change.

Identification process for climate change-related risks and opportunities

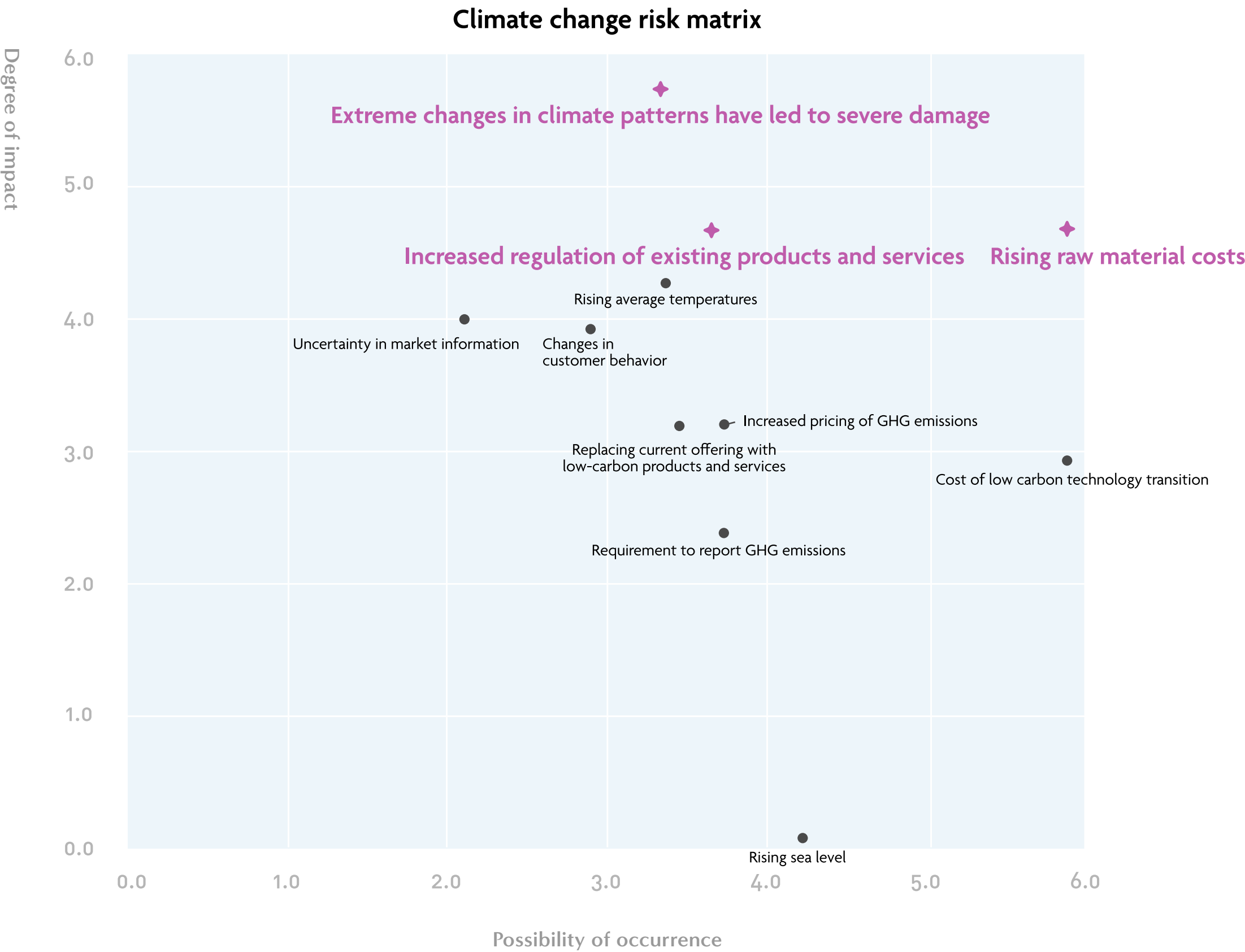
ASPEED Technology carries out matrix analysis on the potential impact of various climate change risks, including the direct or indirect physical impact of extreme climate, and the risks and opportunities of the impact of transformation with regulations, technologies or market demand. Based on the analysis results, we propose corresponding response measures, assess the financial impact of climate risks and opportunities, thereby adjusting the relevant internal management mechanism, and establishing an open and transparent communication channel with various stakeholders to reduce climate change risks and grasp the opportunities brought by climate change. ASPEED Technology identifies the risks and opportunities brought by climate change based on two or more climate change scenarios. Through climate change risk and opportunities workshops, we engage divisional heads and key members groups to conduct climate change research, discussion, information compilation, and review of climate risks and opportunities.

The specific identification process for risks and opportunities related to climate change is shown as follows





After the completion of the identification of climate risks and opportunities, we identified 3 high-risk factors and 3 high-opportunity factors in 2022 based on the “possibility of occurrence” and “degree of impact” of risks or opportunities. The risk matrix and opportunity matrix of ASPEED’s climate change in 2022 is as follows:



Description of risks associated with climate change

Summary table of climate change risks identification

Risk prioritization	Type of risks	Risk factor	Time of occurrence assessment
1	Transition risks – market	Rising raw material costs	Short-term
2	Entity risks	Extreme changes in climate patterns have led to severe disasters	Medium-term
3	Transition risks – policies and regulations	Increased regulation of existing products and services	Medium-term

\*definition of time horizon: short term: 2022-2024, medium term: 2024-2030, long term: 2030-2050

Risk 001: Rising raw material costs

Impact scenario:

Due to climate change and global energy crisis, the difficulties in mining and production of silicon raw materials have increased, and the mining area may face the problem of power limitation and shortage of electricity. As a result, the cost of silicon raw materials increased greatly. Due to the increase in raw material costs and product costs, the Company’s competitiveness has been affected, resulting in a decrease in revenue.

Risk impact oriented assessment	<div>1. <b>Delayed delivery of goods:</b> Production capacity and raw materials require higher prices and longer production cycles than ever before.</div> <div>2. <b>Unstable supply:</b> Increase in raw materials and production costs, coupled with insufficient labor capacity, have directly and indirectly affected output, leading to longer delivery time and unstable access time.</div>
Financial impact oriented assessment	Increase in production costs



Risk 002: Extreme changes in climate patterns have led to severe disasters

Impact scenario:

Due to the increasing severity of extreme weather, the adverse climate such as the increased intensity and duration of typhoons have caused flooding and power outages, affecting the operations of the Company and its foundries As a result of the severe weather:

- 1. Decrease in production capacity, damage to equipment and difficulty in transportation of foundries led to reduction in supply or prolonged delivery
- 2. Power outage caused damage to laboratory equipment, disrupted testing, and impacted product development progress; slower revenue on delayed output of the Company's products

Risk impact oriented assessment	<div><div>1. <b>Capacity decline:</b> Capacity loss is caused by the outbreak of severe climate, the flooding that results in staff being unable to return to work, and cargo transportation being hindered.</div><div>2. <b>R&amp;D loss:</b> The power outage caused damage to laboratory equipment, disruption of testing, and impacted product development progress.</div></div>
Financial impact oriented assessment	<div>Increase in operating costs, decrease in revenue</div>

Risk 003: Increased regulation of existing products and services

Impact scenario:

Due to the policies and regulations of various countries, customers require that the specifications of products need to be adjusted in the direction of low energy consumption, energy saving and power saving, and in line with green product regulations, so that the products can meet the regulatory specifications. Unusual changes in policies and regulations led to higher technical requirements for customer demand and higher uncertainty, resulting in higher costs for the Company; if the product design adjustment fails to meet the requirements of policies and regulations, it will have a negative impact on the internal and external stakeholders of the Company and affect the Company's goodwill.

Risk impact oriented assessment	<div><div><b>Failure of meeting the requirements resulting in the revision of product specifications may affect the schedule of sales:</b> the market demand for energy saving and carbon reduction is getting stronger, the power consumption standard of the end products is becoming more stringent in all countries, and the demand for products with low power consumption is increasing. If the products do not have enough competitiveness in terms of power consumption, the orders will be reduced and the time for product specification modification will be extended, affecting the revenue.</div></div>
Financial impact oriented assessment	<div>Decrease in revenue</div>





Response strategies for climate change-related risks

Risk Response Strategies

Response strategies to address rising raw material cost:

- 1.Reduce the risk of supplier disconnection: We will explore the possibility of introducing multiple suppliers in the future, stabilize the source of raw materials and supply demand, negotiate with suppliers and increase the amount of raw material stock and inventory turnover.
- 2.Enhance customer relationship maintenance: We will improve customer brand loyalty, strengthen communication to enhance customers’ willingness to cooperate, and reduce the impact of sales loss.

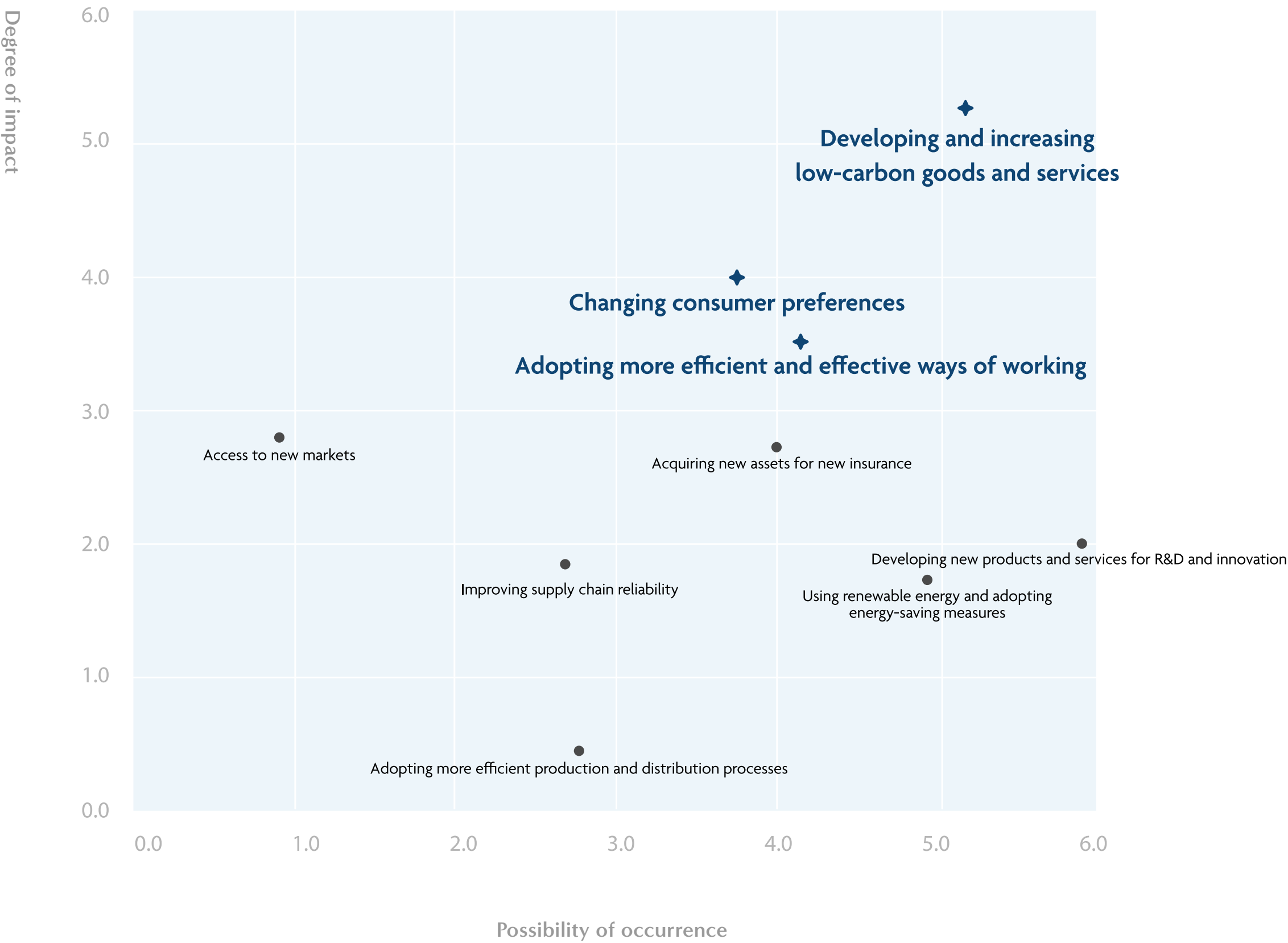
Response strategies to tackle severe disasters due to extreme changes in climate patterns:

- 1.Set up an operation continuity plan: We will introduce remote work process and necessary tools, regularly conduct education and training, so that employees can understand the on-going operation mechanism, be familiar with the remote work process and collaborative tools, so as to cope with the contingencies and maintain productivity.
- 2.Reduce the risk of supply chain disruption:
  - (1) Optimize the supplier evaluation system: We will assess the operation continuity plan of the foundries, the prevention and contingency measures of physical disasters, and conduct regular audits.
  - (2) Capacity replacement plan: We will select areas with high terrain or low rainfall intensity to build a diversified network of foundries to facilitate the relocation of capacity in the event of a disaster.
- 3.Establish a cloud backup mechanism: In conjunction with the ongoing digital transformation project of ASPEED, we will establish a cloud backup mechanism for the R&D of key software and important data, so that the R&D will not be disrupted by physical disasters, and R&D data and information will be kept at any time to avoid the loss of R&D investment caused by the interruption of data collection or transmission.
- 4.Maintain continuous laboratory operations:
  - (1) Uninterrupted power supply: We will import a smart power or uninterrupted power system, and set up self-owned emergency generator.
  - (2) Improve energy efficiency: We will purchase energy-saving and power-saving electrical appliances which will automatically switch to standby mode or shut down when idle.
  - (3) Set up a backup laboratory: We will evaluate the location of the backup laboratory and consider replacing part of the existing laboratory work with cloud services.

Response strategies to strengthen the regulation of existing products and services:

- 1.Keep abreast of product regulations and trends: Through the taskforce for product regulations and trends in the Legal Unit, we will regularly track the latest product-related regulations and trends, and conduct regular staff education and training sessions to discuss the trends so as to assess the existing product revision needs and response strategies, such as re-obtaining certifications that meet product standards.
- 2.Strengthen raw material management: Raw material components used in supply chain production must conform to regulations and ensure compliance with the requirements of EU REACH and RoHS. Such requirements shall be included into the supplier evaluation system for regular supervision.

Climate change opportunity matrix





Description of opportunities associated with climate change

Risk prioritization	Type of opportunities	Opportunities factor	Time of occurrence assessment
1	Opportunities – products and services	Developing and increasing low-carbon goods and services	Medium-term
2	Opportunities – products and services	Changing consumer preferences	Short-term
3	Opportunities – resource efficiency	Adopting more efficient and effective ways of working	Medium-term

Opportunity 001: Developing and increasing low-carbon goods and services

Impact scenario:

Following the global trend of decarbonization, the Company has expanded its low-carbon product range, such as high performance and low-energy low-carbon chips, development of cloud or AI-related application chips, and chips that can be used for smart energy saving. By developing low-carbon products, the Company will improve its market competitiveness, increase market share and raise revenue.

Opportunities impact oriented assessment	<p>1. <b>Developing low-carbon products to improve market share:</b> With the global trend of decarbonization, low energy consumption products help the increase in demand for products with enhanced decarbonization efficiency; by developing relevant products, the Company can improve its market competitiveness, increase market share and raise revenue.</p> <p>2. <b>Expanding new low-carbon and green domain applications:</b> Expanding product applications to low-carbon and carbon reduction-related applications can increase product demand and revenue.</p>
Financial impact oriented assessment	Increase in revenue

Opportunity 002: Changing consumer preferences

Impact scenario:

In response to the international trend of energy conservation and decarbonization, the demand for remote work and online services has increased significantly. The server industry has a clear growth trend, and the quality requirements of video equipment have also increased. The demand for server management chips and audio/video chips has been on the rise. Through changes in market trends and consumer preferences, the demand for the Company's products will continue to increase, which will increase the Company's revenue and enable the Company to continue to grow.

Opportunities impact oriented assessment	<p>1. <b>Developing new low-carbon opportunities:</b> due to customers' increasing demand for remote management of devices, the market has not only applied remotely-managed chips to server products, but also expanded to more product applications; such as AI servers, storage devices, network switches and edge computing devices.</p> <p>2.<b>New applications developed in response to green environment:</b> in response to the trends, product are used in virtual reality and remote control related fields to expand product opportunities.</p>
Financial impact oriented assessment	Increase in revenue

Opportunity 003: Adopting more efficient and effective ways of working

Impact scenario:

In response to the requirements of decarbonization, the Company will promote the digitization of its systems and processes and optimize the product development model. The systematic or cloud approach allows the Company to reduce carbon emissions, carbon expense and operating expenses.

Opportunities impact oriented assessment	<p>1. <b>Operational process optimization:</b> process optimization reduces resource wastage and manpower cost consumption</p> <p>2.<b>Improving operational effectiveness and increasing efficiency</b></p>
Financial impact oriented assessment	Cost reduction



Response strategies for climate change-related opportunities

Risk Response Strategies

Execution strategies to develop and enhance low-carbon products and services:

- 1.Optimize existing products: We will use green energy and green raw materials in the development process, reduce the carbon footprint of products, increase the proportion of the Company’s existing low-carbon products and services, and improve the overall revenue contribution of low-carbon products and services.
- 2.Develop low-carbon products to enhance competitiveness:
  - We will introduce green design concepts in the R&D process, take low energy consumption and power-saving design as the main design logic, such as software and system integration; and optimize the process to reduce energy and resource consumption and waste.
  - In order to reduce power consumption, ASPEED has continued to invest in the development of low-carbon chips by applying more advanced technology in new product development, gradually advancing from 40 nm to advanced technology, and adopting 12 nm technology in the latest 8<sup>th</sup> generation of remote management product AST2700. The new product will feature 3-4x of the original performance, but power consumption per chip will decrease.
  - We will recruit outstanding R&D engineers with the concept of sustainable design, and invest a fixed proportion of revenue each year as R&D budget, so as to continuously meet the needs of customers by keeping track of key R&D achievements.

Execution strategies in response to changing consumer preferences:

- 1.In-depth understanding of market demand: The marketing team members, together with business units, regularly conduct in-depth interviews with existing customers and new customers; to ensure that the functions planned in the new generation of remote management products can fully meet the needs of servers and storage devices, network switches and edge computing devices and be modified in a timely manner.
- 2.Planning and development of functions in new products: We will plan the market positioning of new products, functional specifications, the process of use, and set the timetable for the development and release of new products, formulate marketing plans and arrange live-

Risk Response Strategies

- machine demonstrations with customers. For example, the new products have added a wide range of industrial specifications, and the product operating environment temperature has evolved from previous commercial specifications to being able to support the industrial specifications to meet the environmental temperature needs for different clients and markets.
- 3.Planning and development of functions in new products:We will plan the market positioning of new products, functional specifications, the process of use, and set the timetable for the development and release of new products, formulate marketing plans and arrange live-machine demonstrations with customers. For example, the new products have added a wide range of industrial specifications, and the product operating environment temperature has evolved from previous commercial specifications to being able to support the industrial specifications to meet the environmental temperature needs for different clients and markets.
- 4.Stable supply in response to market demand: We have recruited supply chain management professionals and product packaging and testing professionals as the counterparts with upstream suppliers to improve suppliers’ delivery quality and delivery rate.

Execution strategies to adopting more efficient and effective ways of working:

- 1.Operational process optimization: We will introduce digital transformation and electronic process to assist the optimization of the operational process of warehouse, finance and business divisions, so as to avoid duplicated processes to reduce labor costs and waste of resources caused by errors.
- 2.Digital management: We will establish a digital management platform to integrate data and optimize the enquiry methods, including the financial gross profit margin, the accounts receivable system, the warehouse shipment management system, etc., to accelerate the enquiry of personnel, reduce the time for personnel data consolidation, and ensure the accuracy of information; we will establish an electronic verification system to improve operation efficiency, reduce paper-copy costs, and plan to import all data into the BI system for data analysis.



Climate change-related indicators and targets

Climate risks	Management targets	Management indicators
Extreme changes in climate patterns have led to severe disasters	Reduce the direct impact of climate disasters on work	Improve the implementation frequency of employees' remote workflow
		Improve the implementation frequency of workflow/cloud-based system
	Improve the disaster response capacity of laboratories	Laboratory RTO established: Time target for disaster recovery
		Laboratory RPO established: Time target for systems & data recovery
		Regularly implement laboratory emergency disaster protection education and training
		Regularly implement laboratory emergency disaster protection drill
Increased regulation of existing products and services	Improve the disaster response capacity of foundries	Increase the proportion of foundries that develop operation continuity plans
	Ensure that the Company is responsive to the latest legal and regulatory requirements	Regular updates on laws and regulations related to products
		Regularly confirm whether the work process is updated in accordance with product-related regulations
		Regularly confirm whether the requirements of suppliers are updated in accordance with product-related laws and regulations
		Regular sharing of product-related laws and regulations





Information security and privacy

Identified Impact Result	Negative Impact
GRI Topic-specific Standards	418 Customer Privacy
Performance Indicators	<ul style="list-style-type: none"><li>• Check for infringements of customer privacy rights and data leaks</li><li>• Strengthen the Company’s information security management, employees’ education and training</li></ul>
2022 Results	<ul style="list-style-type: none"><li>• 0 cases of customer privacy infringement and information security hazard</li><li>• In 2022, the Company received a perfect score on the customer information security audit</li><li>• Obtained information security management system ISO27001</li><li>• Information security education training increased to twice a year</li><li>• 100% of all employees completed information security education and training</li></ul>
2023 Objectives	<ul style="list-style-type: none"><li>• No cases of customer privacy infringement and information security hazard</li><li>• Promote the implementation of information security management in accordance with ISO27001 information security management system standards</li><li>• Annually conduct two sessions of information security education and training</li><li>• 100% of all employees completed information security education and training</li><li>• System inspection and upgrade for digital transformation</li></ul>

Information Security and Data Protection

As part of a commitment to managing information security, in addition to the introduction of Cortex XDR 2.0 in 2021 to prevent hack virus extortion, ASPEED Technology obtained ISO27001 information security certification in May 2022. With the “Information Security Policy” and 23 information security-related standards, these standards manage and protect the Company’s information security and reduce information security risks in our network, in order to protect personal information and customer privacy, and uphold the rights and interests of stakeholders. At the same time, the Company actively publicizes information security measures to raise awareness among employees.

For internal management, ASPEED Technology established a comprehensive internet and computing security network to maintain vital corporate functions, such as manufacturing operations, procurement and sales, and accounting. The Company periodically reviews and assesses cybersecurity architecture to ensure adequacy and effectiveness. Besides enhancing efficiency and backing up important information stored in our databases, in an evolving landscape of internet security threats, the Company must protect computer systems to prevent external network attacks that can cripple our systems. These measures prevent theft or hacking attacks on our trade secrets, intellectual property, and confidential information. For external suppliers and cooperative partners, ASPEED Technology achieves mutual assurance of information confidentiality by periodically confirming that suppliers have comprehensive information security management and backup plans in place. Furthermore, ASPEED Technology protects confidentiality by requiring 100% of employees to sign a nondisclosure agreement. For some projects and cases cooperative partners must also sign an NDA to guarantee that each parties’ information is protected. In 2022, ASPEED Technology was not aware of any material information security incidents or cyberattacks, nor had it been involved in any legal proceedings or regulatory investigations related thereof. The audit and assurance firm Deloitte conducted an information operations audit on the Company in 2022 that covered the following areas: understanding the customer's computer processing environment, general computer controls, and application system automated controls. It did not uncover any problems.





ASPEED Technology’s Information Security Policy and Goals

For business to proceed smoothly and to ensure confidentiality, integrity, and availability, ASPEED Technology formulated an information security policy that all employees must follow.

Information Security Policy
✦ Strengthen information security management systems and acquire third party certification.
✦ Strengthen information security and prevent hacker, virus, and extortion attacks.
✦ Implement an information and data backup plan that involves local and remote storage.
✦ Effective management of information assets, including continuing to implement risk analysis and adopting suitable prevention measures.
✦ Protect information systems to prevent unauthorized access and maintain confidentiality.
✦ Prevent unauthorized changes to protect the integrity of the information system.
✦ Ensure that authorized users can access information systems when needed.
✦ Adhere to all information rules and regulations.
✦ Establish disaster recovery plans for core information systems so that operations can continue after a manmade or natural disaster.
✦ Strengthen information security education and training to raise employee information security awareness.
✦ Establish information security management and advocacy programs for suppliers.
✦ Conduct audits and manage the review process to ensure continued improvements to information security management systems.

Information Security Management Methods

To evaluate whether information security management goals are met, ASPEED Technology adopted the following management methods:

Quantitative Indicators
✦ To ensure information is secure, information can only be accessed after an authorized unit grants permission and confirms its confidentiality status. Each year there shall be zero cases of restricted or confidential information leaks.
✦ To ensure accuracy and integrity of customers’ products and data, each year there shall be zero cases of unauthorized information alterations.
✦ To ensure continuity of the Company’s information operations and services, drills and operations to safeguard continuity plans are conducted at least once a year.
✦ To investigate how information security incidents can cause system, processor, or network abnormalities that interrupt operations and services, the Company’s information services availability must meet the following requirements: <div><div>1</div>Basic operational service time shall be at least 99% of annual working hours.<div>2</div>Interruption of key services shall not be more than three times per quarter; each interruption shall not be more than four working hours.</div>
✦ To ensure that the Company’s information security measures and regulations meet current laws, regulations, and contractual requirements, each year the Company shall conduct at least one internal audit.

Qualitative Indicators
✦ Regularly review the authority of the Company’s information security organization staff to ensure the implementation of related duties.
✦ Provide information security training that is suited to employees’ position and responsibilities.
✦ Strengthen the Company’s environmental safety; adopt suitable protection and authority control measures.
✦ Ensure that information is not inadvertently leaked or sent to unauthorized third parties.
✦ Strengthen access controls to prevent unauthorized access and ensure that the Company’s information has an appropriate level of protection.
✦ Consider security needs when conducting routine monitoring of information systems and safety management of system vulnerabilities.
✦ Confirm that all information security incidents and security vulnerabilities are reported to management via appropriate channels and that suitable investigation and treatment follows.



To support ISO27001 information security certification, the information security education and training for employees of ASPEED Technology were held twice a year in 2022 to strengthen information security awareness. The aim is for ASPEED Technology's information security management to provide a more secure environment for employees, customers, suppliers, and cooperative partners. The implementation and achievement of ASPEED Technology's information security in 2022 are as follows:

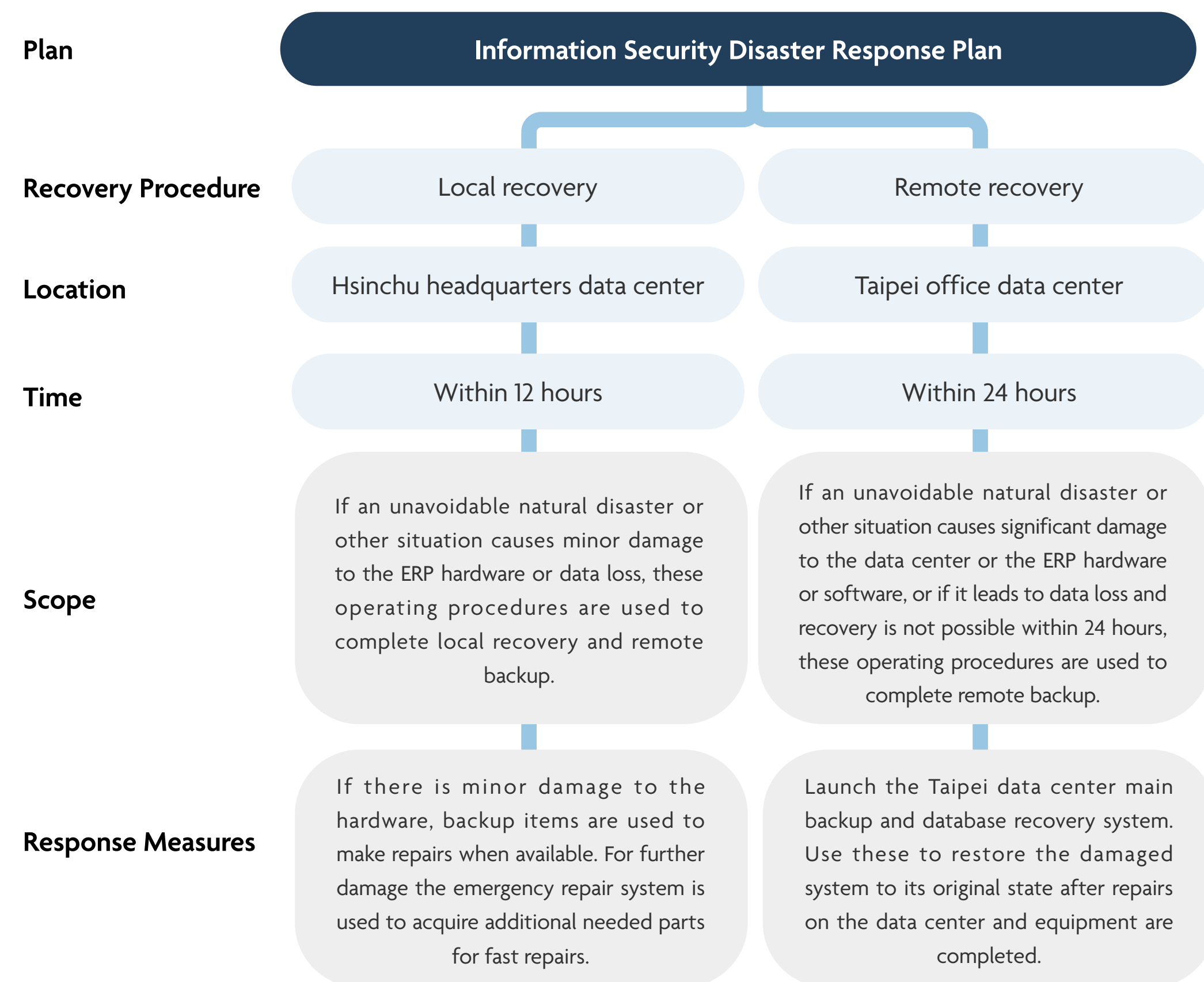
<b>23 Standards</b>
Completed documentation for information security-related standards
<b>1 Time</b>
Each year the Company holds at least one information security management review meeting
<b>2 Time</b>
Each year the Company holds at least two information security education and training meetings
<b>100%</b>
All 106 employees completed 2 hours of information security education and training class
<b>25</b>
A total of 25 employees of relevant divisions completed 2 hours of information security management system document-based class
<b>12 information security promotion</b>
at least one information security promotion per month

Information Security Disaster Response Plan

To prevent natural abnormal occurrences or manmade disasters from affecting information security and disrupting operations, ASPEED Technology formulated the Information Security Disaster Response Plan. By following the plan, analyzing risks, analyzing impacts on operations, and developing recovery strategies, when the Company faces information security disasters, interruptions to key operations will be minimized. These measures will prepare the Company for potential problems and achieve sustainable operations. Besides periodically backing up data, ASPEED Technology established a remote backup plan that includes periodic system and information backups between the data centers at the Company's Hsinchu headquarters and Taipei office. If there is a minor information security breach or damage to the ERP system hardware, restoration is completed within 12 hours and a remote backup of the data is available. If an unavoidable disaster occurs which causes severe damage to a data center or ERP system hardware or software, or leads to loss of data, the Company shall conduct equipment repairs and replacement within 24 hours and prepare the remote data backup.

In response to the increasing demand for flexible hybrid working mode and remote work-from-home operation, information security staff conducted internal inventories and upgraded equipment. They created information security defense mechanisms that backed up information systems and guarded confidential data. Advances included stronger VPN security, universal two-factor authentication, and one-time passwords. Drills showed the resilience of information security protections even when employees work from home.







Product Quality Management

In order to provide customers with high-quality products and services, ASPEED Technology adopted ISO 9001 Quality Management Systems standards and passed ISO 9001:2015 certification. Under ISO 9001, the Company continues to improve, with revisions, additions, or deletions made at any time based on customer needs, international circumstances, or legal rules and regulations. In 2021, based on the European Union's REACH regulation, the Company closely monitored Substances of Very High Concern (SVHC) regulations to adjust internal requirements for green products. The electrical appliances, electronics and related technology products sold by ASPEED in 2022 are in compliance with the relevant environmental protection laws and regulations, such as the RoHS Directive amendment instructions, (EU) 2015/863, Halogen free, IEC 61249-2-21, and ECHA SVHC REACH Directive 233 (EC 1907/2006). It is expected that in 2023, dedicated personnel will be introduced to take charge of green products and the review and response to international relevant regulations. The Company also integrated an ERP computer operations system, which integrates all processes from order taking to manufacturing, material procurement, material inventory, quality management and financial management. In 2022, with the internal digital transformation project of ASPEED, all systems have been gradually integrated electronically. At the same time, in order to assist various departments to effectively conduct analysis and prediction, we introduce the BI (Business Intelligence) system, build a database, and timely provide accurate statistics and analysis data, so that the management of each department can immediately master and control.

- **Quality control in accordance with the PDCA model:** We set up the “Management Procedures for Non-qualified Products”, and improve the control of defective products and related handling procedures arising from the planning of suppliers, the Company’s internal inspection and customer returns, as well as customer complaints.
- **Supplier Quality Abnormality:** When quality control staff discover a nonconformity with a supplier’s product, they record the problem in the supplier defective product report then handle it with the supplier.
- **Abnormality Detected During Internal Testing:** When quality control staff discover a nonconformity during IQC, they record it in the internal testing abnormality report then begin management and communication procedures.

- **Response to Customer Returns and Claims:** If a salesperson or quality control staff receive a return or claim, he or she must complete an online claim management form that describes the situation to relevant departments while requesting that the departments begin improvement procedures. If the customer is not satisfied by the improvements, the departments shall follow through with additional improvements until the customer is satisfied. The departments shall also follow up with the customer to ensure that the improvements are conducted effectively.

In addition to the above procedures, the electronic digital system introduced in 2022 has greatly improved the efficiency of quality control and customer feedback, including inventory control and quantity analysis, delivery inspection system, production management inspection system, etc. It is expected that the DCC will be simultaneously optimized in 2023 with the digital transformation project.



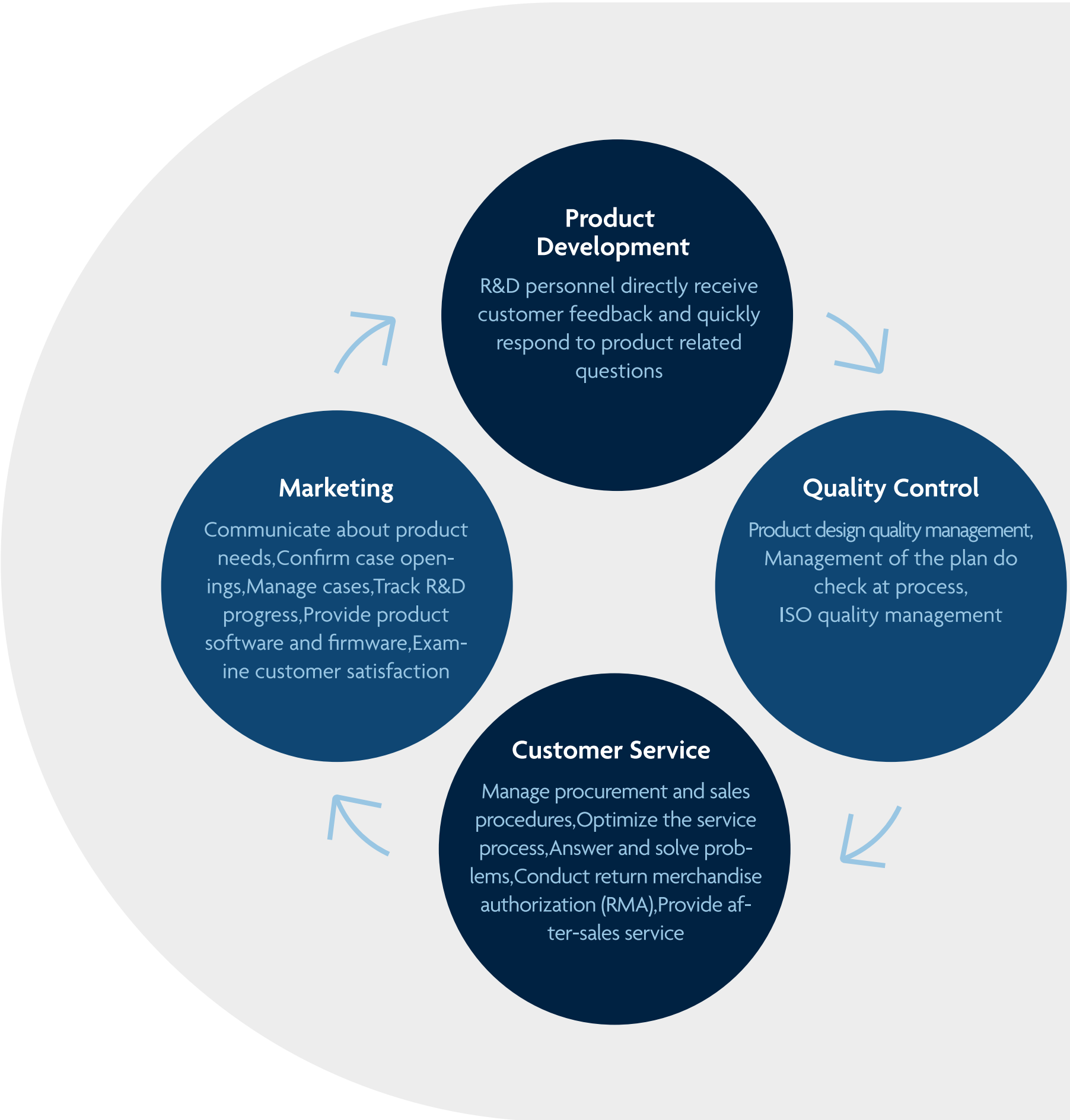
Quality Policy	2022 Results
<ul style="list-style-type: none"><li>◆ Product Innovation</li><li>◆ Attention to Quality</li><li>◆ Customer Confidence</li></ul>	<ul style="list-style-type: none"><li>◆ No major quality issues.</li><li>◆ No discrepancy between the order and delivered quantity.</li><li>◆ No errors on the delivery documents.</li><li>◆ Introduction of electronic digital system and optimization of ERP system.</li><li>◆ The customer satisfaction rate was 94.74%, and the Company provided timely responses to customer opinions and recommendations.</li></ul>



Customer Service Management

Besides providing excellent quality products, ASPEED Technology maintains close communications with customers so that we understand their needs and are always prepared to fulfill them. This approach is the best type of customer service. The Company's business units provide specialized services that are designed to support all types of customers. One of our distinct advances is including R&D engineers in our communications system, so that field application engineers do not need to act as bridges. When customers have a product design problem, they can quickly receive a direct response from R&D staff, and R&D staff benefit from getting direct feedback from customers. This model creates close cooperation between business units, R&D engineers, and customers. We believe that providing prompt assistance to customers is critical. Moreover, the communications process helps R&D engineers to gain a better understanding of market needs and receive customer feedback. For these reasons, in annual customer satisfaction surveys the Company gets high scores for “speed, clarity, and effectiveness” when responding to problems. We also established a customer service management unit and a quality control unit, which support product sales and solve after-sales problems. Each of these units contributes towards guaranteeing quality at every stage from production to delivery while maintaining open communications channels with customers. Since 2021, the Company has launched digital transformation projects, and also improved the process of customer service and strengthened service quality. The order inquiry system and shipment inspection system can respond to customer inquiries more quickly, check accounts and reconcile accounts receivable with the reporting system, and import into the BI system for quick analysis and judgment to reduce unexpected situations with customers.

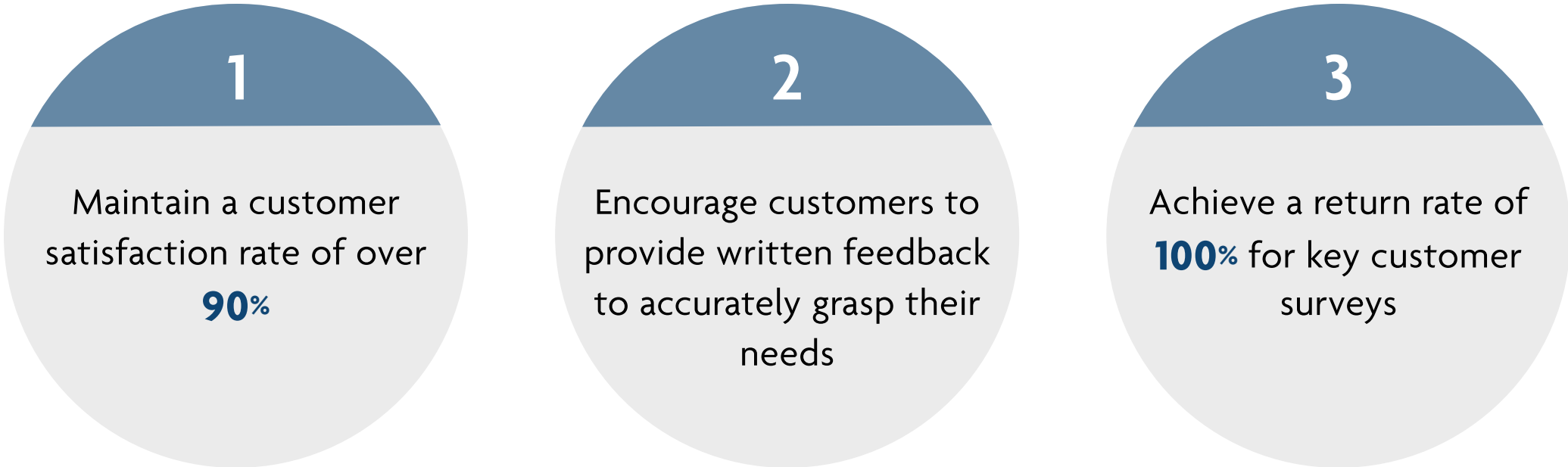
Department	Service Description
Marketing	Conducts periodic visits and calls to customers, communicates about product needs, serves as a bridge between the customer and R&D departments, confirms case openings, manages cases, tracks R&D progress, provides product software and firmware, and examines customer satisfaction.
Customer Service	Manages procurement and sales procedures, optimizes the service process, answers and solves problems, conducts return merchandise authorization (RMA), and provides after-sales service.
Quality Control	Product design quality management, management of the plan do check at process, and ISO9001 quality management.
Product Development	R&D personnel directly receive customer feedback and quickly respond to product related questions.







ASPEED Technology places great importance on customer satisfaction. At the end of each year, sales staff are responsible for managing an online customer satisfaction survey. At the same time, for a more precise understanding of customers' expectations and opinions, we make immediate improvement every year based on customer feedback received in the previous year, and have fine-tuned the goal of customer satisfaction survey for different years. The target for 2022 is as follows:



In 2022, a survey questionnaire was distributed to both existing and potential customers at home and abroad, with a satisfaction rate of 94.74%. There were no unsatisfactory responses to the questionnaire. Sales staff investigated and compiled opinions from the customers that said the Company's performance was only "ok", then arranged for meetings with quality control and R&D units in order to quickly respond to and solve all problems our customers faced. All customer needs received a quick solution and response. In order to better understand the real needs and opinions of customers, ASPEED encourages customers to

provide written feedback as much as possible so that they can clearly grasp the customers' thoughts. In 2022, a total of 37% of domestic and overseas customers conducted written feedback, which also enabled us to better understand the actual needs. To respond more actively to green products, human rights, environmental protection and other related issues in the semiconductor supply chain, since 2021 ASPEED Technology signed 100% of sustainability-related supplier pledges requested by customers and responded to sustainability-related surveys. The Company participates in the Carbon Disclosure Project, as requested by customers, as well as water surveys and the Responsible Business Alliance. At the same time, as a member of the responsible semiconductor supply chain, ASPEED Technology also requires suppliers to sign a corporate social responsibility pledge.

Customer Satisfaction and Opinions or Complaints	Explanation
Satisfaction Survey: Distribution of Online Questionnaires	In 2022, the overall satisfaction rate was 94.74%. Timely handling of all customer opinions and doubts included the following: 1.Conducted calls, visits, or teleconference meetings with domestic customers. When necessary, the Company arranged for engineering or R&D staff to provide assistance. 2.Used email or online meetings to communicate with foreign customers. When necessary, the Company arranged for engineering or R&D staff to provide assistance. 3.A total of 37% customer questionnaire responses were submitted in writing, and the responsible sales staff directly communicated with customers to understand the situation and properly handled.
Complaints Made Via the Corporate Website	Customers can write to sales@aspeedtech.com to engage in timely communication with the Company and to express opinions. In 2022, most communication via this email address, which is found on the Company's website, involved price inquiries from potential customers or opinions expressed by non-customers. The Company quickly responded to each email.
Complaints Made Via Phone	In 2022, the Company did not receive any complaints or opinions by telephone.



Supplier Management Policy

As a fabless IC design company, ASPEED Technology deeply values supply chain partners. We therefore established management policies covering all of our suppliers. In recent years, the Company gradually made sustainable management a factor in supplier management. In this way, as we grow with our suppliers, we can also demonstrate a commitment to society, governance, and the environment. Each year, the Company conducts supplier audits. New items added to the audit included environmental, human rights protection, and anti-conflict mineral pledges, with related information published on the corporate website. Key suppliers are also requested to sign ASPEED Technology’s corporate social responsibility pledge.

Supplier Management and Evaluation Process

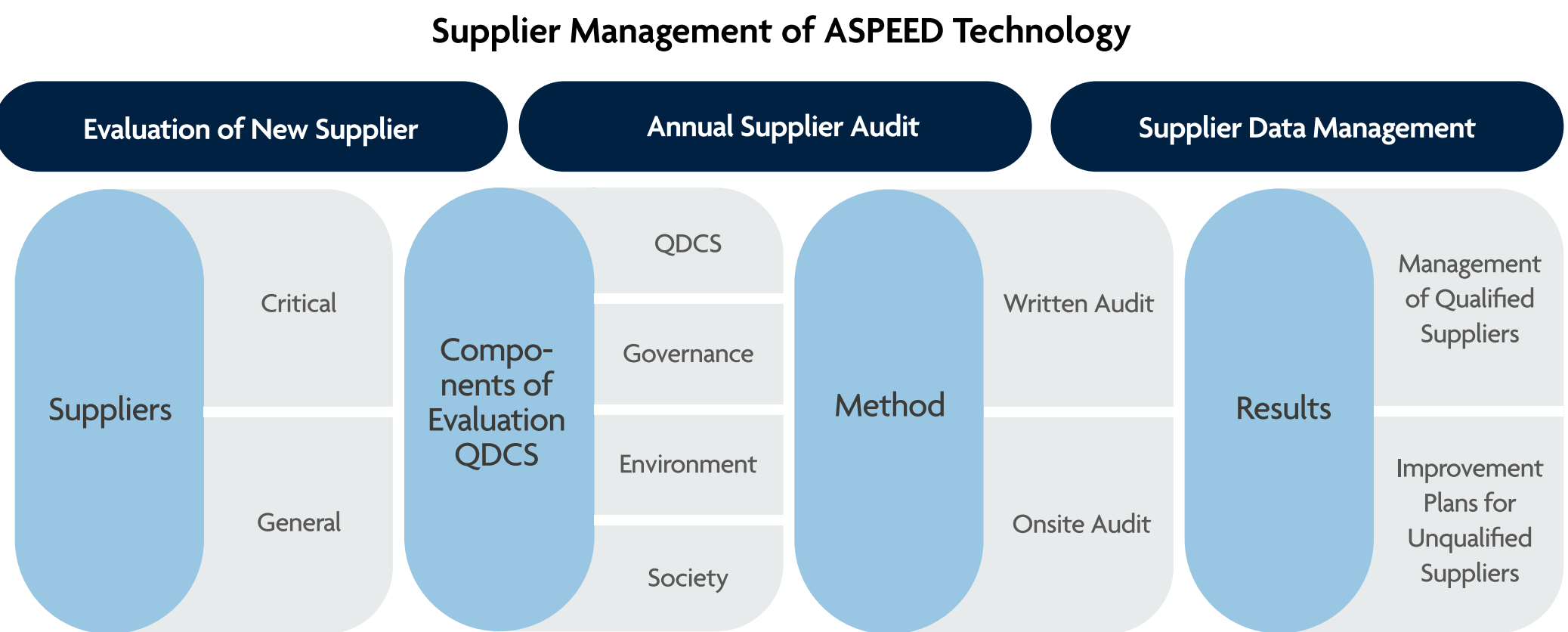
The General Administration Department convenes quality assurance and product development units to form an evaluation team, which conducts an onsite evaluation of the supplier based on items contained in the supplier initial evaluation form. Suppliers who score at least 75 points are registered as qualified suppliers. When an onsite evaluation is not possible, or for international suppliers, the supplier can conduct a self-evaluation. The evaluation team reviews the results to determine whether the supplier should be approved.

ASPEED Technology’s suppliers can be divided into two main categories: critical suppliers and general business suppliers. Critical suppliers provide main raw materials, production, and testing. Considering the importance of this group towards the Company’s operations, we only choose world-class manufacturers and suppliers and confirm that they meet our standards for social responsibility, green environmental protection, occupational safety and health, labor rights, human rights and sustainable operation management solutions. They must follow the Code of Conduct Responsible Business Alliance (RBA), and priority shall be given to suppliers that pass ISO 9001, ISO 14001, or ISO 45001 certification. In addition, the Company requests that suppliers produce and publicly release annual sustainable management reports to support audits and assessments. The Company also monitors to see whether the suppliers have any incidents that cause reputational damage or face any fines from international customers. ASPEED Technology has started to ask suppliers to sign corporate social responsibility pledges. In 2022, 60% of key suppliers signed, and the Company aims to increase this response rate.

Supplier Audit Management

ASPEED Technology conducts annual onsite or written supplier assessments. Suppliers must score at least 75 points to pass; those who fail must make improvements within a limited time period then apply for reassessment. If a supplier fails reassessment, it no longer qualifies to be a supplier of the Company. The assessment process includes quality control, design procedures and management, document records, storage, and inspections, as well as green product management and ESG. If a serious quality problem occurs with an approved supplier, ASPEED Technology increases the proportion of sampling tests in accordance with the inspection and testing management procedures. Rigorous reviews continue until improvements are completed. If following guidance, a supplier is still unable to make expected improvements the supplier loses its supplier qualification. In 2022, the Company completed assessments on six suppliers, including annual assessments of five critical suppliers and an assessment of one new supplier. All six passed.

ASPEED Technology supported the Company’s green pledge, human rights protection, and conflict-free minerals policy by issuing a public statement on the corporate website proclaiming that the Company and the Company’s suppliers shall uphold their social and environmental protection responsibilities. They shall not accept minerals from conflict zones or illegal mines. The Company required that all suppliers commit to implementing these measures.





Declaration of Minerals Conflict-Free

To manage the Company’s conflict-free minerals policy, ASPEED Technology supports the “responsible minerals procurement” position. ASPEED Technology shares the Company’s conflict-free minerals policy with suppliers and insists on full compliance. Each year the Company examines suppliers’ Conflict Minerals Reporting Template (CMRT and EMRT). Suppliers must identify their smelting source. All of their purchases must be made from conflict-free and qualified mineral suppliers, and they shall faithfully disclose their conflict minerals information. Compliance is included in annual supplier evaluations, which enables us to implement our conflict-free procurement program. Suppliers shall also sign ASPEED Technology’s corporate social responsibility pledge and confirm that they will adhere to its conflict-free minerals policy. In the event that we discover that products or raw materials from suppliers contain conflict minerals from non-qualified sources, we take the necessary measures to stop use. ASPEED Technology issued a public declaration of support for responsible minerals procurement on the Company’s corporate website and seeks to fully implement this social responsibility. In 2022, ASPEED Technology’s management of conflict-free minerals:

Type of Conflict-Free Mineral	Management Strategy	Explanation
Antimony	Misc. in products	Not a CMRT listed in the RBA. ASPEED Technology regularly asks for supplier management.
Cobalt	EMRT_1.11	EMRT Report specified in the RBA.
Tungsten	CMRT_6.22	CMRT Report specified in the RBA.
Palladium	Use in products	Not a CMRT listed in the RBA. ASPEED Technology regularly asks for supplier management.



See the corporate website for information on ASPEED Technology’s green pledge



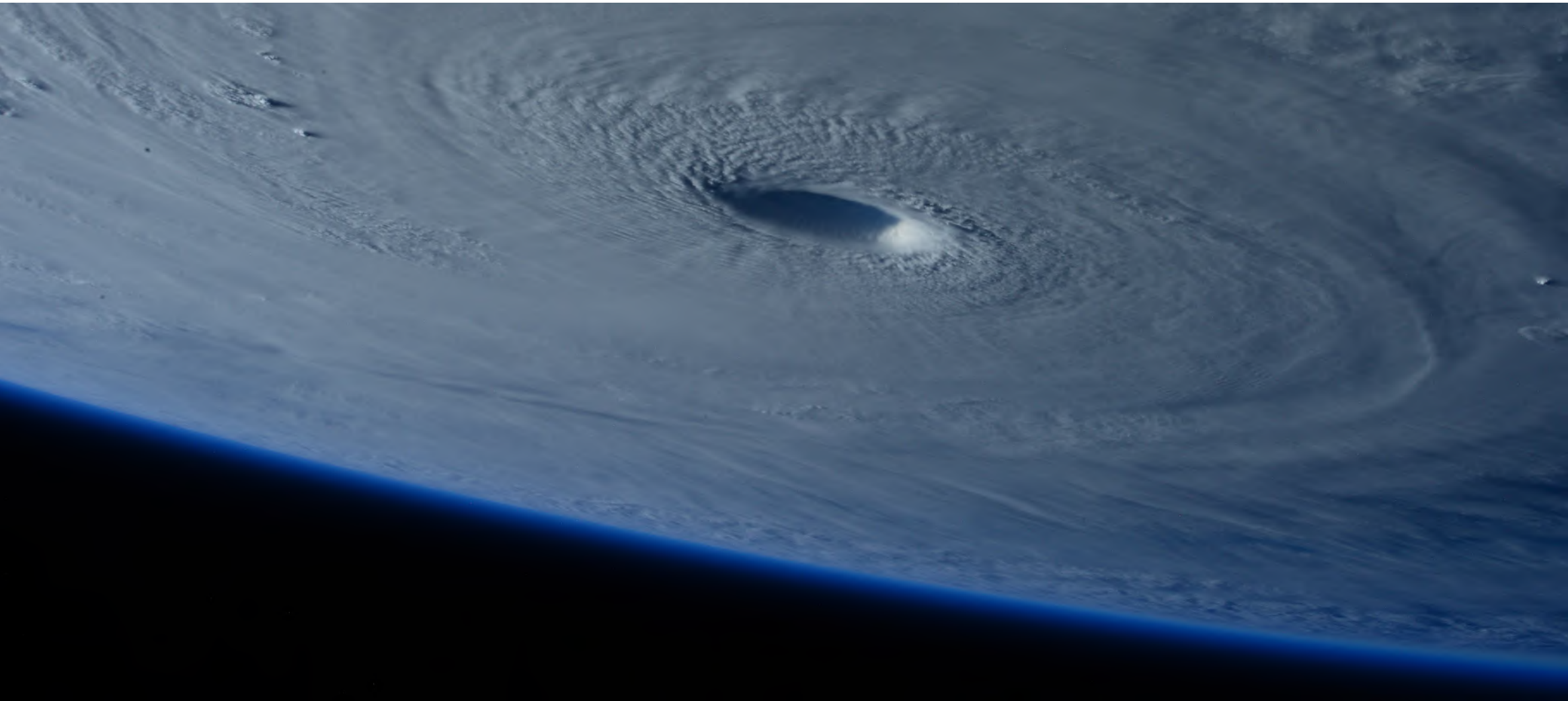
### RBA Code of Conduct

To comply with the Responsible Business Alliance - RBA Code of Conduct, each year, ASPEED responds to customers' requests for the annual SAQ (Self Assessment Questionnaire) on RBA Online. Meanwhile, ASPEED Technology is committed to ensuring that working conditions at the Company and in the Company's supply chain are safe; that workers have a safe and healthy work environment and are treated with respect and dignity; and that business operations are environmentally responsible and conducted ethically.

### Supplier Risk Management

ASPEED Technology is a fabless IC design company that manufactures all products through turnkey service providers. The providers' process technologies, quality, yield, capacity, and delivery time are key factors to whether a product is successful. Therefore, when deciding on the turnkey service provider, besides considering the completeness of its silicon IP, its use of ISO certified suppliers, and its APR technical capabilities, which foundry, assembly house and testing house it is in a strategic alliance with is even more important. ASPEED Technology built long-standing and stable partnerships with members of the Company's upstream and downstream supply chain. The Company cooperated with foundry partners (turnkey service providers) on building a wafer bank, with the aim of maintaining a four-to-six-month inventory to ensure that there are no supply disruptions. For product assembly and testing, the Company's turnkey service providers sign capacity guarantee agreements with first rate domestic assembly firms on the Company's behalf. Orders are distributed to multiple suppliers to reduce risk. Due to the impact of the COVID-19 pandemic, many enterprises have been unable to meet their delivery lead times. ASPEED Technology, on the other hand, has relied on close partnerships with suppliers to uphold the quality and smooth delivery of products, without facing any severe impact caused by overall economic conditions. In order to avoid the risk of packaging substrate capacity constraint and long lead time in the overall production operation, we have added alternative packaging substrate suppliers to diversify the risk, and have successfully delivered samples and mass production in 2022.

In addition, considering the potential for natural disasters and other unavoidable situations such as earthquakes, typhoons, or fires, the Company joined with turnkey service providers in building reporting channels that can be used to immediately obtain related information about suppliers' condition, in order to quickly understand when work can resume and respond by transferring orders if needed. The Company conducts follow-up tracking until the situation is resolved and normal production resumes.





# 06

## Shared Social Prosperity

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# Viewpoint

## Talent Sustainability and Industry Development



In the semiconductor industry in which ASPEED Technology is based, outstanding talents are always our most important asset. In recent years, as the semiconductor industry has thrived, how to successfully retain talents through active recruitment and attractive talent retention policies has become the focus of the development of ASPEED. ASPEED believes that in order to attract talents, apart from competitive salary and benefits, it is important to create an environment that allows employees to maintain work-life balance and provide comprehensive education and training.

ASPEED Technology insists on the R&D of niche products, with a long product development cycle and lifecycle, and a time frame for product project development. At the same time, we continue to recruit R&D personnel to ensure that sufficient R&D manpower, and maintain the normal commuting pattern of our employees as far as possible, which could break the long-standing impression that the public has spent more time in the technology industry. Apart from a flexible working model, ASPEED employees can also adjust their working hours flexibly. In recent years, we are aware of the impact of physical and mental stress

on our employees and have gradually increased more lectures and courses on how to adjust work pressure and relieve their living pressure. We believe that by creating a healthy and happy working environment for our employees, we can help them to develop their potential and create a win-win value.

The diverse composition of talents has been helpful for stimulating development of each other as well as divergent design and R&D elements. Therefore, in terms of talent recruitment, we expect to be able to attract a diverse group of people. However, with in-depth analysis of the manpower recruited within the enterprise and the composition of the talent pool in the Taiwan science and technology industry over the past few years, it is found that the composition of manpower in the semiconductor industry is relatively single and there is a general lack of diversified science and technology talents. Therefore, in planning corporate social investment projects this year, we think how to combine corporate core with social welfare sponsorship and invest resources in sustainable diversity and inclusion and the development of female science and technology talents. We have also invited National Tsing Hua University STEAM School that possesses a strong educational background to collaborate on the continuity and impact of this project.





Comprehensive Labor Structure

ASPEED’s success today is attributable to its employees’ passion for work. All employees are important partners for our continuous growth. Therefore, ASPEED has been constantly cultivating its R&D capabilities and has long been actively selecting and cultivating talents. It not only pays attention to the growth of the number of employees, but also values the structure and quality of manpower. In addition to providing competitive remuneration and benefits, the Company is also committed to creating a happy and friendly working environment and caring for families of employees, so that employees can always be carefree and devote their passion and creativity into work. ASPEED had 106 employees (full-time employees) in 2022, with an average age of 40.74 and an average tenure of 5.17 years. Most of the employees are experienced and have grown with the Company for a long time. 80.19% were male and 19.81% were female. In 2022, the total number of supervisors was 44, of which 6 were female, accounting for 13.64% of the total number of supervisors. The professional talent pool in Taiwan has long been dominated by male, and the staff composition of ASPEED Technology is also dominated by R&D staff, which is one of the factors for the higher proportion of males in the Company’s internal workforce. In terms of the number of men and women in the management sales units, the ratio of men to women is 1:1, which is quite average. Overall, the Company recruits talents mainly based on the job nature and needs. ASPEED Technology is committed to implementing corporate gender equality, diversity, equality and inclusion, and considering the balance of the gender ratio of R&D talents in Taiwan. Since 2022, it has been adhering to the principle of equality in talent recruitment, providing gender-friendly and fair treatment of workplace measures, and improving the cultivation of campus talents. It has also started to pay attention to the issues of investing in female science and technology talents. A total of two sustainability talent workshops have been held to encourage employees to participate in the discussion of how to exert the influence of ASPEED to promote the issue of female science and technology talents, and to help new generation female students understand the

industry and further cultivate their interests. Based on the results of the discussion, a series of social investment participation activities in cooperation with tertiary institutions will be implemented in 2023, hoping to develop diversified professional and technology talents for the industry through the perspective of education and knowledge sharing, so as to implement gender equality.

From the perspective of the structure of professional background, among the staff, R&D staff accounted for 65.10% of the total, and those with a Doctoral and Master’s degree accounted for 73.58%, fully reflecting the determination and strength of ASPEED Technology on R&D of innovative technology. In terms of the position distribution, ASPEED had a total of 69 R&D personnel (including R&D and design personnel in the product development division as well as the quality verification and system design division), and 37 salespeople and quality control staff in 2022. Among them, the number of business and new business development personnel increased from 6 to 9, which was in line with the trend of ASPEED Technology to expand its business in recent years. In terms of distribution of work locations, since ASPEED Technology is headquartered in Hsinchu, more than 90% of the employees are based in Hsinchu, Taiwan, the major business hub, while there are other work locations distributed in Taipei, where R&D and technical support services are provided. In order to provide employees with a more flexible working model, employees can also choose to work in the headquarter in Hsinchu or Taipei office based on their own needs during the epidemic; the employment rate of senior management from local residents is 100%. By providing an excellent working environment, ASPEED Technology will allow outstanding talents of the Company to cooperate and grow together, accelerate the pace of product development and the timeliness of technical support, so as to bring innovative values to full play.



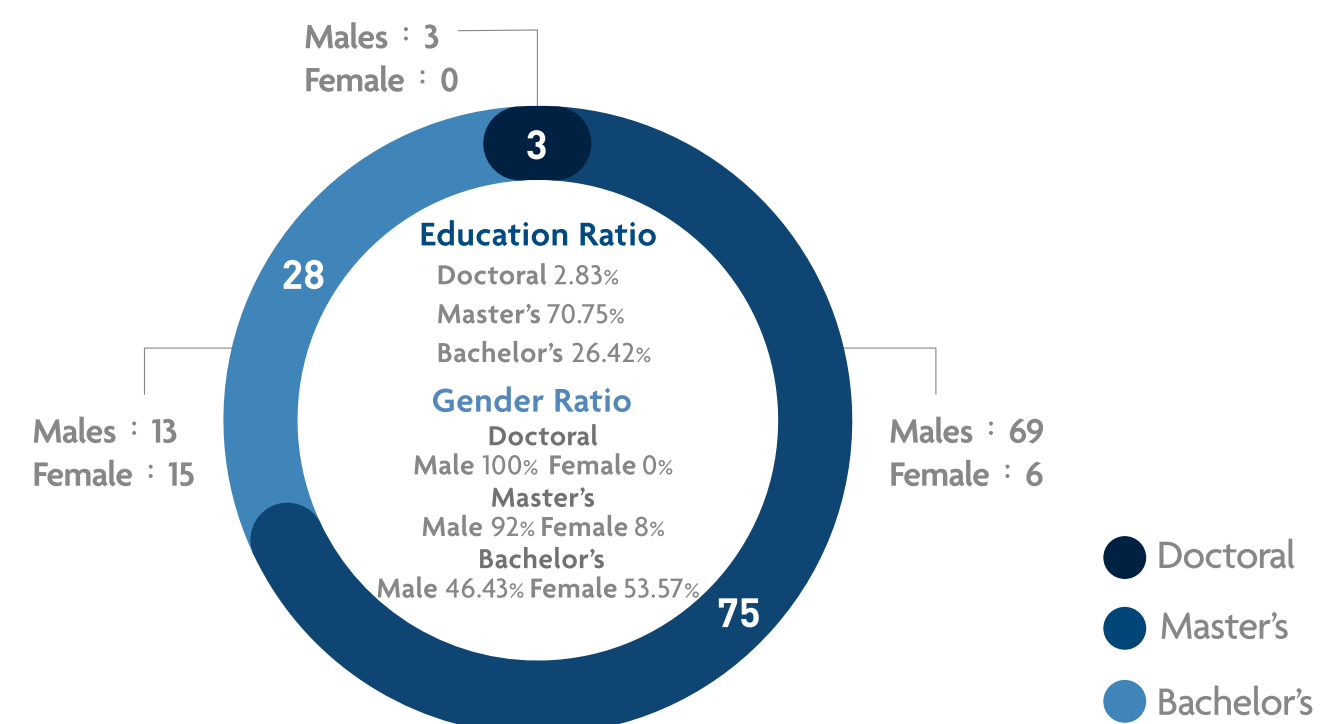
## Labor structure in 2022

(Unit: number of people, percentage)



## Education

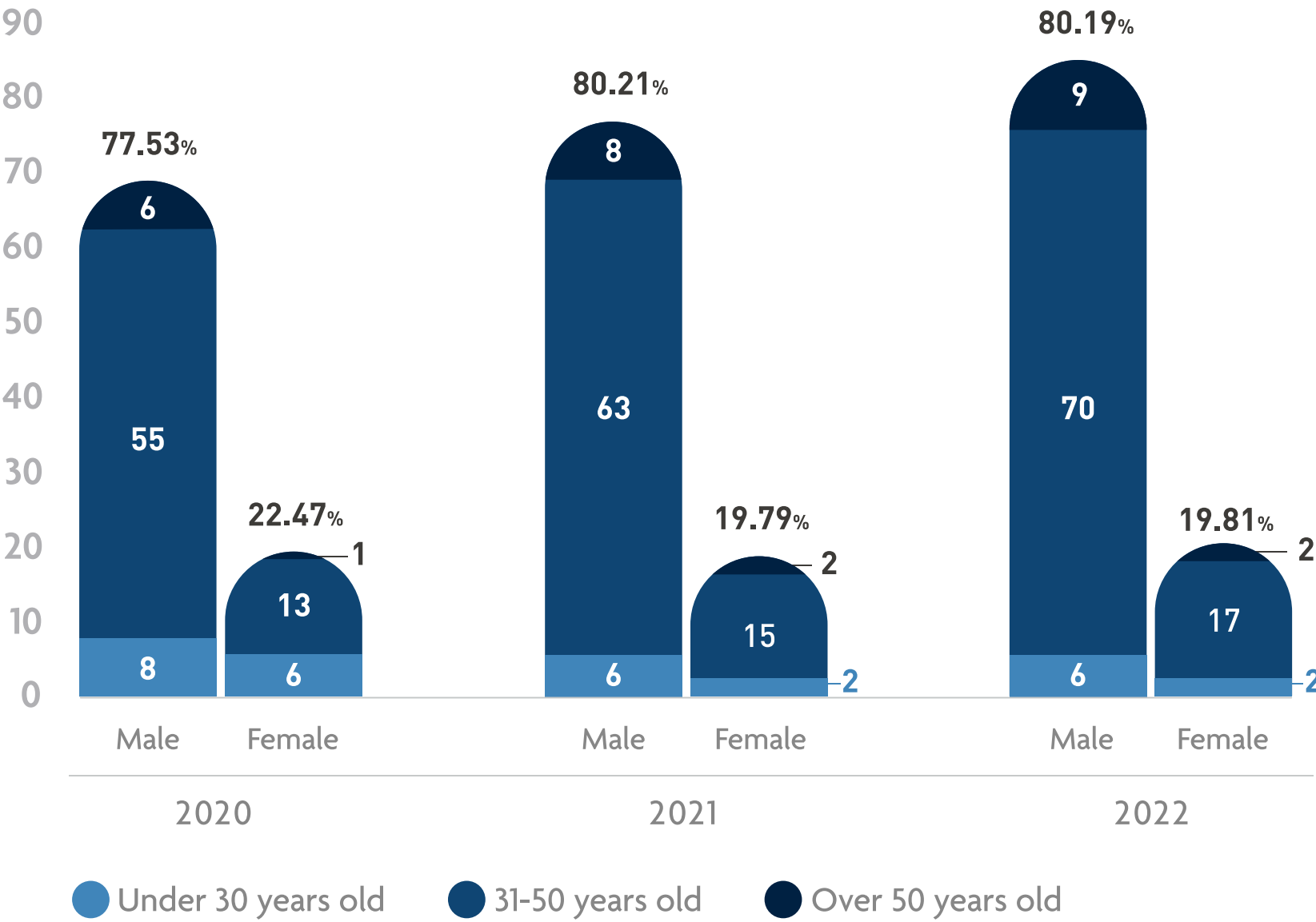
(Unit: number of people, percentage)





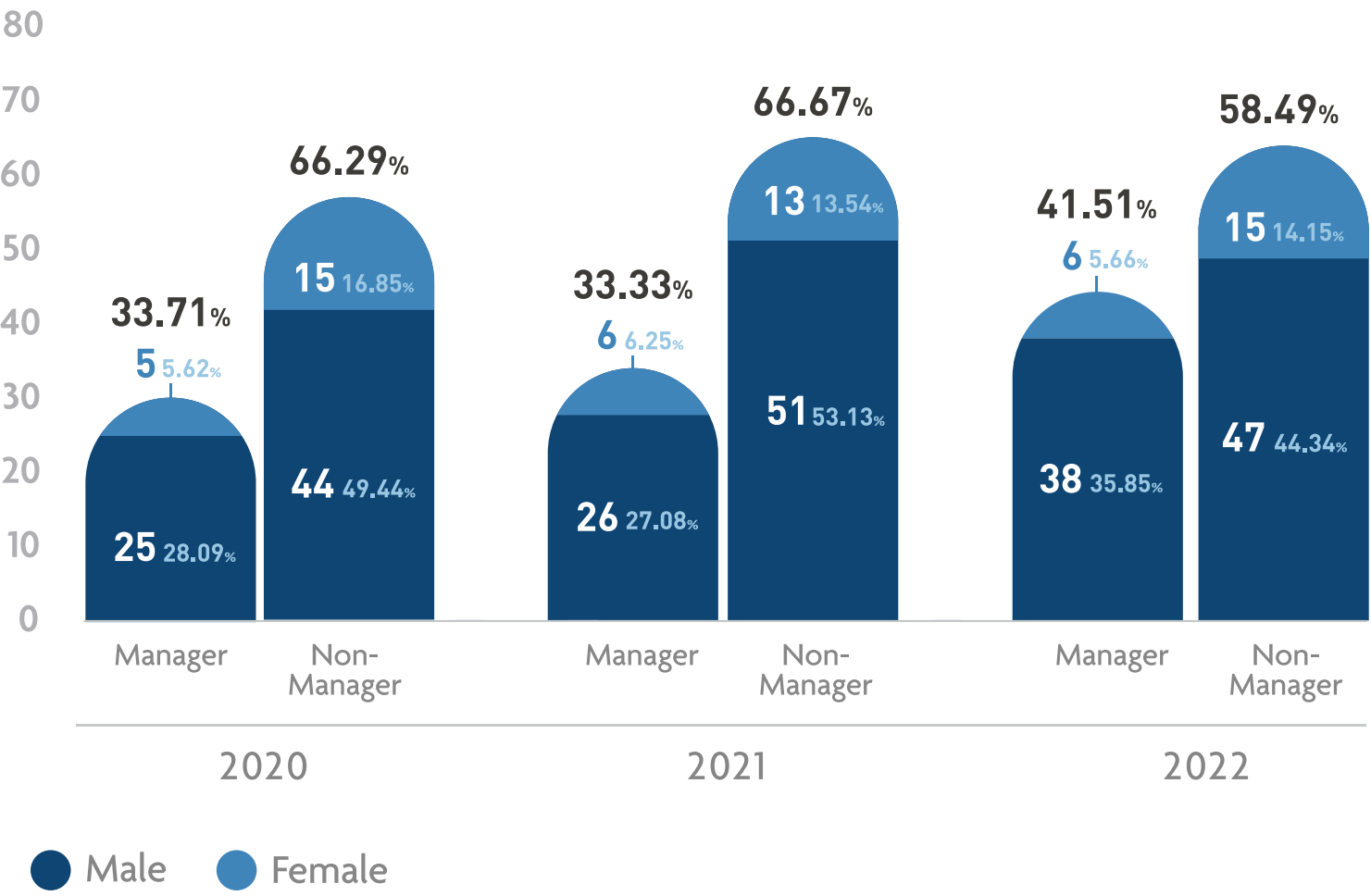
Number of ASPEED's Employees by Age

(Unit: number of people, percentage)



Number of ASPEED's Employees by Gender and Position

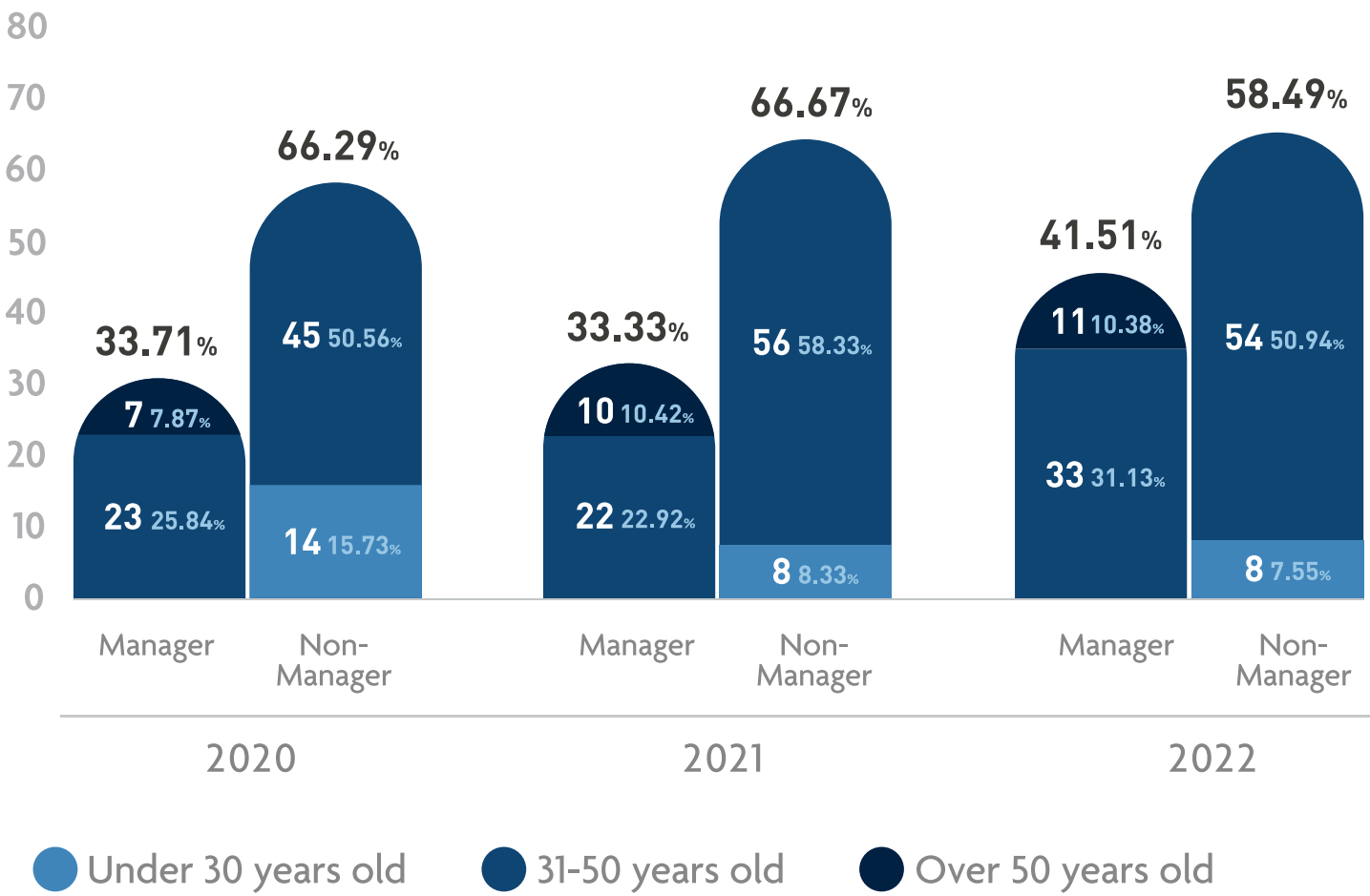
(Unit: number of people, percentage)



\* Managerial positions are defined as those above manager level

Number of ASPEED's Employees by Position and Age

(Unit: number of people, percentage)

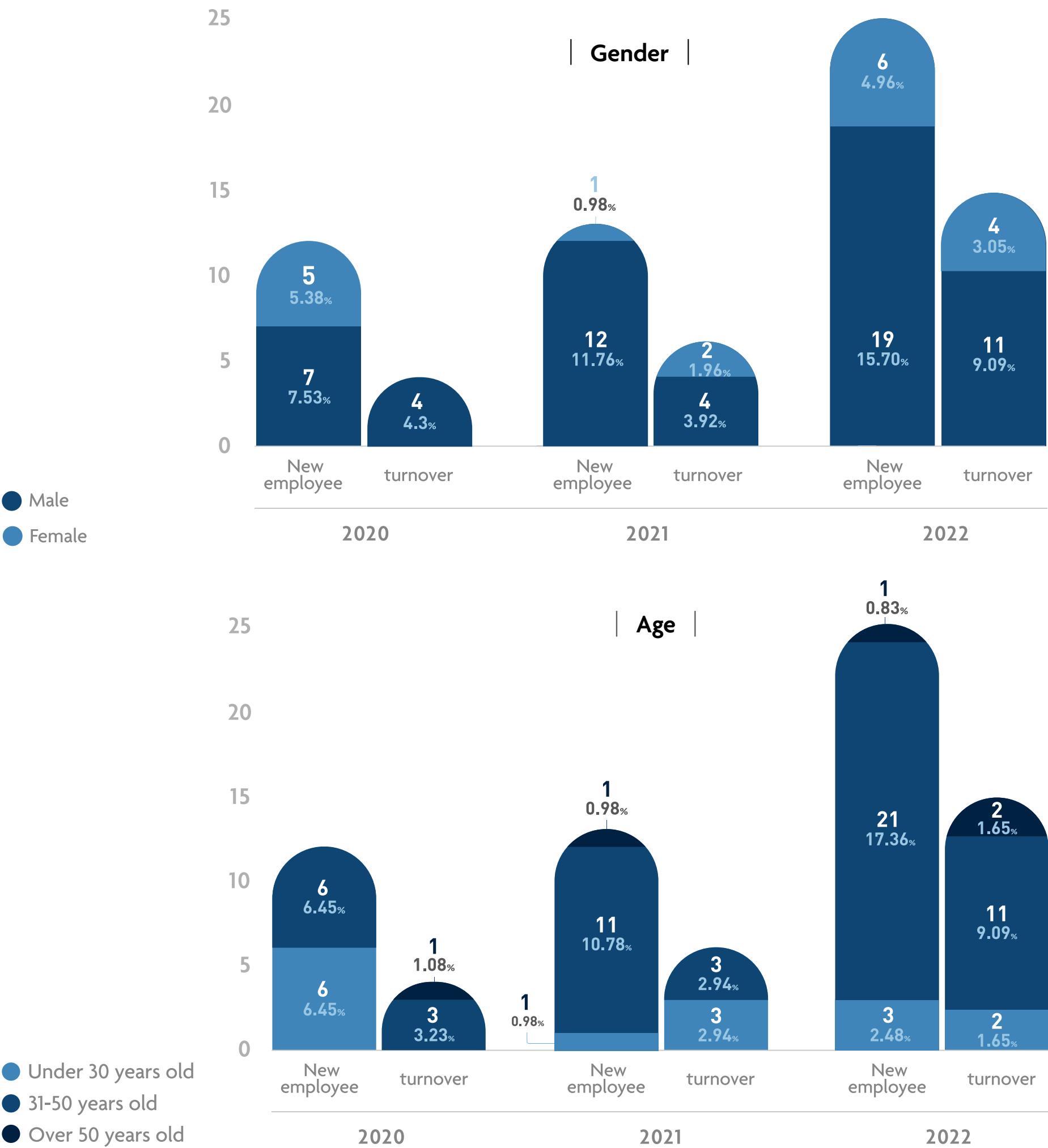




Apart from new recruitment, turnover rate will also affect the stability of manpower structure. The average turnover rate of ASPEED Technology in 2022 was 12.40%, higher than last year. After reviewing all the employees who left the company last year, it was a normal turnover in the industry and there was no particular reason for concern. In addition, the accession rate of 20.66% in 2022 also increased significantly compared with the previous year, showing the continuous active recruitment of talents by ASPEED Technology. In addition, ASPEED Technology has maintained a high-growth operational performance in recent years. In the future, we will continue to attract employees by improving the overall remuneration and benefits, considering flexible working models, and improving career planning for them.



Number of ASPEED’s Employees by Position and Age (Unit: number of people, percentage)





Good talents are essential to the IC design industry. ASPEED Technology is a mid-size IC design company with about 100 employees. The average industry qualification of each new employee is very advanced and complete, so not only can they immediately put their expertise to work, but they can also grow and bring greater benefits to the company by sharing their experience with each other; in addition, each R&D personnel can work independently, and is very flexible in terms of talent dispatching project requirements. ASPEED Technology's talent recruitment management is conducted regularly by the Administration Division through analysis of the knowledge, skills, capabilities and personality traits required for the position, and the recruitment policies are developed based on the core skills required for each position. Its recruitment channels include:

- Professional personnel consulting companies:** Through the personnel consulting companies, we carry out analysis and screening to accurately and effectively grasp the talent in demand, and increases the company's steady source of high-quality talent
- Staff referrals:** We welcome our staff to refer outstanding industry talents. ASPEED Technology will offer a bonus of NTD100,000 to its staff upon successful referrals
- On-site operations:** We regularly cooperate with top local universities in Hsinchu City to connect and interact with targeted talents, expanding the image and influence of ASPEED Technology

Apart from actively recruiting outstanding external talents, ASPEED Technology also continues to cultivate internal talents. In addition to integrating internal and external resources to create a continuous and diversified learning environment, the Company assists employees and managers to review past performance through training, development and performance systems, so as to set future work goals and development directions as the basis for learning and development. We attach great importance to the long-term career planning of employees, and help employees explore new development directions and personal potential, so that employees can grow with the Company. In 2022, in response to the sustainable trend and the need to strengthen the resilience of the enterprise, we added training courses for employees to further study, including integrity and ethics, anti-corruption, and information security education and training. In addition, in consideration of the fact that employees are the most important assets of ASPEED, how to relieve and adjust to mental and physical stress is also an important issue in the modern workplace. In 2022, relevant general education courses on emotional stress adjustment were also added.

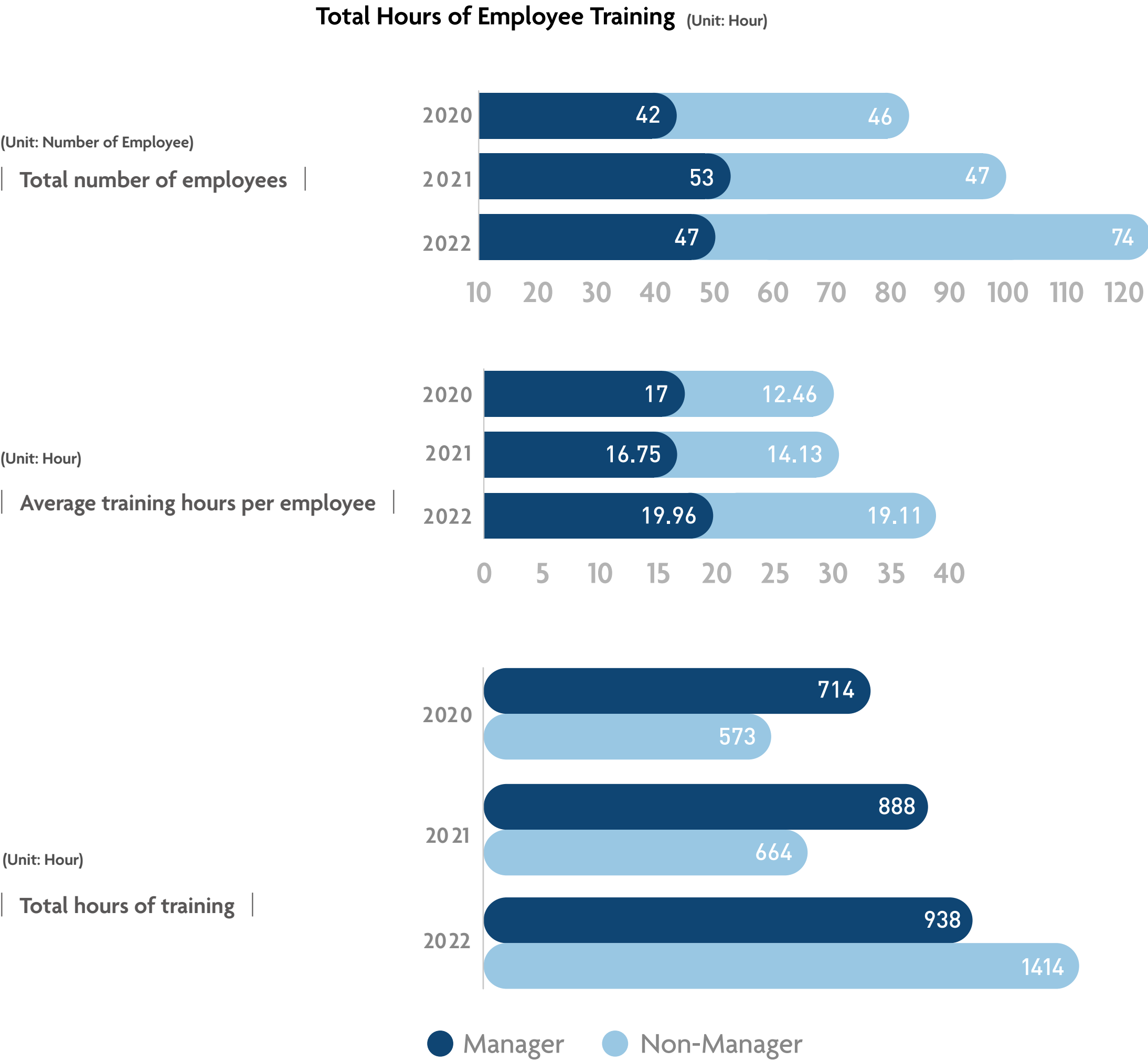






New Employee Training	Designed to meet each department's requirements, ASPEED Technology introduced a senior mentor program for new employees. The program provides basic training and employment guidance to assist new employees in quickly adapting to the team.	
Professional Skill Training	Identify the professional training needs of each department then provide the training to employees to strengthen their professional competence.	
General Training	Skills training that embodies the core values of the Company and teaches employees knowledge they need in their everyday work and lives. Includes training required by government regulations and professional skills that employees must possess, such as regular labor safety and health lectures and fire drills, etc.	
Sustainable Awareness Training	Two times a year on information security education, integrity and ethics, anti-corruption, and climate change. New theme courses will gradually be added going forward.	
Emotional-related Courses for Employees	Including career training and emotional stress management courses, so as to take care of employees' physical and mental health in an all-round way.	
Other Training	Management Skill Training	For employees with management potential, the Company provides training courses to build management thinking, cultivate strategic analysis, and foster organizational planning capabilities. Our objective is continuity of organizational development and team operations.
	Celebrity Lectures	A series of lectures planned to provide opportunities for employees to hear from top thought leaders in various fields to broaden their horizons and inspire new thinking.
	Workshops	Through experiential learning, employees join situational activities to learn how to incorporate business management theory into their regular work, leading to higher quality, better results.
	Self-study and Development	Self-study and Development: ASPEED Technology offers an open, diversified study platform for employees to access professional online courses that can raise their professional skills. The Company also fully subsidizes tuition for external training courses.





\*The number of people refers to the total number of people who underwent training that year (includes employees who later left their job)

\*In 2022, managerial positions were defined as those above manager level

Professional Certificates Obtained by Employees, 2020 – 2022

Year	Category	Certificate Name	Number
2020	Finance	Policy explanation and internal control management practices relating to the competent authorities' efforts to improve companies' financial report compilation capabilities	5
		Responses by internal auditors to problems frequently encountered when compiling IFRS financial reports	
		Continuing education of the principal accounting officers of issuers, securities firms, and securities exchanges	
		Annual continuing education class for accounting supervisors	
2021	Finance	Analysis of Key Corporate Finance Data and Strengthening Crisis Warning Capabilities	10
		Professional Development of Principal Accounting Officers of Issuers, Securities Firms, and Securities Exchanges	
		From Corporate Governance 3.0, a Practical Analysis of How Companies Build Risk Management Development Blueprints	
		Deciphering Financial Statements to Uncover Corporate Fraud and Scams	
		Key Crisis Warnings in Financial Reports	
	Others	Analysis of Key Corporate Finance Data and Strengthening Crisis Warning Capabilities	
		Professional Development of Principal Accounting Officers of Issuers, Securities Firms, and Securities Exchanges	
		Safety and Health Occupational Education and Training for First Aid Practitioners	
		Occupational Education and Training for Managers and Supervisors of Occupational Safety and Health Affairs	
		Occupational Education and Training for Managers of Fire Safety	
2022	Finance	Continuous Training Programme for Accounting Supervisors	11
		Professional Development of Principal Accounting Officers of Issuers, Securities Firms, and Securities Exchanges (Video)	
		Corporate Fraud Detection and Prevention Practice: Legal Responsibility, Identification and Big Data Analysis	
	Compliance	Corporate Decisiveness - Good Management and Protection of Trade Secrets	
		Legal Risk Workshop on Related Party Transactions	
		Basis of Corporate Labor Law Compliance - From the Five Functions of Human Resources Management 1	
		Basis of Corporate Labor Law Compliance - From the Five Functions of Human Resources Management 2	
		E-Course on Anti-corruption and Whistleblower Protection (Statutory Recognition)	
		Compliance audit on CSR and Sustainability Reports	
		E-Course on Analysis of the PDPA (Statutory Recognition)	
	Others	Head of Lead Operations	



Employee benefits and care	
Identified Impact Result	Self Disclosures
GRI Topic-specific Standards	<ul style="list-style-type: none"><li>• 102 General Disclosures</li><li>• 201 Economic Performance</li><li>• 401 Employment</li><li>• 403 Occupational Health and Safety</li><li>• 404 Training and Education</li></ul>
Performance Indicators	<ul style="list-style-type: none"><li>• Employee average salary</li><li>• Employee benefits</li></ul>
2022 Results	<ul style="list-style-type: none"><li>• In 2022, ranked the first among the TWSE-Listed Companies and sixth among the TWSE- and TPEX-Listed Companies in terms of the average salary of all employees</li><li>• Spent NTD522 million on employee benefit fees, which was an increase of 51.54% over the previous year</li><li>• Raised health check quota for employees over 40 years old</li><li>• Provided a quarterly departmental exchange fee of NTD800 per person</li><li>• Focused on employees' physical and mental balance, and added emotion-related courses</li></ul>
2023 Objectives	<ul style="list-style-type: none"><li>• Continue to raise the average salary level of all employees</li><li>• Enhance employee benefits (economy-oriented and physical and mental health-oriented)</li></ul>

Compensation and Employee Welfare

High-quality talent is the most important asset of IC design companies, so facing competition in the talent pool of the semiconductor industry, ASPEED Technology not only provides employees with a highly competitive, internally fair compensation and a diverse and rewarding welfare program, but also respects employees' autonomy and cohesion, and pays attention to employees' self-practice, work environment and quality of life balance, so that the enterprise and employees can grow sustainably together.

In 2021, ASPEED increased the number of guaranteed paid months' salary from 14 months to 15 months, and the structural salary adjustment in 2022 also increased compared to the previous year. The overall salary adjustment system allows employees to practically feel the importance that the Company attaches to talent retention. In 2022, the total amount of employee benefit expenses incurred by ASPEED Technology amounted to NTD522 million, representing a significant increase of 51.54% over the previous year, which showed that we attach great importance to employee benefits. The total remuneration of non-managerial full-time staff was NTD413 million, representing a significant increase of 76% over the previous year. The average salary of non-managerial staff was NTD4.588 million and the average median salary was NTD4.220 million, representing a significant increase of 72% as compared to last year. The average salary of all employees reached NTD4.552 million, ranking the first among the TWSE-Listed Companies and sixth among the TWSE- and TPEX-Listed Companies. Higher salaries do not represent the Company's only policy approach to improving employee benefits. In the future, we will continue to work towards the provision of better all-round welfare for employees by comprehensively improving their compensation and benefits and creating a diversified and inclusive environment.

Performance-based Compensation System

ASPEED Technology's incentives system was designed to support the Company's operational goals and was formulated based on our employees' duties, professional knowledge and skills, and performance. The Company's employee assessments are 100% individual based, and employee rewards include the stipulation that at least 8% of the Company's annual profits (if any) shall be distributed to employees as a bonus, which



exceeds the standard of distributing at least 1% of annual profits as bonuses that is generally followed by other companies. From 2022 onwards, the senior executives of associates or above will receive performance dividends in the form of restricted stock units (RSU). The Company will distribute 8% of the profits as general employee performance bonus, which will be shared among all employees other than associates. The future compensation plan will further incorporate sustainability achievement indicators into the performance compensation of senior executives in the hope of encouraging and implementing company-wide efforts toward sustainable management. Salary raises and bonuses shall also reflect employee performance, in order for our compensation system to have a stronger impact on the Company. We want to encourage employees to demonstrate team spirit and show cooperation, so they can find innovative ways to generate more profits to share in the future.

To examine employees’ development and work performance results, ASPEED Technology established an employee performance management system. Separate assessments are conducted for new employees during their trial period and all employees for their annual performance review. Every employee who reported before October 31st of the previous year, apart from those on fixed-term contracts, must participate in the performance reviews regardless of gender, age, or work category. Employees’ managers and colleagues review goal fulfillment as well as the values and capabilities that employees bring to their future career planning. Together, they reach agreement on key areas of development to make personalized improvement recommendations that support career development planning.

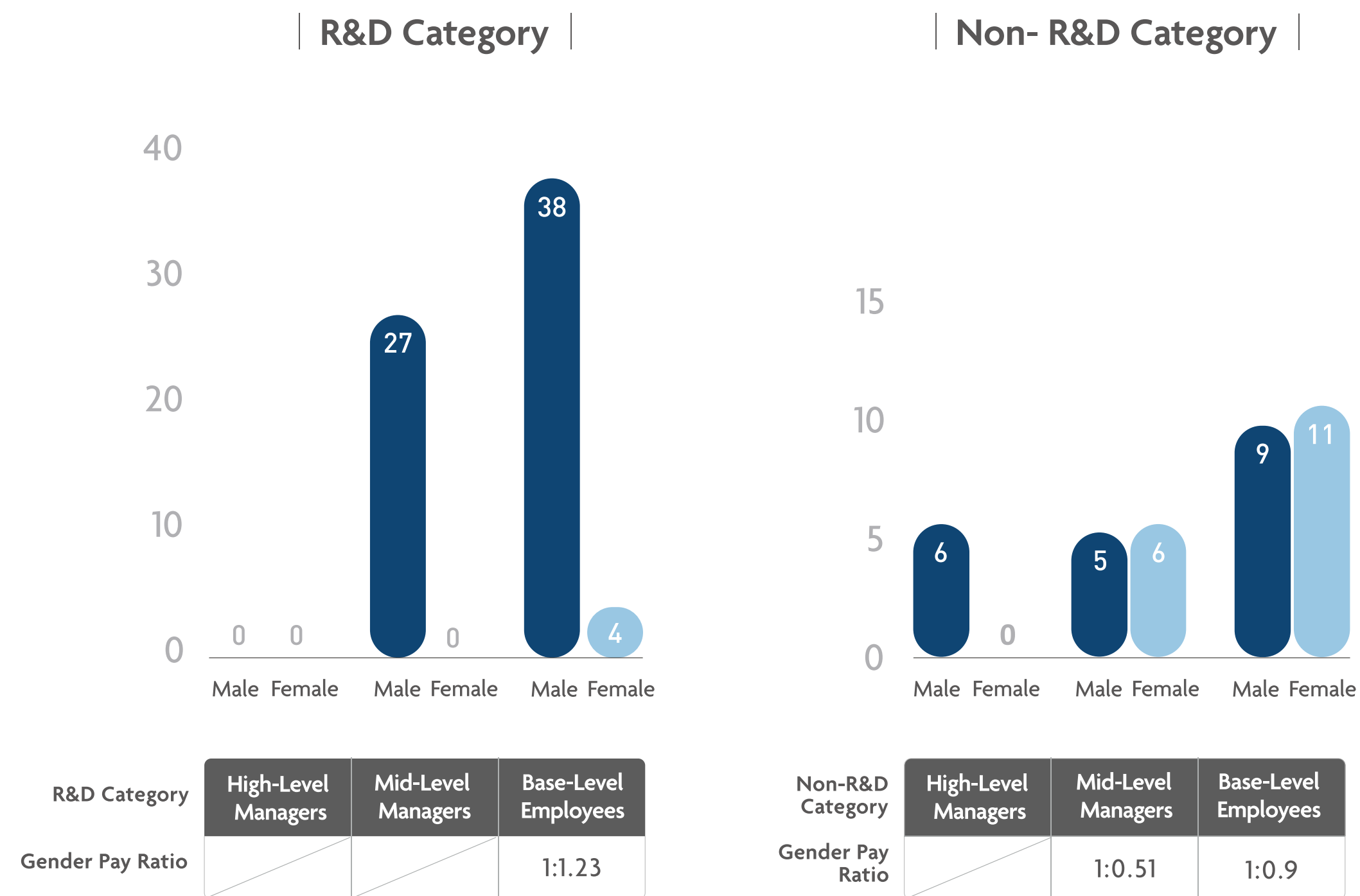
Total salary of non-managerial, full-time employees	2020	2021	2022	2022 growth rate
Employee benefit fees including salary, Labor Insurance and National Health Insurance fees, pension fees, and RSU (Unit: NTD100 million)	2.88	3.44	5.22	52%
Total salary (unit: NTD100 million)	1.84	2.34	4.13	76%
Average salary (unit: NTD10,000)	236.1	283.1	458.8	62%
Median salary (unit: NTD10,000)	198	245.4	422.0	72%

Gender Pay Ratio

ASPEED Technology’s employee recruitment and overall compensation system are based on individual performance and professional skills. The Company adheres to work regulations and hiring policies that call for diversity and tolerance as well as the provision of equal opportunities for all genders. In comparison of R&D and non-R&D job types, the gender pay ratios of ASPEED Technology in 2022 showed no significant difference in the ratio of male to female pay for the same job type. Taking entry level employees as an example, the pay ratio between men and women in non-R&D category has been around 1:0.9 for three consecutive years, while the pay ratio between men and women in R&D category varies from year to year. For example, in 2022, the pay ratio between men and women in R&D category was 1:1.23, showing that the salary is not significantly related to gender but more to individual performance.

Welfare Items (unit: NTD)	2020	2021	2022
Salary (including RSU)	260,649,643	313,000,732	482,563,886
Insurance premium (labor insurance/health insurance/group insurance)	11,215,125	13,783,174	15,686,363
Labor pension 6%	5,777,478	6,447,041	8,138,192
Community subsidies	10,019,879	11,070,700	15,375,342
Total welfares	287,662,125	344,301,647	521,763,783





Key locations of operation	Taipei City and Hsinchu City
High-Level Managers	President, Chief Operation Officer, Vice President, Assistant Vice President
Mid-Level Managers	Senior Manager, Manager
Base-Level Employees	Assistant Manager, Department Head, Senior Engineer, Engineer, Assistant Engineer, Senior Executive, Executive

Percentage of Employees Undergoing Performance Reviews, 2020 - 2022			
	2020	2021	2022
Number of Employees	89	96	106
Employees Subject to Review	77	92	104
Actual Percentage That Underwent Review	100%	100%	100%

\* Employees subject to review are employees who reported to the Company before October 31st of the previous year

\* Pay ratios are calculated to compare the difference in income between men and women for the same work. For employees who reported to the Company between 2020 and 2022, pay in their first year was prorated to a full year’s income (total pay/number of months \* 15 = annual pay)



Birth Incentives/Parental Leave

In accordance with the Labor Standards Act, ASPEED Technology’s “Employee Attendance and Leave Policy” state that the Company shall not terminate an employee’s labor contract when the employee is on parental leave. Female workers qualify for a combined total of 56 days of maternity leave before and after childbirth. An employee may take five days paid leave during a spouse’s pregnancy or within 15 days before, after, or on the day of birth/miscarriage. The Staff Welfare Committee provides birth gifts to congratulate the addition of a new member to an employee’s family. Employees who need to provide child care can apply for parental leave. Since the Company offers flexible work hours, employees can arrange their schedules in a way that helps them to care for their families. In 2022, no employees applied for parental leave.

Comprehensive Employee Insurance Plan

Besides enrolling employees in the government-mandated Labor Insurance and National Health Insurance, the Company also provides employees with comprehensive group insurance that covers life, major illness, accident and injury, medical, cancer, and disaster. When employees face an unexpected major illness or accident, they can receive comprehensive medical care, financial support, and economic protection. In 2021, the Company added vaccine insurance to the group insurance plan, so that employees and their families could receive comprehensive health care and financial support in the event of an unpredicted, serious sickness or death. For employees who travel overseas for business, we offer high coverage travel insurance to provide even greater guarantees.

Retirement Planning

ASPEED Technology established the “Regulations for Employee Retirement” in accordance with the Labor Standards Act and the Labor Pension Act. Following enactment of the Labor Pension Act on July 1st, 2005, all employees adopted the new retirement system. For employees who use the new retirement system, every month the Company deposits 6% of their salary into their personal retirement account at the Bureau of Labor Insurance. We also assist in voluntary submission in accordance with the wishes of each employee.

Implementation of Other Welfare Measures

ASPEED Technology offers compensation that is competitive on the open market while providing comprehensive benefits and care. The Company established the Employee Welfare Committee which is made up of representatives put forward by each department. The committee is responsible for overall planning and implementation of various welfare measures and employee care initiatives. Besides legally required welfare measures, the Company provides an excellent work environment and conditions and seeks to balance employees’ physical and mental health, with the goal of helping employees to achieve a positive work-life balance.

Employee Welfare Fees (Unit: NTD10,000)

Item	2020	2021	2022
Amount of Employee Welfare Expenditures	1,002.1	1,107.1	1,537.5
Proportion of Employee Welfare Expenditures	1.50%	1.53%	1.62%
Average Welfare Fees Per Person	11.5	11.5	14.5

- \*Employee welfare expenditures consist of employee welfare fees minus salaries, Labor Insurance and National Health Insurance fees, and pension fees.
- \*Proportion of employee welfare expenditures refers to the percentage of employee welfare expenditures in our business expenses.
- \*Average welfare fees per person consist of employee welfare expenditures in 2022 divided by the average number of employees per month.





Annual Employee Welfare Items

Category	Item	Content
Activities	<b>Domestic and international travel</b> <b>Family day activities</b> <b>Departmental activities</b>	<ul style="list-style-type: none"><li>• Due to the pandemic, in 2022 the Company offered flexible travel subsidy policies. Some alternatives included distributing department store or travel agency gift certificates, or converting the subsidy amount to increase the value of health examinations. These substitute measures meant that employees and their families could still enjoy this benefit. If there are remaining travel grants for the past three years, they will be deferred to 2023 for use by employees.</li><li>• For the annual family day, employees and their families are invited to join in free activities.</li><li>• The Company provided quarterly subsidies of NTD800 per employee for departmental activities, which could be used for departmental communication, cohesion development and other activities.</li></ul>
	<b>Wednesday afternoon tea time</b>	<ul style="list-style-type: none"><li>• As a small pleasure for employees, every Wednesday afternoon we provide tea and treats that help to build camaraderie.</li></ul>
	<b>Holiday activities</b>	<ul style="list-style-type: none"><li>• End-of-year activities and banquet, Mid-Autumn Festival evening BBQ, and Company anniversary commemorative activities offer more chances for interaction between families.</li></ul>
Holidays	<b>Flexible holidays</b> <b>Flexible work hours</b>	<ul style="list-style-type: none"><li>• We go beyond requirements of the “Labor Standards Act” by immediately offering new employees seven days of national holidays and annual leave, so our workers have more chances for vacation.</li><li>• Monthly accumulated flexible rest hours can be extended up to six months and are deducted on a ‘first-in, first-out’ basis.</li><li>• In response to the COVID-19 pandemic, the Company offered fully paid vaccine leave and disease prevention family care leave. Based on family need, employees could also apply for short-term remote work privileges.</li></ul>
Health	<b>Annual health examinations</b>	<ul style="list-style-type: none"><li>• We offer each employee one comprehensive health examination per year at a medical institution. For those who are 40 years old or older, the amount of health examination is increased to NTD8,000, and for those who are 50 years old or older, painless gastroscopy is also provided.</li><li>• Each year, R&amp;D personnel who use unleaded welding chemicals undergo lead toxin health exams to ensure that there is no impact on their health.</li></ul>
Arts and Culture	<b>Arts and culture, celebrity lecture hall</b>	<ul style="list-style-type: none"><li>• We hold a variety of arts, culture, and celebrity lecture hall events to increase employees’ soft knowledge of topics from outside the workplace.</li></ul>
Subsidies	<b>Activities, customs, education, food and beverage, and various types of congratulatory gifts</b>	<ul style="list-style-type: none"><li>• Domestic and foreign travel subsidies, wedding and birth congratulations, sympathy payments for injury/illness/hospitalization, funeral payments, birthday gift certificates, and language study subsidies.</li></ul>
Lifestyle	<b>Discounts at designated shops</b>	<ul style="list-style-type: none"><li>• The Staff Welfare Committee signed agreements for special discounts with more than 200 shops, which are available to employees who show their Company ID. The committee releases information on these discounts on the Company’s welfare website.</li></ul>
Other	<b>Seniority based on past experience</b>	<ul style="list-style-type: none"><li>• Employees fill out a staff information form that includes their experience. Their direct supervisor considers their experience in related industries and professional level in determining who should be designated for promotion.</li><li>• Past experience is weighted at 30%. Up to three years can be included as time of service when calculating vacation allowances.</li></ul>



## Compliance with International Human Rights Norms

ASPEED Technology scrupulously abides by the laws and regulations of each location it operates while following the principles of international human rights conventions, including upholding employees' freedom to form associations and opposing any behaviors that infringe on or violate people's rights. In employment, the Company opposes any form of discrimination. ASPEED Technology's work regulations explicitly state the policy of diversity and inclusion, which incorporates the principles of diversity, equality, and inclusivity: hiring managers shall not discriminate against candidates on the basis of their race, class, language, views, religion, political party, place of ancestry, gender, marital status, appearance, facial features, disability, astrological sign, blood type, or past participation in a union. In the workplace, employees shall not be discriminated against on the basis of race, age, gender, sexual orientation, disability, maternity, politics, or religion. The objective is to foster a workplace environment that is equal, diverse and inclusive. All employees sign a labor agreement in accordance with the law, and work regulations stipulate that employees' freedom to assemble or form associations shall not be infringed upon, child labor shall not be used, and there shall be no forced labor. These rules protect workers' basic human rights. If a special circumstance arises in Taiwan where the Company must terminate a labor agreement with an employee, the Company prepares and pays severance in accordance with the Labor Standards Act. In 2022, the Company did not have any incidents of employing child laborers, forced labor and violation of human rights.

## Equal Rights for Both Genders

In order to provide an equal working environment for all employees free from sexual harassment and take appropriate preventive measures, ASPEED has formulated the "Gender Equality Implementation Measures" internally, and provides employee complaint channels. If complaints are received, they will be immediately investigated, and the investigation process should protect the privacy and other personal rights of the parties involved. In order to effectively prevent the occurrence of sexual harassment and maintain a gender equality environment, it is expected that in 2023, the "Gender Equality Implementation Measures" will be further revised to improve the formulation of regulations on sexual harassment and gender equality. With the whistle-blower mechanism, the reporting and complaint channels will be handled by a third-party

impartial unit. Once a complaint is received, a sexual harassment and complaint handling committee will be established to provide employees with more complete protection. In 2022, there were no violations of human rights related to employee rights, gender equality or sexual harassment.

## Employee Care and Communications Channels

Employees are the most valuable resource of ASPEED Technology. We have a high-quality labor force that we provide with comprehensive employee welfare benefits. We care for our employees and their households while supporting their lifestyles. By conscientiously heeding employee opinions, we use communication as a bridge for connecting employees' work with the Company vision. Employees build trust with one another, which encourages joint hard work and continued growth. ASPEED Technology's organizational framework has a linear design that supports internal free flow of opinions and open communications channels. Employees share their opinions at the end of each year in Company satisfaction surveys as well as labor management meetings, digital mailboxes, and through the Employee Welfare Committee. These channels make it easy for employees to share their thoughts with the Company, so that the responsible Company unit can offer a timely response, fostering positive interaction and trust between labor and management. Creating a seamless communication culture and an active, enlightened work environment enables us to better guarantee workers' rights and interests. In order to provide employees with a smooth and confidential communications channel and to improve corporate governance, the Company has started planning a whistleblower reporting system in 2022, which will be supervised by a third party and independent directors to create a transparent and open working environment, and the system is expected to be completed in the first half of 2023. Regarding labor-management meetings, labor representatives serve a four-year term and are re-elected every four years through employee voting at labor-management meetings. These meetings are held quarterly to facilitate two-way communication between labor and management in accordance with regulations. Main agenda items include an explanation of operational conditions from the previous quarter, a discussion of the current quarter's Company activities, and other ad hoc motions. Employees are also welcome to submit anonymous surveys before the meeting for managers of related departments to respond to during the meeting. In the labor-management meetings held in 2022, all issues raised by employees were addressed by department managers or administrative units.



Channel	Content	Frequency
Digital mailbox	Any opinions or topics relating to the Company	Ad Hoc
Labor-management meetings	Labor-management relations, labor conditions	Quarterly
Employee Welfare Committee	Employee welfare topics	Quarterly
Manager discussions	Work performance, goals and plans, career development	Annual
Employee satisfaction survey	Corporate environment, administrative affairs support, various welfare activities, and open questions about anything else relating to the Company	Annual
Annual prospect meeting	Company performance and communication of coming year goals employees feedbacks	Annual

### Management of Occupational Safety and Health

To prevent occupational disasters while protecting employees’ safety and health, ASPEED Technology holds regular training courses in accordance with the “Occupational Safety and Health Guidelines” to carry out safety and health protection. Various internal measures are in place to formulate emergency response procedures for various emergencies through the concept of risk management. The Company has a Class 1 manager of occupational safety and health who regularly reviews and promotes related issues and environmental protection topics. The occupational safety and health management system covers 100% of employees. In 2022, the Company had 14 statutory non-employees, whose main tasks included environmental cleaning, administrative work, short-term appointments for product import and export operations, etc. The Company adhered to the occupational safety and health policies of their employer. Since ASPEED Technology is an IC design company that does not directly operate a factory, in daily operations the Company does not handle substances or chemicals that are hazardous to health. The laboratory only conducts testing simulations, and the occupational safety and health manager primarily focuses on identifying hazard sources in the office environment. The only chemical type employees encounter is unleaded welding chemicals used by R&D personnel. In accordance with regulations, employees who handle these chemicals must wear an N95 mask and the environment must be well ventilated. Lead toxin health exams are conducted to ensure that there is no health impact. In order to

protect the Company’s internal environment and employee health and safety management, the Company will increase the frequency of office area cleaning and disinfection and adjust various countermeasures on a rolling basis depending on the actual situation or the outbreak of epidemics and infectious diseases. In 2022, in response to the changes in the pandemic, the Company distributed masks, alcohol, and other materials to keep the environment clean and disinfected. For the group insurance plan, the Company added vaccine insurance. The pandemic emergency response task force, formed under the risk management unit of the sustainable management implementation task force, regularly holds meetings and communicates with employees. The task force also makes disease prevention announcements and awareness messages, in order to help maintain a safe work environment for employees.

The Company adopts appropriate occupational safety and health measures while using risk management concepts when formulating emergency response procedures. By attending occupational safety and health education/training as well as emergency response drills, employees understand response procedures to report and handle emergencies.

Occupational disaster education and training includes the following:

- **One labor safety and health lecture for new employees**
- **One labor safety and health lecture every three years for employees**
- **Two fire drill and training sessions every year (together with the TFC One building drill)**

According to the occupational disaster disability standards of the Occupational Safety and Health Administration, Ministry of Labor, excluding traffic accidents outside the Company, in 2022 the employees and statutory non-employees of ASPEED Technology did not have any incidents of employee injury or illness. There were also not any lawsuits related to employee health or safety violations.

### Minimum Notice Period for Operational Changes

When a major operational change or related measure that will have an impact on employees’ rights or interests is set to occur, the Company must first discuss the matter with employees in a labor-management meeting and notify affected employees in advance, in accordance with the law. The Company also provides related complementary measures, such as helping transfer employees to other departments or supporting government aid applications. In accordance with the Labor Standards Act, the Company gives employees at least 10 to 30 days advance notice based on the employees’ years of service. In 2022, there were no labor disputes or dismissals.



Every year, ASPEED Technology contributes towards social participation, so that we can give back to the community. Since 2013, social participation has mainly focused on “education” as a starting point. In the past, education resources were targeted at disadvantaged areas in rural areas, including the infusion of hardware resources such as school repairs and equipment donations, as well as software resources such as book donations and teacher training. In recent years, in addition to fulfilling its corporate social responsibility, the Company also discussed how to integrate public welfare activities with the core business of ASPEED Technology, and gradually set “Assist higher education and strengthen the cultivation of young students” as our medium and long-term corporate social responsibility goals. We cooperate with first-rate universities to keep top professors in Taiwan and encourages students to focus on academic research. We aim to fulfill our role as a corporate advisor that provides direction for students engaged in life planning. In 2022, besides providing manpower and resources, the Company contributed close to NTD13.7982 million towards social causes, and in the future, we will continue working to fulfill our social objectives.

Infusing Resources into Rural Education

In ten years since 2013, ASPEED has invested in hardware and software resources for disadvantaged rural areas. In 2022, we continued to cooperate with Global Views Educational Foundation to organize the “Sow the Seeds of Reading to Give Children a Great Future” activity for the eighth consecutive year by donating monthly periodicals to the elementary schools to junior high schools in the Taitung area. This project has received enthusiastic feedback from students every year. By 2022, we have made donations to a total of 17 rural areas and 84 schools in the Taitung area, with more than 17,000 copies of periodicals benefiting 20,000 students. In addition to books and magazines donation, in response to the high turnover of teachers in remote areas, ASPEED Technology is cooperating with Education Support for Taiwan to donate funds in implementing the “Support Program for Teachers without Teaching Certificate”, with an aim to nurturing non-certified substitute teachers in resource-poor areas, alleviating the plight of non-certified teachers in Taitung, and providing students in remote areas with stable and quality teaching. We believe that education is the foundation of everything. In the future, ASPEED Technology will continue to invest in rural education to shorten the education gap between urban and rural areas.



\*In 2022, two workshops on sustainable talents were held.



Strengthening the Cultivation of Young Students

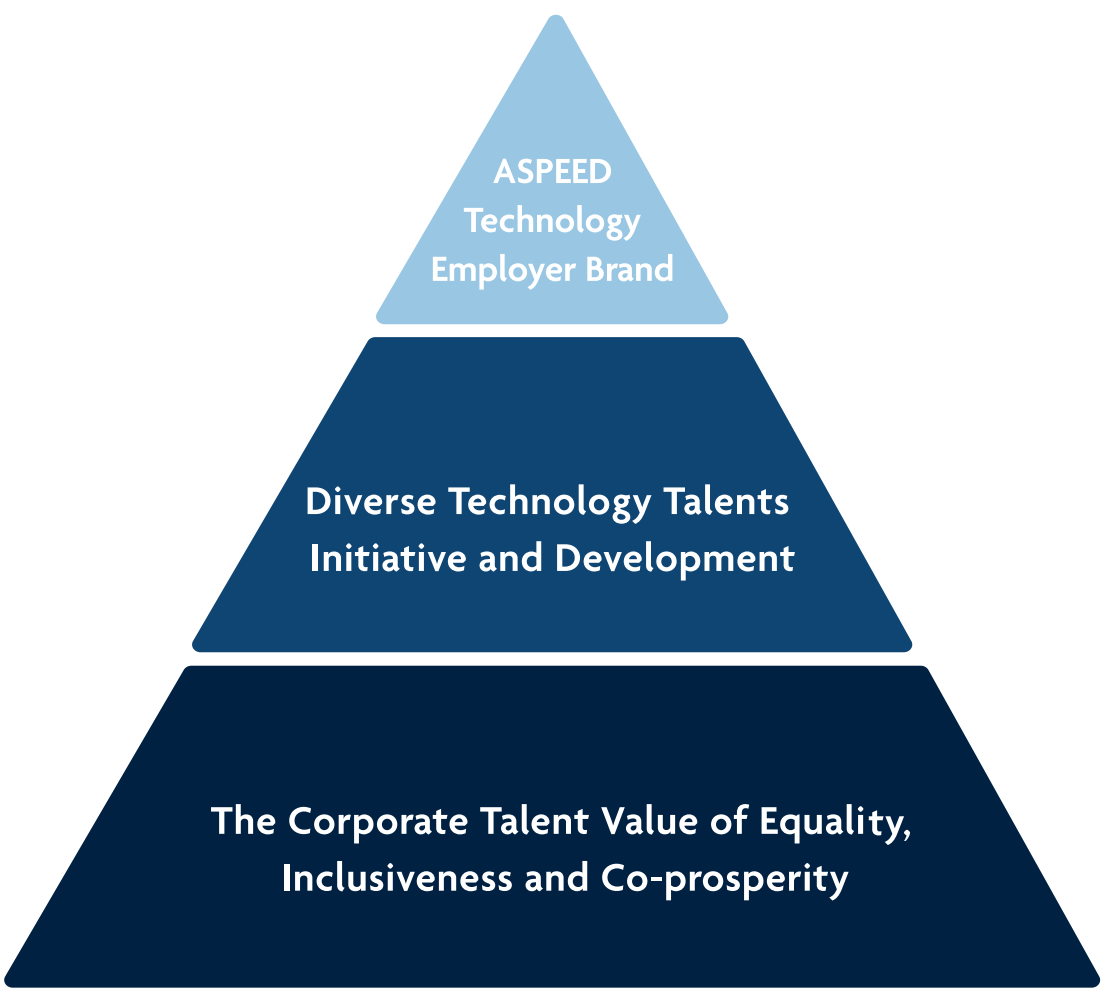
In 2020, ASPEED Technology set the mid-to-long-term social corporate responsible target as “Assist higher education and strengthen the cultivation of young students.” ASPEED Technology selected the nearby National Yang Ming Chiao Tung University and National Tsing Hua University gradually invest educational resources including:

- 1. ASPEED Technology’s “Junior Chair Professor” Sponsorship Program:** The program is contributing approximately NTD11.52 million over four years to sponsor junior chair professors at National Yang Ming Chiao Tung University and National Tsing Hua University. The program recruits talented individuals and provides monthly subsidies, which supports the local higher education environment by helping schools to keep talented teachers in Taiwan. When connections exist between the young professors’ R&D plans and ASPEED Technology’s business, the Company promotes further interaction. In 2022, this program sponsored 6 professors from 2 universities, who taught at the Department of Chemistry, Institute of Service Science and Institute of Electronics Engineering at National Tsing Hua University, as well as the School of Law, Department of Electronics and Electrical Engineering, and Department of Management Science at National Yang Ming Chiao Tung University. Their R&D areas include electronics and electrical engineering, chemistry, marketing and legal patents.
- 2. National Tsing Hua University Sunrise Scholarship Program:** The program provides financial support to underprivileged students. Over the course of four years the Company is contributing NTD1.6 million, providing aid to a total of four underprivileged students in 2022 to let them study without facing financial concerns.
- 3. Academic Exchange:** We offer a series of speeches, lectures, and course planning for both schools. One aim of the program is to promote our brand as an employer among young adults who will soon enter the workforce, in order to support future recruitment. In this way the program supports the Company’s internal core talent development program and talent cultivation.

Sustainable Influence Program for Diverse Technology Talents

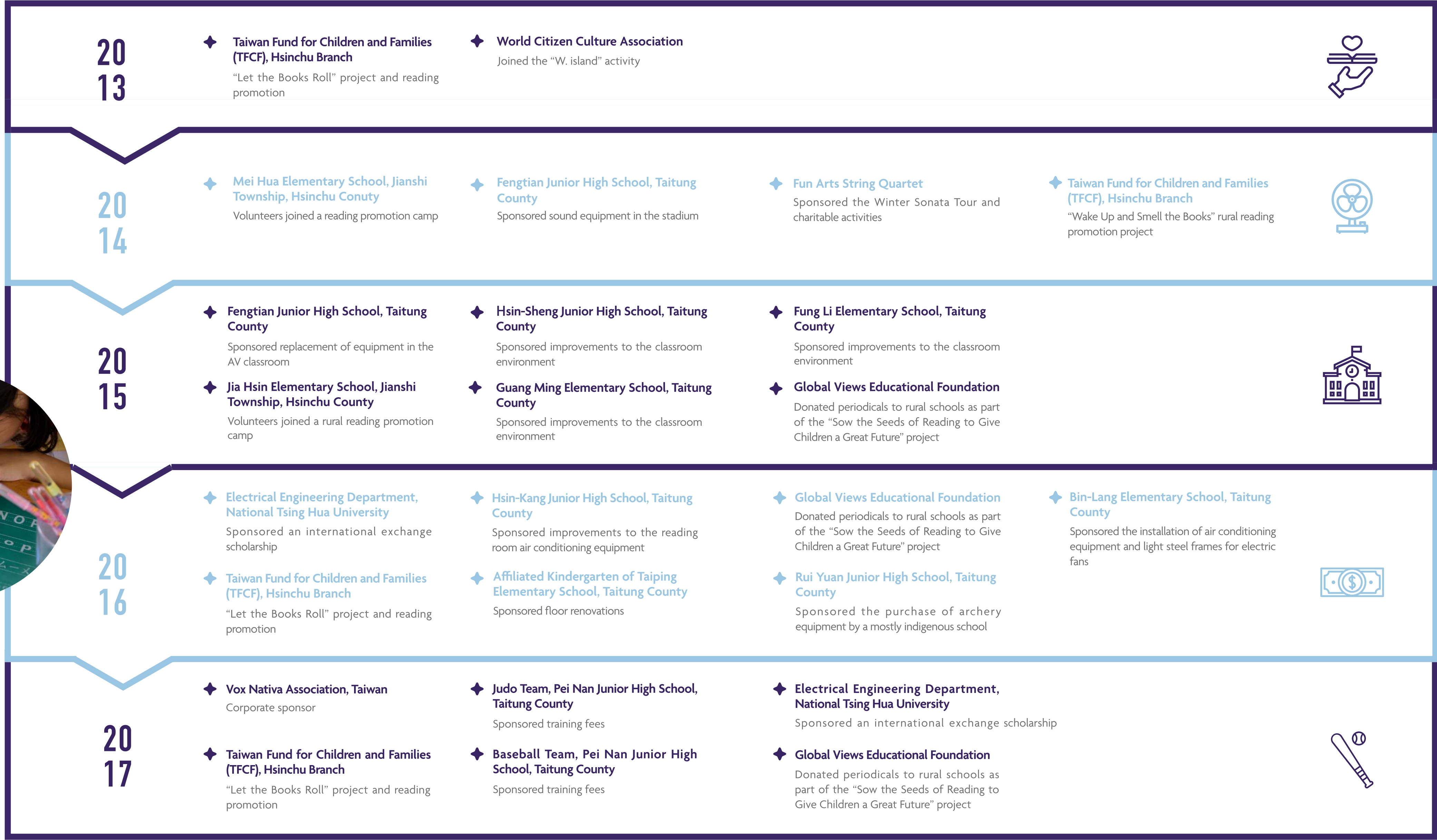
Talent is the critical resource for the development of semiconductor industry. ASPEED Technology recognizes that talent development is a critical part of ESG. Therefore, actively recruit technology talent is the key point of how ASPEED Technology maintain market dominating position. Considering the current gender imbalance in the semiconductor technology talent market, notably that the pool of women in technology is insufficient,

ASPEED Technology formulated a Sustainable Influence Program for Diverse Technology Talents in 2022. Through face-to-face discussions with stakeholders, the ESG value, future pathway and the resources that invest in sustainability, diversity, and inclusion, as well as the development of women in technology of ASPEED Technology will be linked to industrial topics. In 2022, two workshops on sustainable talents were held, at which a total of 8 volunteers, who were students from the College of Education at National Tsing Hua University and employees at ASPEED Technology, showing interest in working on this project were invited to join the discussion and work out the “Women in Technology and Tsinghua STEAM School Education Development Project”. Projected investment of funds and volunteer resources will commence in 2023. By leveraging the core technological expertise of ASPEED Technology and the sharing of volunteer engineers, together with the academic resources of the National Tsing Hua University’s College of Education, we aim to launch relevant impactful activities targeting high school females. We hope this will inspire potential female talents to develop an interest and ability in the field of technology and the project will be continued and expanded to more schools in the future. Furthermore, ASPEED Technology will use the Social Return on Investment (SROI) to plan, evaluate, record the impact of social participation and quantify the impact, as a performance indicator for future social participation.

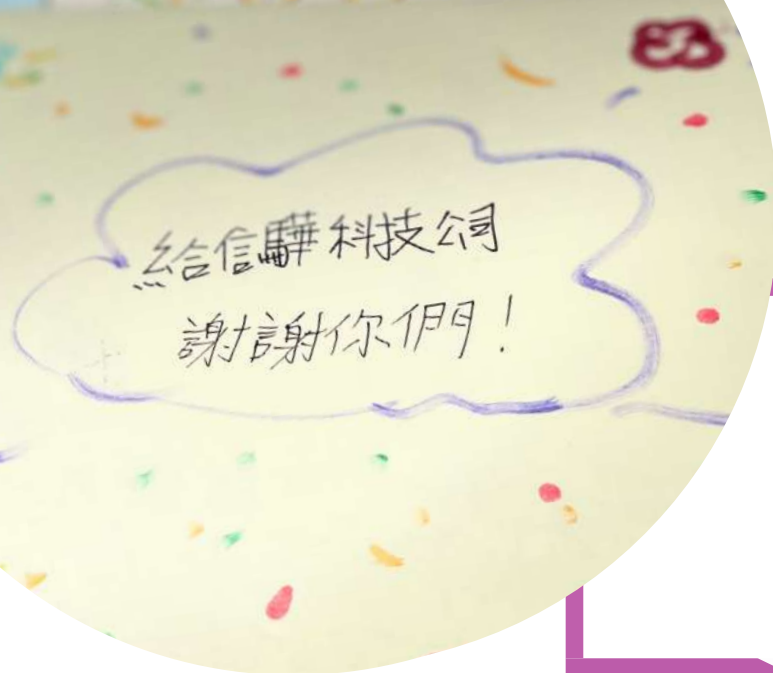




Timeline of Social Commitments







2018	<ul style="list-style-type: none"><li>◆ <b>Canoe Team of the Taitung Sports Association</b> Sponsored attendance at the 2018 Taiwan International Dragon Boat Championships</li></ul>	<ul style="list-style-type: none"><li>◆ <b>Electrical Engineering Department, National Tsing Hua University</b> Sponsored an international exchange scholarship</li></ul>	<ul style="list-style-type: none"><li>◆ <b>Global Views Educational Foundation</b> Donated periodicals to rural schools as part of the “Sow the Seeds of Reading to Give Children a Great Future” project</li></ul>		
2019	<ul style="list-style-type: none"><li>◆ <b>Cooperated with UBS to commission artworks for a charity project</b> Charity donation to the The Giver Charity, New Taipei</li></ul>	<ul style="list-style-type: none"><li>◆ <b>National Tsing Hua University and a 360-degree image association</b> Sponsored attendance at an international 360-degree photo competition by professors and students</li></ul>	<ul style="list-style-type: none"><li>◆ <b>Global Views Educational Foundation</b> Donated periodicals to rural schools as part of the “Sow the Seeds of Reading to Give Children a Great Future” project</li></ul>		
2020	<ul style="list-style-type: none"><li>◆ <b>National Yang Ming Chiao Tung University</b> Sponsored the Junior Chair Professor sponsorship plan</li></ul>	<ul style="list-style-type: none"><li>◆ <b>National Tsing Hua University</b> Sponsored the Sunrise Scholarship program</li></ul>	<ul style="list-style-type: none"><li>◆ <b>Cooperated with UBS to commission artworks for a charity project</b> Charity donation to the The Giver Charity, New Taipei</li></ul>	<ul style="list-style-type: none"><li>◆ <b>Global Views Educational Foundation</b> Donated periodicals to rural schools as part of the “Sow the Seeds of Reading to Give Children a Great Future” project</li></ul>	
2021	<ul style="list-style-type: none"><li>◆ <b>National Yang Ming Chiao Tung University</b> Junior Chair Professor Sponsorship Program</li><li>◆ <b>Fugang Elementary School, Taitung</b> Sponsorship of soccer boots, uniforms, and equipment for the soccer team</li></ul>	<ul style="list-style-type: none"><li>◆ <b>National Tsing Hua University</b> Sunrise Scholarship Program</li><li>◆ <b>Global Views Educational Foundation</b> “Sow the Seeds of Reading to Give Children a Great Future” activity, which donates magazines and other periodicals to rural areas</li></ul>	<ul style="list-style-type: none"><li>◆ <b>National Tsing Hua University</b> Junior Chair Professor Sponsorship Program</li><li>◆ <b>Lanyu Township, Taitung</b> Sponsorship of sporting clothes to elementary school children in Lanyu, Taitung</li></ul>		
2022	<ul style="list-style-type: none"><li>◆ <b>Global Views Educational Foundation</b> Donated periodicals to rural schools as part of the “Sow the Seeds of Reading to Give Children a Great Future” project</li><li>◆ <b>National Yang Ming Chiao Tung University</b> Sponsored the Junior Chair Professor sponsorship plan</li></ul>	<ul style="list-style-type: none"><li>◆ <b>National Tsing Hua University</b> Sponsored the Sunrise Scholarship program</li><li>◆ <b>National Tsing Hua University</b> Sponsored the Junior Chair Professor sponsorship plan</li></ul>	<ul style="list-style-type: none"><li>◆ <b>Education Support for Taiwan</b> “Support Program for Teachers without Teaching Certificate”</li><li>◆ <b>National Yang Ming Chiao Tung University</b> Fund donation for Chiao Tung University’s Arts and Culture Center</li></ul>		





# 07

## Green Operations

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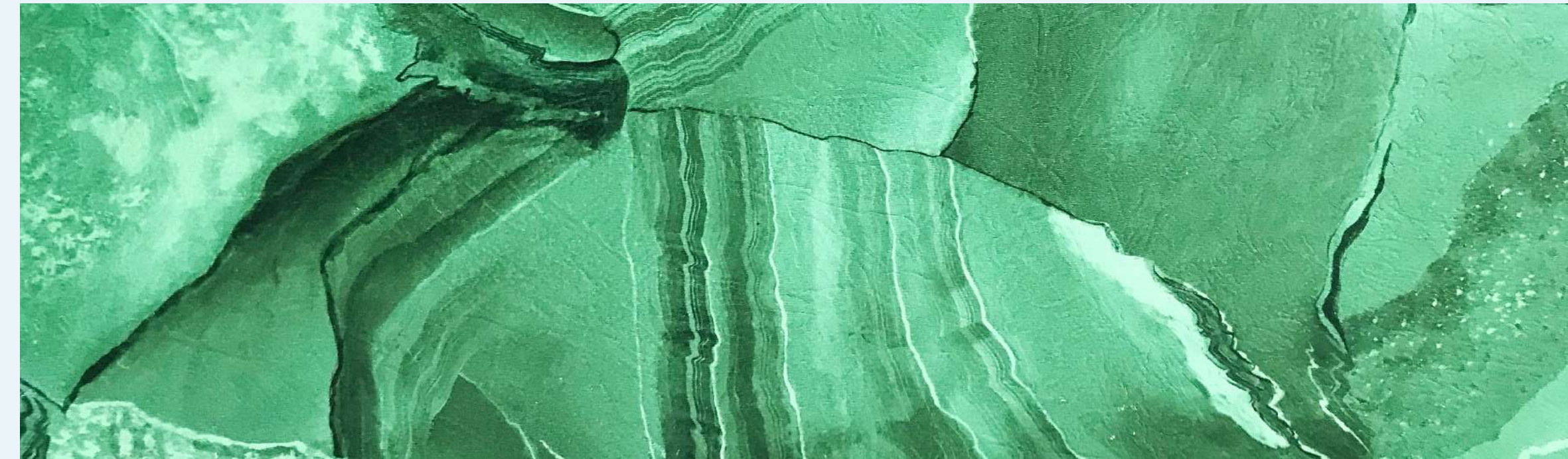


# Viewpoint

## Carbon Management and Low Carbon Action

In recent years, the promotion of net zero across the globe has gradually become clearer. In June 2021, the National Development Council released the “Taiwan 2050 Net Zero Path Plan”, the new draft of the “Carbon Border Adjustment Mechanism (CBAM)” approved by the European Parliament to include Scope 2 emissions into regulatory control, and the proposal of the US version of the “Clean Competition Act (CCA)” on carbon tariffs. The net-zero targets announced by various countries represent a growing trend in which global businesses are incorporating green and low-carbon initiatives as important operational indicators, and it is necessary to accurately track progress in reducing carbon emissions.

ASPEED Technology is fabless IC design company. As a key upstream player in the semiconductor industry chain with important customers worldwide, we focus on proactively responding to the net zero trend from the perspective of responsible suppliers and striving to achieve the net zero goal for ourselves and our customers together. Therefore, ASPEED Technology has started to conduct GHG inspection and carbon reduction planning since 2022 to fully understand our own emissions status so that we can formulate a clear carbon reduction path and net zero goal. Within ASPEED, in addition to incorporating the business secrets registration system into green innovation-related projects, including green design, green

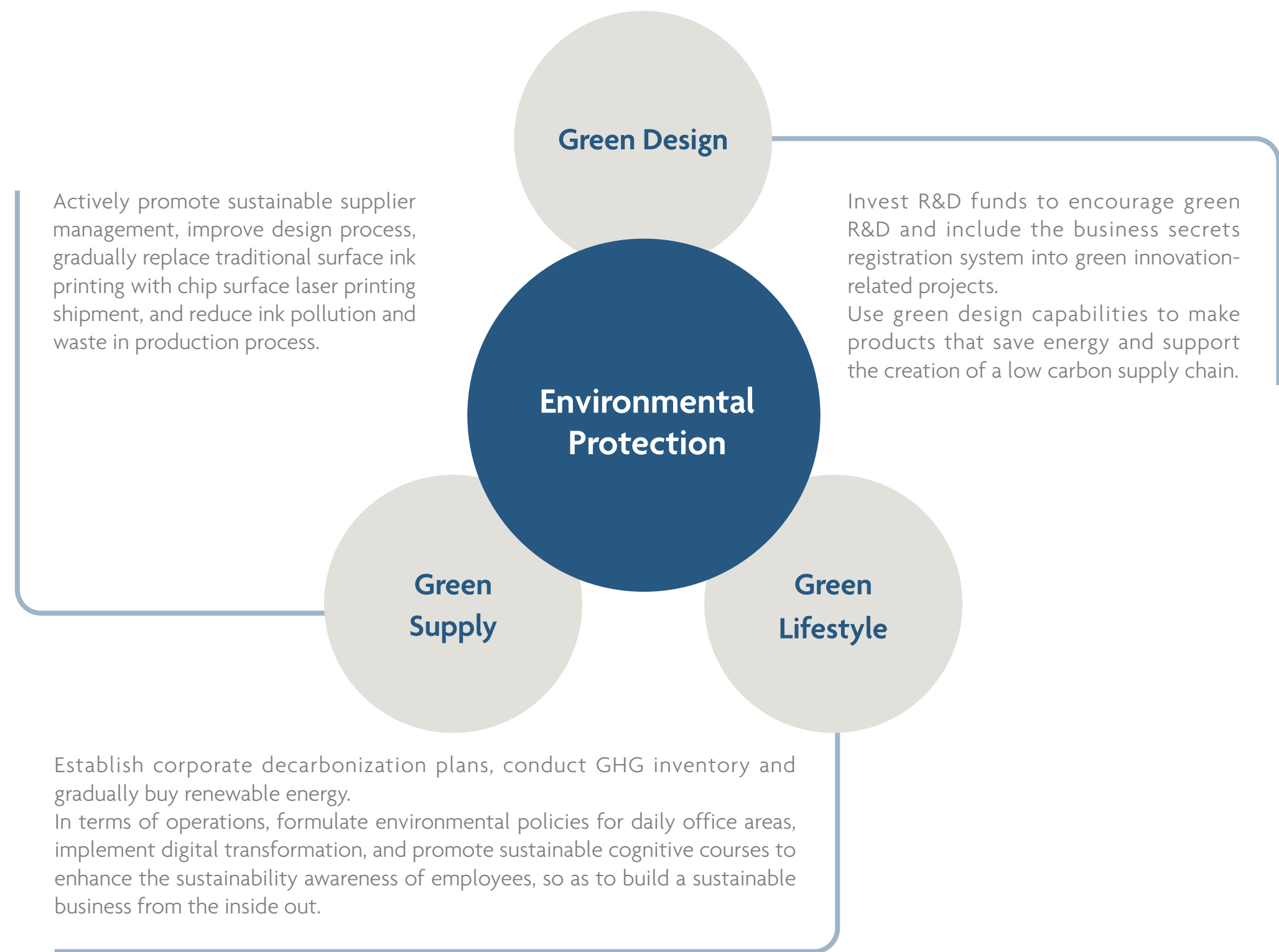


manufacturing, etc. in the future, we will also consider the possibility of linking the remuneration of senior management with sustainable performance indicators, hoping to develop a green operation from the enterprise to support ASPEED’s next low-carbon action. This year, ASPEED Technology has determined its carbon reduction plans and strategies. Its short-term targets include the purchase of renewable energy and the promotion and application of SBTi scientific basis reduction targets. In the medium and long term, the Company will further expand to Scope 3 GHG inventory, product carbon footprint and digital carbon inventory. We will step towards the goal and review rolling adjustments every year based on actual conditions and attention to changes in international regulations. In addition, as an important component of the global data center and customer application, ASPEED Technology’s chips can reduce chip energy consumption through our own R&D strength, which will benefit the decarbonization of the entire industry’s upstream and downstream supply chain. In the future, we will focus on how to continuously improve the energy consumption of our core products and to develop more revolutionary innovative applications to help reduce carbon emissions during our operations.





As a fabless IC design company, ASPEED Technology believes that the greatest contribution we can make to environmental protection is to use our core capabilities of IC R&D and design to make products that use less energy and produce less carbon. In this way, we can contribute towards a low carbon semiconductor supply chain. At the same time, we integrate green concepts into our supplier management, so that we can minimize the relatively high environmental impact of backend manufacturing. Internally, we focus on strengthening energy saving and carbon reduction awareness among employees. We actively respond to environmental and emissions topics, and we adopt third-party GHG inspections and certification as part of our focus on green design, green supply, and green lifestyle. In this way we can contribute to making the environment better.





Environmental Management

Since passing ISO 14001 environmental management systems certification in 2017, each year ASPEED Technology has systematically managed the Company’s internal environmental protection system. The Company built a routine environmental management system and established procedures for making improvements. In addition, the Corporate Sustainability Committee meets biannually. The committee examines environmental protection trends and regulations, and fully implements the Company’s environmental management policies, in order to meet shareholders’ expectations towards the Company. As a fabless IC design Company, internal environmental management primarily focuses on general water and electricity use, waste disposal and management, and green product specifications. Externally, the Company focuses on expansion of sustainable supply chain management. ASPEED Technology makes every effort to join suppliers in implementing environmental management.

Environmental Policies

Adhere to environmental protection laws and regulations

Raise environmental awareness

Foster earnest, full participation

Prevent environmental pollution

Continue to improve the environment

2022 Achievements

100% Legal Compliance: Air, water, waste, energy management, noise, RoHS, REACH, HF.

Zero violations of environmental safety regulations.

Continue to implement ISO 14001:2015 environmental management systems and establish related environmental management procedures.

Completed third-party GHG verification and certification ISO14064-1:2018.

Mid- and Long-Term Environmental Objectives

- Green Lifestyle:**
- Promote corporate decarbonization and buy renewable energy.
  - Take inventories of GHG emissions and gradually implement management measures and carbon reduction objectives.
  - Implement operation process with the introduction of digital transformation system to achieve low-carbon operation and improve office efficiency.
  - Save energy in the office; gradually replace lighting and water equipment.
  - Continue to plan and promote sustainability-related education and training to raise employees’ sustainability awareness.
  - Respond to domestic and international environmental protection and carbon reduction initiatives, actively participate in international competition.
- Green Supply:**
- Gradually adopt chip surface laser printing shipment to reduce pollution and waste generated during production.
  - Have suppliers sign ASPEED Technology’s corporate social responsibility pledge and increase the signing rate.
  - 100% of the minerals used by our suppliers shall be conflict-free.
  - Continuously increase local procurement of key raw materials.
- Green Design:**
- Make each generation of SoC more energy efficient.
  - Develop a simplified product design framework; consider design and manufacturing improvements from every angle in order to further reduce pollution during manufacturing.
  - Continuously invest in manpower and budget and strive for green innovation and R&D.
  - Green innovation R&D embedded in the business secret registration system.



Preserve Local Procurements

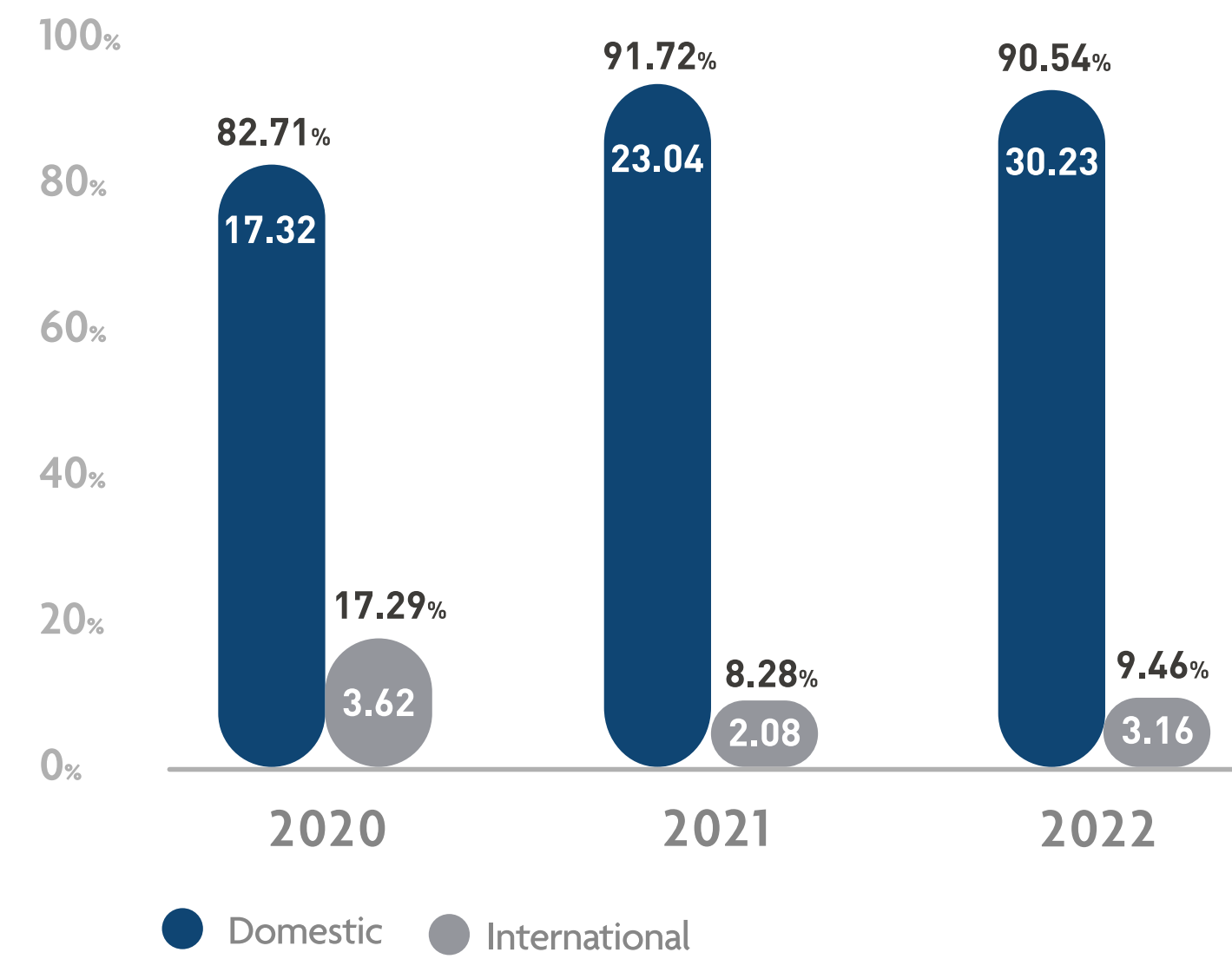
ASPEED Technology is committed to local procurements. We are working towards raising the ratio of goods procured in Taiwan year by year, which we hope can reduce the amount of carbon emissions that are produced during the transit of raw materials. Procurement quantity by value is illustrated in the following table:

Domestic Purchase Summary Table (Unit: NTD100 million)

Key locations of operation	Type	Purchase amount	Local purchase amount	Local procurement ratio
Taiwan	Raw Material Purchase	24.44	22.43	91.78%
	General	8.95	7.8	87.15%

List of domestic and foreign purchases in the past 3 years

(Unit: NTD100 million, percentage)





Since ASPEED Technology does not operate a factory, internal energy management focuses on three areas: everyday operations (water and electricity use), GHG inventory, and waste management. ASPEED Technology's Sustainability Committee reports sustainability execution results biannually to the Board of Directors. In response to environmental topics and reduction of GHG, we do not operate a factory, but we still hope to play a role in the global climate change in the semiconductor industry chain. In 2022, ASPEED Technology has completed the ISO14064-1:2018 third-party GHG inspection certification at the organizational level, aiming to have a clear understanding of ASPEED's GHG emissions, then gradually develop a carbon reduction plan, and respond to the requirements of customers and investors to set carbon reduction targets, thereby ultimately achieving the net zero carbon emission target within the scope of operations. In response to the carbon reduction plan, it is expected to be presented to the Board for approval in 2023, and the carbon management project will be implemented gradually through the purchase of renewable energy and the implementation of the SBTi SME near-term target planning and application.

Daily Operations

While ASPEED Technology does not operate a factory, the Company implements environmental policies suited to the IC design industry and scrupulously abides by related standards. Resources consumed in everyday operations primarily consist of water used by employees, electricity, and gasoline for transportation. The Company has a number of policies in place to save energy, reduce carbon, and cut emissions, with the goal of lowering the burden on the environment. In 2021, to respond to the COVID-19 pandemic and adjustments in work models, the Company adopted a policy of encouraging customers to use online tools for visits and regular meetings. An added bonus of this policy was to promote ASPEED Technology's teleconferencing equipment. With the promotion of energy and water conservation in 2022, the total annual electricity consumption decreased by 5.61% and the per capita electricity consumption decreased by 16.61% compared to last year despite the increase in staff, but the water consumption increased slightly. In the future, the Company will continue to reduce GHG emissions and save both water and electricity, as part of our efforts to protect the environment.

Currently, the focus of the operational resource management plan has been implemented. We are continuously promoting awareness of energy conservation and water saving among our employees:

- 🔗 All lights are replaced with LED tubes
- 🔗 Distributed control of lighting to reduce electricity use
- 🔗 During off-work hours (at a set time each evening) lighting is automatically turned off
- 🔗 Encourage employees to replace in person visits with virtual meetings

Year	Electricity		Water	
	Electricity usage (kwh)	Electricity usage intensity (kwh/million piece)	Water usage (metric tons)	Water usage intensity (metric tons/million piece)
2020	503,513	43,909.74	3,443	300.25
2021	577,291	43,438.00	2,644	198.95
2022	546,640	34,749.22	2,692	171.11

\* Average fuel consumption for gasoline vehicles for transportation was set at 10km/L

\* Each type of carbon emission coefficient is referred to the EPA GHG Emission Coefficient Table 6.0.4



(Unit: mg/L)		2020		2021		2022	
		All Regions	Areas with water pressure	All Regions	Areas with water pressure	All Regions	Areas with water pressure
Water withdrawal	Water from third parties (total volume)	3.443	0	2.572	0	2.692	0
Total water withdrawal	Surface water + ground water + sea water + water from third parties (total volume)	3.443	0	2.572	0	2.692	0
(Unit: mg/L)		2020		2021		2022	
		All Regions	Areas with water pressure	All Regions	Areas with water pressure	All Regions	Areas with water pressure
Water discharge	Water from third parties (total volume)	3.443	0	2.572	0	2.692	0
Total water discharge	Surface water + ground water + sea water + water from third parties (total volume)	3.443	0	2.572	0	2.692	0

### Waste Management

Since ASPEED Technology does not operate a factory, the Company mostly produces general non-hazardous waste as well as some industrial waste from operations. Day-to-day waste management therefore primarily involves implementing strict waste separation, recycling, and composting of kitchen waste. The goals are to achieve recycling and reuse while encouraging employees to do everything they can to reduce waste production. General non-hazardous waste is disposed of in the building where ASPEED Technology's headquarters is located; there is not a separate scale to measure weight. In the future, the Company will research the feasibility of weighing the waste before disposal. The industrial waste types that the Company produces are ICs, BGA IC substrates, PCBs, and other items used for R&D. Each year the Company commissions an operator with a Level A waste management license to dispose of these items in accordance with procedures that include making an inventory, taking photos, and recording weight. Throughout the process, the Company designates staff to provide oversight. In 2022, ASPEED Technology did not produce hazardous waste from operation.

### Total Volume of Industrial Waste (Unit: metric tons)

Year	2020	2021	2022
Weight (metric tons)	0.1393	0.0363	0.1134

\* 100% of the Company’s industrial waste is handled in accordance with relative procedures by an operator with a Level A waste management license.



Industrial Waste in 2022 (Unit: metric tons)

Waste Composition	2020			2021			2022		
	Waste Production	Waste Transfer	Waste Direct Handling	Waste Production	Waste Transfer	Waste Direct Handling	Waste Production	Waste Transfer	Waste Direct Handling
BGA	0.0025	0.0025	0	0	0	0	0	0	0
BGA (copper)	0.0212	0.0212	0	0	0	0	0	0	0
LCDMonitor	0.0653	0.0653	0	0	0	0	0.0385	0.0385	0
Notebook PC	0.0136	0.0136	0	0	0	0	0	0	0
IC (gold manufacturing process)	0	0	0	0.0344	0.0344	0	0.0001	0.0001	0
IC (copper manufacturing process)	0	0	0	0.0019	0.0019	0	0.0565	0.0565	0
PCB Plug-In Board	0	0	0	0	0	0	0.0125	0.0125	0
PCB Bare Board	0	0	0	0	0	0	0.0058	0.0058	0
Network Router	0	0	0	0	0	0	0	0	0
Uninterruptable Power System	0	0	0	0	0	0	0	0	0
Host Computer	0.0367	0.0367	0	0	0	0	0	0	0
Total Waste Volume	0.1393	0.1393	0	0.0363	0.0363	0	0.1134	0.1134	0



## GHG Inventory and Carbon Reduction Planning

As an IC design company that does not operate a factory, ASPEED Technology focuses on taking a responsible role in the semiconductor supply chain by proactively conducting GHG verification and carbon reduction planning. In 2021, we started the GHG inventory and obtained ISO14064-1:2018 external inspection certification in August 2022. In the future, we will continue to disclose GHG emissions in an open and transparent manner. 2021 was the Company's base year for GHG emissions. We check our emissions every year and formulate a net zero target and carbon reduction plan of ASPEED:



### Short term (2023-2025)

#### Net zero path planning and decarbonization strategy formulation

- In response to the SBTi SME Science-Based Targets initiative, setting net-zero targets and paths
- Formulation of corporate decarbonization solutions and purchase of renewable energy
- Completion of Scope 3 examination in accordance with GHG Protocol

### Medium term (2025-2030)

#### Continuous promotion and expansion of decarbonization

- Implementation of corporate decarbonization solutions and gradual increase in the use of renewable energy
- Continue to optimize GHG inventory in Scope 3
- Identify the supply chain's decarbonization goals and begin to drive decarbonization in the supply chain
- Assess and promote product carbon footprint inventory and certification
- Revise SBTi targets and rolling adjustments every five years

### Long term (2030-2050)

#### Low carbon transformation and empowerment

- Continue to implement and track carbon reduction progress to achieve net zero goal
- Establish a sustainable supply chain system
- Introduce carbon management digital platform
- Revise SBTi targets and rolling adjustments every five years

\*The GHG inventory after inspection in 2022 showed that there were no nitrogen oxides (NOx), sulfur oxides (SOx), perfluorinated compounds (PFCs), and other major gas emissions.





2022 Total GHG Emissions and Intensity (Unit: tCO2e)

GHG emissions  <div>{ Scope 1 + Scope 2 }</div>		Base Year (2021)	2021	2022
	Scope 1 (Taiwan Region, covering Taipei office and Hsinchu headquarters)	16.369	16.369	17.3288
	Scope 1 Total	16.369	16.369	17.3288
		Base Year (2021)	2021	2022
	Scope 2 (Taiwan Region, covering Taipei office and Hsinchu headquarters)	293.84	293.84	277.6634
	Scope 2 Total	293.84	293.84	277.6634

Total GHG Emissions and Intensity		Base Year (2021)	2021	2022
	Scope 1	16.369	16.369	17.3288
	Scope 2 (Location-based)	293.84	293.84	277.6634
	Scope 3	8,407.79	8,407.79	11,902.8588
	Total (Scope 1 + Scope 2 + Scope 3)	8,407.79	8,407.79	12,197.8510
	Shipment volume per million piece	13.29	13.29	15.731
	GHG emission intensity ratio	655.98	655.98	775.4021



ASPEED's GHG emission reduction		Base Year (2021)	2022
	Scope 1 reduction	16.369	17.3288
	Scope 2 reduction	293.84	277.6634
	Total reduction (Scope 1 + Scope 2) tCO2e	15.2168	
	Total reduction (Scope 1 + Scope 2) %	4.91%	

Disclosure content	Type of GHG	Total emission (tCO2e)	Total emission (tCO2e)
Global GHG Scope 1 Emission	CO <sub>2</sub>	6.3451	17.3288
	CH <sub>4</sub>	7.1326	
	N <sub>2</sub> O	0.1998	
	HFCs	3.6513	
	SF <sub>6</sub>	0	
	NF <sub>3</sub>	0	
	PFCs	0	

Energy Usage and Usage Intensity

Type	Usage	Heating value (billion J)	Energy intensity (billion J /million piece)
Purchased electricity (excluded green energy)	545,507.6 kwh	1,968.18	124.86
Gasoline	2,801.7 L	91.50	5.82
Total		2,055.68	130.68



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## Appendix

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Identification of Stakeholders

ASPEED Technology's Sustainability Development Working Team identifies and evaluates core stakeholders based on the business and interactions of each department, pursuant to the five principles of the AA1000 Stakeholder Engagement Standard (AA1000 SES): Responsibility, Influence, Dependency, Tension, and Diverse Perspectives. Nine key stakeholders were ultimately identified as priority targets for engagement: employees, shareholders & investors, customers, suppliers, government agencies, media, public welfare organizations, academic research organizations, and partners.

Stakeholder Category	Engagement	2022 Communication Results	Topics of Concern
<b>Customers</b> Having the greatest influence on ASPEED Technology's product/technology development and design	<ul style="list-style-type: none"><li>Customer contact email address: sales@aspeedtech.com</li><li>Customer satisfaction survey (annually)</li><li>Sales interviews and interactions (ad hoc)</li></ul>	<ul style="list-style-type: none"><li>Customer satisfaction rate of 94.74%</li><li>37% of domestic and international customers provide written feedback</li><li>No customer complaints were issued to our customer service team in 2021</li><li>Public responses to sustainable management issues raised by customers including CDP, RBA, green product, and conflict minerals, response rate 100%</li></ul>	<ul style="list-style-type: none"><li>Customer privacy and confidentiality measures</li><li>Product quality and customer satisfaction</li><li>Technological and R&amp;D innovations</li><li>Sustainable supply chain management</li><li>Response to international organizations and initiatives</li><li>Management of waste and hazardous materials</li></ul>
<b>Employees</b> Are the most important resource of ASPEED Technology and critical partners for the sustainable development of the Company	<ul style="list-style-type: none"><li>Opinions mailbox: hr@aspeedtech.com (regular)</li><li>Labor-management coordination meeting (quarterly)</li><li>Meeting of Employee Welfare Committee (quarterly)</li><li>Manager discussions</li><li>Employee satisfaction survey (annually)</li><li>Expressing opinions at the end of the year (annually)</li><li>One-on-one discussions (ad hoc)</li></ul>	<ul style="list-style-type: none"><li>Held four labor-management meetings to offer comprehensive discussions and responses relating to labor movement and employee welfare</li><li>Performance assessment reviews take place every April. A total of 104 reviews were held, for a completion rate of 100%</li><li>Weekly in-depth one-on-one discussions with managers in the Operation Division and New Products Division</li><li>All issues were addressed at the year-end satisfaction survey</li></ul>	<ul style="list-style-type: none"><li>Operational achievements and financial performance</li><li>Compensation and performance mechanisms</li><li>Employee benefits and care</li><li>Employee cultivation and career development</li><li>Workplace equality and human rights protection</li><li>Talent recruitment and cultivation</li><li>Community contributions and social participation</li></ul>
<b>Government Agencies</b> Policies, laws or regulations can influence the operational directions or decision making of ASPEED Technology	<ul style="list-style-type: none"><li>General inquiry email address: info@aspeedtech.com</li><li>Official documents, emails, and meetings (ad hoc)</li><li>Advocacy meetings, public hearings (ad hoc)</li></ul>	<ul style="list-style-type: none"><li>Participated in the TWSE Corporate Governance Evaluations</li><li>Conducted ad hoc communication relating to our business or specific topics</li><li>We were not issued any fines or penalties by the competent authorities in 2022</li></ul>	<ul style="list-style-type: none"><li>Corporate governance and ethical corporate management</li><li>Information security and privacy</li><li>Operational achievements and financial performance</li><li>Risk management</li><li>Legal compliance</li><li>Compensation and performance mechanisms</li></ul>
<b>Cooperative Partners</b> Grows with ASPEED Technology through close cooperation, important partner for ASPEED Technology	<ul style="list-style-type: none"><li>General inquiry email address: info@aspeedtech.com</li><li>Social participation and public welfare activities (ad hoc)</li></ul>	<ul style="list-style-type: none"><li>Communicate and visit cooperative partners irregularly</li><li>Invitation to annual events</li></ul>	<ul style="list-style-type: none"><li>Sustainable supply chain management</li><li>Technological and R&amp;D innovations</li><li>Risk management</li><li>Legal compliance</li><li>Compensation and performance mechanisms</li></ul>
<b>Media</b> Reports and assessments impacting the Company's reputation and image	<ul style="list-style-type: none"><li>Media inquiry email address: media@aspeedtech.com</li><li>Press releases for major news (ad hoc)</li></ul>	<ul style="list-style-type: none"><li>In 2022, senior management gave three special interviews following media request, two radio interviews and several telephone interviews</li><li>Issued press releases to announce major news</li><li>One press conference for major news</li></ul>	<ul style="list-style-type: none"><li>Corporate governance and ethical corporate management</li><li>Operational achievements and financial performance</li><li>Technological and R&amp;D innovations</li><li>Legal compliance</li></ul>



Stakeholder Category	Engagement	2022 Communication Results	Topics of Concern
<b>Shareholders/Investors</b> Influencing the stock price by appraisals of Company	<ul style="list-style-type: none"> <li>Investor relations email address: ir@aspeedtech.com</li> <li>Shareholders’ meeting (annually)</li> <li>Foreign and domestic investors’ meeting (ad hoc)</li> </ul>	<ul style="list-style-type: none"> <li>In 2022, we held one shareholders’ meeting and two public investors’ conferences</li> <li>For major topics we held ad hoc discussions with domestic and foreign institutional investors. 357 phone/physical meetings in total during 2022</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance and ethical corporate management</li> <li>Legal compliance</li> <li>Technological and R&amp;D innovations</li> <li>Operational achievements and financial performance</li> <li>Risk management</li> </ul>
<b>Suppliers</b> Providing excellent raw materials of a consistent quality; through close cooperation, we jointly pursue corporate sustainability	<ul style="list-style-type: none"> <li>General inquiry email address: info@aspeedtech.com</li> <li>Supplier meetings (annually)</li> <li>Supplier audits (annually)</li> <li>Critical supplier’s ESG commitment (annually)</li> </ul>	<ul style="list-style-type: none"> <li>Held critical supplier meetings</li> <li>Completed five audits of critical suppliers and one evaluation of a new supplier</li> <li>Critical supplier’s ESG commitment response rate 60%</li> </ul>	<ul style="list-style-type: none"> <li>Product quality and customer satisfaction</li> <li>Operational achievements and financial performance</li> <li>Risk management</li> <li>Legal compliance</li> <li>Sustainable supply chain management</li> </ul>
<b>Public Welfare Organizations/Academic and Research Organizations</b> ASPEED Technology actively interacts with public welfare organizations, academic research organizations, and cooperative partners to fulfill our ESG obligations	<ul style="list-style-type: none"> <li>General inquiry email address</li> <li>Social participation and public welfare activities (ad hoc)</li> </ul>	<ul style="list-style-type: none"> <li>Accumulated contributions through 2022 were NTD13.7982 million</li> <li>Rural underprivileged caring: <ul style="list-style-type: none"> <li>-For a seventh consecutive year we participated in the Global Views Educational Foundation’s “Plant a seed of reading for the children” event by sponsoring reading materials for students in the Taitung area. We had already donated over 17,000 magazines for a total of 20,000 students at 84 schools in 17 townships in Taitung</li> <li>-“Support Program for Teachers without Teaching Certificate” in Taitung</li> </ul> </li> <li>Supporting the development of higher education: <ul style="list-style-type: none"> <li>-Launching the 4-year Sunrise Scholarship Program in National Tsing Hua University with estimated budget of NTD1.6 million</li> <li>-Launching the 4-year Junior Chair Professor Sponsorship Program: in National Yang Ming Chiao Tung University and National Tsing Hua University with estimated budget of NTD11.52 million. Sponsoring a total of six professors in the two universities in 2022</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Compensation and employee care</li> <li>Talent recruitment and retention</li> <li>Response to international organizations and initiatives</li> <li>Technological and R&amp;D innovations</li> <li>Social care and public welfare participation</li> </ul>





Material Topic Identification Procedures

step 1



[ Stage I ]  
Identification

**Identify counterparts to communicate with** (Identify main stakeholders)

ASPEED Technology uses the AA1000 Stakeholder Engagement Standard to identify core stakeholders (employees, shareholders/ investors, customers, suppliers, government agencies, media, public welfare organizations, academic research organizations, and partners).

step 2

**Gather sustainability topics** (20 sustainability topics)

ASPEED Technology uses the GRI Standards as a reference and considers the sustainability concerns of domestic and international industry peers as a basis for gathering comprehensive information on sustainability topics then determining the Company's 20 core sustainability concerns. Starting from 2022, ASPEED Technology will update the list of sustainability issues every three years, so the 2021 "Sustainability Issues" will be used throughout 2022 to promote circular management.

step 3



[ Stage II ]  
Analysis

**Identify negative materiality**

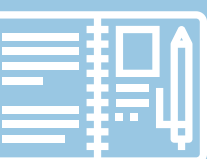
By collecting opinions annually from the heads of various divisions in ASPEED on the impact of different sustainability issues on the Company's internal operations, and combining these results with the level of external stakeholder concern, we evaluate the negative impacts from within the company to the outside world; Each year, ASPEED collaborates with experts to evaluate and measure the extent of negative impacts that its sustainability management practices have on the economic, environmental, and social aspects of the outside world. The aim is to identify significant negative impacts both internally within the Company and externally on the outside world. These issues are then highlighted as materiality with negative impact for the year.

step 4

**Identify positive materiality**

By collecting opinions annually from the heads of various divisions in ASPEED on the impact of different sustainability issues on the Company's internal operations, and combining these results with the level of external stakeholder concern, we evaluate the positive impacts from within the company to the outside world; Each year, ASPEED collaborates with experts to evaluate and measure the extent of positive impacts that its sustainability management practices have on the economic, environmental, and social aspects of the outside world. The aim is to identify significant positive impacts both internally within the Company and externally on the outside world. These issues are then highlighted as materiality with positive impact for the year.

step 5



[ Stage III ]  
Confirmation

**Draft a negative and positive materiality matrixes**

The scores of the issues obtained in the above steps are evaluated for materiality. After comprehensively considering the scores of internal to external negative/positive impact assessment and external to internal negative/positive impact assessment of the sustainable issues, two matrixes of negative materiality and positive materiality are drafted to identify and obtain sustainability issues that meet the significant impact threshold in both directions. The list of material topics with negative and positive impacts is used as the basis for in-depth analysis in this report.

step 6

**Review disclosure content**

Five material topics were identified. Together with the material issue of "employee benefits and care" as resolved by the Working Team of Sustainability Committee, six material topics were approved by the Chairman of the Board eventually. We compared the material topics to twelve special topics and two self-formulated topics based on the GRI Standards. These results formed the boundaries of ASPEED Technology's stakeholder information disclosures and formed the foundation of this report. (For details, please refer to Chapter 3.3 ASPEED Sustainability Policies and Blueprint)



Indicator	Disclosure Items	Corresponding Chapter	Page	Note
GRI 2 General Disclosures 2021				
2-1	Organizational details	3.1 About ASPEED Technology	9	
2-2	Entities included in the organization’s sustainability reporting	About this Report	4	
2-3	Reporting period, frequency and contact point	About this Report	4	
2-4	Restatements of information	Report Adjustments	111	
2-5	External assurance	About this Report	4	
2-6	Activities, value chain and other business relationships	3.1 About ASPEED Technology	10	
		5.6 Sustainable Supply Chain Management	67	
2-7	Employees	6.3 Employee Care	79	
2-8	Workers who are not employees	6.1 Employee Composition	72	
2-9	Governance structure and composition	5.1 Corporate Governance and Ethical Corporate Management	37	
2-10	Nomination and selection of the highest governance body	5.1 Corporate Governance and Ethical Corporate Management	37	
2-11	Chair of the highest governance body	5.1 Corporate Governance and Ethical Corporate Management	37	
2-12	Role of the highest governance body in overseeing the management of impacts	5.1 Corporate Governance and Ethical Corporate Management	45	
		8 Materiality Analysis	102	
2-13	Delegation of responsibility for managing impacts	3.3 ASPEED Sustainability Policies and Blueprint	17	
		5.1 Corporate Governance and Ethical Corporate Management	45	
2-14	Role of the highest governance body in sustainability reporting	3.3 ASPEED Sustainability Policies and Blueprint	17	

Indicator	Disclosure Items	Corresponding Chapter	Page	Note
2-15	Conflicts of interest	5.1 Corporate Governance and Ethical Corporate Management	40	
2-16	Communication of critical concerns	8 Materiality Analysis	102	
2-17	Collective knowledge of the highest governance body	5.1 Corporate Governance and Ethical Corporate Management	39	
2-18	Evaluation of the performance of the highest governance body	5.1 Corporate Governance and Ethical Corporate Management	39	
2-19	Remuneration policies	5.1 Corporate Governance and Ethical Corporate Management	40	
		6.3 Employee Care	79	
2-20	Process to determine remuneration	5.1 Corporate Governance and Ethical Corporate Management	40	
		6.3 Employee Care	79	
2-21	Annual total compensation ratio	6.3 Employee Care	79	
2-22	Statement on sustainable development strategy	2.1 A Letter from the President	6	
		2.2 A Letter from the Chief Operating Officer	7	
		3.3 ASPEED Sustainability Policies and Blueprint	17	
2-23	Policy commitments	3.3 ASPEED Sustainability Policies and Blueprint	17	
		5.1 Corporate Governance and Ethical Corporate Management	36	
2-24	Embedding policy commitments	3.3 ASPEED Sustainability Policies and Blueprint	17	
2-25	Processes to remediate negative impacts	5.1 Corporate Governance and Ethical Corporate Management	45	
2-26	Mechanisms for seeking advice and raising concerns	5.1 Corporate Governance and Ethical Corporate Management	42	
		8 Materiality Analysis	102	
2-27	Compliance with laws and regulations	5.1 Corporate Governance and Ethical Corporate Management	43	



Indicator	Disclosure Items	Corresponding Chapter	Page	Note
2-28	Membership associations	5.6 Sustainable Supply Chain Management	15	
2-29	Approach to stakeholder engagement	8 Materiality Analysis	102	
2-30	Collective bargaining agreements	8 Materiality Analysis	102	None in 2022
GRI3 Material Topics 2021				
3-1	Process to determine material topics	3.3 ASPEED Sustainability Policies and Blueprint	19	
		8 Materiality Analysis	104	
3-2	List of material topics	8 Materiality Analysis	20	
3-3	Management of material topics	3.3 ASPEED Sustainability Policies and Blueprint	20	
		8 Materiality Analysis	102	
GRI 201 : Economic Performance 2016				
201-1	Direct economic value generated and distributed	5.2 Operational Performance	49	
		6.2 Talent Development	76	
201-2	Financial implications and other risks and opportunities due to climate change	5.2 Operational Performance	49	For complete financial information, please refer to 2022 annual report.
		5.3 Climate Strategies TCFD	53	
201-3	Defined benefit plan obligations and other retirement plans	5.2 Operational Performance	49	
		6.3 Employee Care	82	
201-4	Financial assistance received from government	5.2 Operational Performance	49	None in 2022
GRI 202 : Market Presence 2016				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	6.1 Employee Composition	79	In 2022, ASPEED Technology achieved the highest average salary among all employees, amounting to 4.552 million New Taiwan Dollars, ranking first among over-the-counter (OTC) listed companies.

Indicator	Disclosure Items	Corresponding Chapter	Page	Note
202-2	Proportion of senior management hired from the local community 9 Glossary	6.1 Employee Composition	72	In 2022, ASPEED Technology employed local residents for all of its senior executive positions, resulting in a 100% ratio of local residents in high-level management roles.
GRI 203 : Indirect Economic Impacts 2016				
203-1	Infrastructure investments and services supported	6.4 Social Participation	86	
203-2	Significant indirect economic impacts	3.3 ASPEED Sustainability Policies and Blueprint	21	
GRI 204 : Procurement Practices 2016				
204-1	Proportion of spending on local suppliers	7.1 Environmental Management	92	
GRI 205 : Anti-corruption 2016				
205-1	Operations assessed for risks related to corruption	5.1 Corporate Governance and Ethical Corporate Management	44	
205-2	Communication and training about anti-corruption policies and procedures	5.1 Corporate Governance and Ethical Corporate Management	44	
205-3	Confirmed incidents of corruption and actions taken	5.1 Corporate Governance and Ethical Corporate Management	36	None in 2022
GRI 206 : Anti-competitive Behavior 2016				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	5.1 Corporate Governance and Ethical Corporate Management	36	
GRI 207 : Tax 2019				
207-1	Approach to tax	5.2 Operational Performance	52	
207-2	Tax governance, control, and risk management	5.2 Operational Performance	52	
207-3	Stakeholder engagement and management of concerns related to tax	5.2 Operational Performance	52	
207-4	Country-by-country reporting	5.2 Operational Performance	52	



Indicator	Disclosure Items	Corresponding Chapter	Page	Note
GRI 301 : Materials 2016				
301-1	Materials used by weight or volume	7.2 GHG and Energy Resource Management	95	ASPEED Technology does not involve production or manufacturing, so it is not applicable.
301-2	Recycled input materials used	7.2 GHG and Energy Resource Management	95	
301-3	Reclaimed products and their packaging materials	7.2 GHG and Energy Resource Management	95	Due to the nature of ASPEED Technology's products being chips, it is not possible to obtain data on whether there is a recycling program or retrieval of end products.
GRI 302 : Energy 2016				
302-1	Energy consumption within the organization	7.2 GHG and Energy Resource Management	95	
302-2	Energy consumption outside of the organization	7.2 GHG and Energy Resource Management	95	
302-3	Energy intensity	7.2 GHG and Energy Resource Management	100	
302-4	Reduction of energy consumption	7.2 GHG and Energy Resource Management	100	
302-5	Reductions in energy requirements of products and services	4.3 Green Breakthroughs	32	
GRI 303 : Water and Effluents 2018				
303-1	Interactions with water as a shared resource	7.2 GHG and Energy Resource Management	95	Considering that ASPEED Technology does not have manufacturing facilities, the main focus of internal energy and resource management within the company is primarily on three aspects: daily operations (water and electricity consumption), greenhouse gas inventory, and waste management practices.
303-2	Management of water discharge-related impacts	7.2 GHG and Energy Resource Management	95	
303-3	Water withdrawal	7.2 GHG and Energy Resource Management	95	
303-4	Water discharge	7.2 GHG and Energy Resource Management	95	
303-5	Water consumption	7.2 GHG and Energy Resource Management	95	

Indicator	Disclosure Items	Corresponding Chapter	Page	Note
GRI 304 : Biodiversity 2016				
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	7.2 GHG and Energy Resource Management	95	None in 2022
304-2	Significant impacts of activities, products and services on biodiversity	7.2 GHG and Energy Resource Management	95	
304-3	Habitats protected or restored	7.2 GHG and Energy Resource Management	95	
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	7.2 GHG and Energy Resource Management	95	
GRI 305 : Emissions 2016				
305-1	Direct (Scope 1) GHG emissions	7.2 GHG and Energy Resource Management	99	
305-2	Energy indirect (Scope 2) GHG emissions	7.2 GHG and Energy Resource Management	99	
305-3	Other indirect (Scope 3) GHG emissions	7.2 GHG and Energy Resource Management	99	
305-4	GHG emissions intensity	7.2 GHG and Energy Resource Management	99	
305-5	Reduction of GHG emissions	7.2 GHG and Energy Resource Management	99	ASPEED Technology's short-term carbon reduction plan in the future primarily focuses on Scope 1 and Scope 2 emissions.
305-6	Emissions of ozone-depleting substances (ODS)	7.2 GHG and Energy Resource Management	100	In 2022, ASPEED Technology had no incidents of emissions related to substances that deplete the ozone layer (ODS).
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	7.2 GHG and Energy Resource Management	100	In 2022, ASPEED Technology had no significant emissions of nitrogen oxides (NOx), sulfur oxides (SOx), or other major gases.



Indicator	Disclosure Items	Corresponding Chapter	Page	Note
GRI 306 : Effluents and Waste 2020				
306-1	Water discharge by quality and destination	7.2 GHG and Energy Resource Management	96	
306-2	Waste by type and disposal method	7.2 GHG and Energy Resource Management	96	
306-3	Significant spills	7.2 GHG and Energy Resource Management	96	
306-4	Transport of hazardous waste	7.2 GHG and Energy Resource Management	96	
306-5	Water bodies affected by water discharges and/or runoff	7.2 GHG and Energy Resource Management	96	
GRI 308 : Supplier Environmental Assessment 2016				
308-1	New suppliers that were screened using environmental criteria	5.6 Sustainable Supply Chain Management	67	
308-2	Negative environmental impacts in the supply chain and actions taken	5.6 Sustainable Supply Chain Management	67	
GRI 401 : Employment 2016				
401-1	New employee hires and employee turnover	6.1 Employee Composition	75	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.3 Employee Care	82	
401-3	Parental leave	6.3 Employee Care	82	There were no employee applications for maternity or paternity leave in 2022.
GRI 402 : Labor/Management Relations 2016				
402-1	Minimum notice periods regarding operational changes	6.3 Employee Care	85	
GRI 403 : Occupational Health and Safety 2018				
403-1	Occupational health and safety management system	6.3 Employee Care	85	

Indicator	Disclosure Items	Corresponding Chapter	Page	Note
403-2	Hazard identification, risk assessment, and incident investigation	6.3 Employee Care	85	
403-3	Occupational health services	6.3 Employee Care	85	ASPEED Technology employees are not engaged in job roles associated with high risk or high specific disease occurrence rates.
403-4	Worker participation, consultation, and communication on occupational health and safety	6.3 Employee Care	85	
403-5	Worker training on occupational health and safety	6.3 Employee Care	85	
403-6	Promotion of worker health	6.2 Talent Development	77	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6.3 Employee Care	85	
403-8	Workers covered by an occupational health and safety management system	6.3 Employee Care	85	
403-9	Work-related injuries	6.3 Employee Care	85	No occupational injuries have occurred in the past three years.
403-10	Work-related ill health	6.3 Employee Care	85	No occupational ill have occurred in the past three years.
GRI 404 : Training and Education 2016				
404-1	Average hours of training per year per employee	6.2 Talent Development	78	
404-2	Programs for upgrading employee skills and transition assistance programs	6.2 Talent Development	77	
404-3	Percentage of employees receiving regular performance and career development reviews	6.3 Employee Care	78	



Indicator	Disclosure Items	Corresponding Chapter	Page	Note
GRI 405 : Diversity and Equal Opportunity 2016				
405-1	Diversity of governance bodies and employees	6.1 Employee Composition	72	In 2022, ASPEED Technology did not hire employees with disabilities or individuals of indigenous backgrounds.
405-2	Ratio of basic salary and remuneration of women to men	6.3 Employee Care	80	
GRI 406 : Non-discrimination 2016				
406-1	Incidents of discrimination and corrective actions taken	6.3 Employee Care	84	
GRI 407 : Freedom of Association and Collective Bargaining 2016				
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	6.3 Employee Care	79	The company has not established any associations or labor unions yet.
GRI 408 : Child Labor 2016				
408-1	Operations and suppliers at significant risk for incidents of child labor	6.3 Employee Care	79	No child labor was used in 2022
GRI 409 : Forced or Compulsory Labor 2016				
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	6.3 Employee Care	79	There were no incidents of forced labor in 2022.
GRI 410 : Security Practices 2016				
410-1	Security personnel trained in human rights policies or procedures	6.3 Employee Care	79	No related data in 2022
GRI 411 : Rights of Indigenous Peoples 2016				
411-1	ncidents of violations involving rights of indigenous peoples	6.4 Social Participation	86	None in 2022
GRI 413 : Local Communities 2016				
413-1	Operations with local community engagement, impact assessments, and development program	6.4 Social Participation	86	

Indicator	Disclosure Items	Corresponding Chapter	Page	Note
413-2	Operations with significant actual and potential negative impacts on local communities	6.4 Social Participation	86	
GRI 414 : Supplier Social Assessment 2016				
414-1	New suppliers that were screened using social criteria	5.6 Sustainable Supply Chain Management	67	
414-2	Negative social impacts in the supply chain and actions taken	5.6 Sustainable Supply Chain Management	67	
GRI 415 : Public Policy 2016				
415-1	Political contributions	5.1 Corporate Governance and Ethical Corporate Management	36	None in 2022
GRI 416 : Customer Health and Safety 2016				
416-1	Assessment of the health and safety impacts of product and service categories	5.5 Product Quality and Customer Service	64	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	5.5 Product Quality and Customer Service	64	None in 2022
GRI 417 : Marketing and Labeling 2016				
417-1	Requirements for product and service information and labeling	5.5 Product Quality and Customer Service	64	None in 2022
417-2	ncidents of non-compliance concerning product and service information and labeling	5.5 Product Quality and Customer Service	64	None in 2022
417-3	Incidents of non-compliance concerning marketing communications	5.5 Product Quality and Customer Service	64	None in 2022
GRI 418 : Customer Privacy 2016				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	5.4 Information Security	60	None in 2022



Type	Category	Code	Accounting Metric	Unit of Measure	Data		2022 ESG report Corresponding Chapterage	Page
1	Quantitative	TC-SC-110a.1	(1) Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	Metric tons (t) CO2e	1.Global Scope 1 emissions in 2022 amounted to 17.3288 metric tons of carbon dioxide equivalent. 2. Total emissions of fluorinated compounds in 2022 were 0.		7.2 GHG and Energy Resource Management	99
2	Quantitative	TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	NA	In 2022, ASPEED Technology has completed the ISO14064-1:2018 third-party GHG inspection certification at the organizational level. A carbon management project is expected to be submitted to the Board for approval in 2023 to progressively implement the carbon reduction plan through the purchase of renewable energy and implementation of the recent SBTi SME target planning and application.		7.2 GHG and Energy Resource Management	98
3	Quantitative	TC-SC-130a.1	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Gigajoules (GJ) Percentage (%)	1. 2,055.68 2.96% 3.0%		7.2 GHG and Energy Resource Management	100
4	Quantitative	TC-SC-140a.1	(1) Total water withdrawn, (2) Total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic metres(m³) Percentage (%)	1. 2,962 m³ (Total water withdrawn); 2.0% in regions with High or Extremely High Baseline Water Stress 2,962 m³ (Total water consumed); 0% in regions with High or Extremely High Baseline Water Stress		7.2 GHG and Energy Resource Management	96
5	Quantitative	TC-SC-150a.1	Amount of hazardous waste from manufacturing, percentage recycled	Metric tons (t) Percentage (%)	No hazardous waste in 2022		7.2 GHG and Energy Resource Management	96
6	Quantitative	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	NA	1. ASPEED Technology has a professional occupational safety and health business supervisor, regularly reviews occupational safety, health and environmental protection-related matters, and promotes various occupational safety, health and environmental protection related businesses. The employee coverage rate of the occupational safety and health management system is 100%. 2. Since ASPEED Technology is an IC design company that does not directly operate a factory, in daily operations the Company does not handle substances or chemicals that are hazardous to health. The laboratory only conducts testing simulations, and the occupational safety and health manager primarily focuses on identifying hazard sources in the office environment. The only chemical type employees encounter is unleaded welding chemicals used by R&D personnel. In accordance with regulations, employees who handle these chemicals must wear an N95 mask and the environment must be well ventilated. Lead toxin health exams are conducted to ensure that there is no health impact. 3. In 2022, in response to the changes in the pandemic, the Company distributed masks, alcohol, and other materials to keep the environment clean and disinfected. For the group insurance plan, the Company added vaccine insurance.		6.3 Employee Care	85
7	Quantitative	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedingsassociated with employee health and safety violations	Reporting currency	None in 2022		6.3 Employee Care	79
8	Quantitative	TC-SC-330a.1	(1) foreign nationals and (2) located offshore	Percentage (%)	0		6.1 Employee Composition	72
9	Quantitative	TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Percentage (%)	0		5.5 Product Quality and Customer Service	64
10	Quantitative	TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	(MIPS/W)	2,381 (AST2600) 1,652 (AST2500A2-GP) 1,357 (AST2520A2-GP)	580 (AST2400A1-GP) 1,149 (PILOT 4) 1,652 (AST1520A1-GP)	4.3 Green Breakthroughs	33
11	Quantitative	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	NA	None in 2022		5.6 Sustainable Supply Chain Management	68
12	Quantitative	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Reporting currency	None in 2022		5.1 Corporate Governance and Ethical Corporate Management	36
13	Quantitative	TC-SC-000.A	Total production	Thousand pieces	15,731		5.2 Operational Performance	50
14	Quantitative	TC-SC-000.B	Percentage of production from owned facilities	Percentage(%)	NA, ASPEED Technology does not involved production		5.2 Operational Performance	49



Page	chapter	Before adjustment	After adjustment																				
29	Corporate Governance and Ethical Corporate Management	<div><div>2020</div><div><div>Male:1 Female:0</div><div>1</div><div>Percentage</div><div>&lt;30 0% 31-50 11% &gt;51 78%</div><div>Male:7 Female:0</div><div>7</div><div><div>Under 30 years old</div><div>31-50 years old</div><div>Over 50 years old</div></div></div></div>	<div><div>2020</div><div><div>Male : 1 Female : 0</div><div>1</div><div>Percentage</div><div>&lt;30 0% 31-50 12.5% &gt;51 87.5%</div><div>Male : 7 Female : 0</div><div>7</div><div><div>Under 30 years old</div><div>31-50 years old</div><div>Over 50 years old</div></div></div></div>																				
14	About ASPEED Technology	<div><div>2021</div><div>193.53 tons / per million piece: Water use intensity</div></div>	<div><div>2021</div><div>198.95 tons / per million piece: Water use intensity</div></div>																				
54	Environmental Protection	<div><div>2021</div><div><div>85.51% 14.49%</div><div>82.71% 17.29%</div><div>83% 17%</div><div><div>Domestic</div><div>International</div></div></div></div>	<div><div>2021</div><div><div>82.71% 17.32% 3.62%</div><div>91.72% 23.04% 8.28%</div><div>90.54% 30.23% 9.46%</div><div><div>Domestic</div><div>International</div></div></div></div>																				
55	Environmental Protection	<div><div>2021</div><div><table><tr><th colspan="2">Water</th></tr><tr><th>Water usage (metric tons)</th><th>Water usage intensity (metric tons/million piece)</th></tr><tr><td>892</td><td>101.24</td></tr><tr><td>3,531</td><td>307.93</td></tr><tr><td>2,572</td><td>193.53</td></tr></table></div></div>	Water		Water usage (metric tons)	Water usage intensity (metric tons/million piece)	892	101.24	3,531	307.93	2,572	193.53	<div><div>2021</div><div><table><tr><th colspan="2">Water</th></tr><tr><th>Water usage (metric tons)</th><th>Water usage intensity (metric tons/million piece)</th></tr><tr><td>3,443</td><td>300.25</td></tr><tr><td>2,644</td><td>198.95</td></tr><tr><td>2,692</td><td>171.11</td></tr></table></div></div>	Water		Water usage (metric tons)	Water usage intensity (metric tons/million piece)	3,443	300.25	2,644	198.95	2,692	171.11
Water																							
Water usage (metric tons)	Water usage intensity (metric tons/million piece)																						
892	101.24																						
3,531	307.93																						
2,572	193.53																						
Water																							
Water usage (metric tons)	Water usage intensity (metric tons/million piece)																						
3,443	300.25																						
2,644	198.95																						
2,692	171.11																						
56	Environmental Protection	Data show that water use intensity in 2021 decreased by 37.15% in 2021 compared to 2020	Data show that water use intensity in 2021 decreased by 33.74% in 2021 compared to 2020																				

Page	chapter	Before adjustment	After adjustment
63	Shared Social Prosperity	<div><div>2021 Education</div><div><div>Male:2 Female:0</div><div>2</div><div>Education Ratio</div><div>Doctoral 2.08% Master's 67.71% Bachelor's 30.21%</div><div>Gender Ratio</div><div>Doctoral Male 2.08% Female 0% Master's Male 64.58% Female 3.13% Bachelor's Male 13.54% Female 16.67%</div><div>Male:13 Female:16</div><div>65</div><div>Male:62 Female:3</div><div><div>Doctoral</div><div>Master's</div><div>Bachelor's</div></div></div></div>	<div><div>2021 Education</div><div><div>Male:2 Female:0</div><div>2</div><div>Education Ratio</div><div>Doctoral 2.08% Master's 67.71% Bachelor's 30.21%</div><div>Gender Ratio</div><div>Doctoral Male 100% Female 0% Master's Male 95.38% Female 4.62% Bachelor's Male 55.17% Female 44.83%</div><div>Male:13 Female:16</div><div>65</div><div>Male:62 Female:3</div><div><div>Doctoral</div><div>Master's</div><div>Bachelor's</div></div></div></div>
65	Shared Social Prosperity	<div><div>Number of ASPEED's Employees by Position and Age</div><div><div>Gender</div><div><div>2019</div><div><div>16 17.58%</div><div>1 1.16%</div><div>9 9.8%</div><div>5 5.38%</div><div>7 7.53%</div><div>4 4.1%</div><div>12 11.76%</div><div>2 1.96%</div><div>4 3.92%</div></div></div></div><div><div>Age</div><div><div>2019</div><div><div>13 14.29%</div><div>3 3.1%</div><div>10 10.39%</div><div>6 6.45%</div><div>3 3.1%</div><div>1 0.98%</div><div>11 10.7%</div><div>3 2.94%</div><div>3 2.94%</div></div></div></div></div>	<div><div>Number of ASPEED's Employees by Position and Age</div><div><div>Gender</div><div><div>2020</div><div><div>5 5.38%</div><div>7 7.53%</div><div>4 4.3%</div><div>12 11.76%</div><div>2 1.96%</div><div>4 3.92%</div></div></div><div><div>Age</div><div><div>2020</div><div><div>6 6.45%</div><div>3 3.23%</div><div>1 0.98%</div><div>11 10.7%</div><div>3 2.94%</div><div>2 1.96%</div></div></div></div></div></div>



Page	chapter	Before adjustment	After adjustment																																																																
67	Shared Social Prosperity	<p>Number of ASPEED's Employees by Position and Age</p> <table><tr><th>Year</th><th>Position</th><th>Under 30 years old</th><th>31-50 years old</th><th>Over 50 years old</th></tr><tr><td rowspan="2">2019</td><td>Manager</td><td>14 (17.28%)</td><td>6 (7.41%)</td><td>24.69%</td></tr><tr><td>Non-Manager</td><td>11 (13.58%)</td><td>49 (60.49%)</td><td>1 (1.23%)</td></tr><tr><td rowspan="2">2020</td><td>Manager</td><td>14 (15.73%)</td><td>7 (7.87%)</td><td>23.60%</td></tr><tr><td>Non-Manager</td><td>14 (15.73%)</td><td>64 (60.67%)</td><td>76.40%</td></tr><tr><td rowspan="2">2021</td><td>Manager</td><td>13 (13.54%)</td><td>8 (8.33%)</td><td>21.88%</td></tr><tr><td>Non-Manager</td><td>8 (8.33%)</td><td>65 (67.71%)</td><td>78.13%</td></tr></table>	Year	Position	Under 30 years old	31-50 years old	Over 50 years old	2019	Manager	14 (17.28%)	6 (7.41%)	24.69%	Non-Manager	11 (13.58%)	49 (60.49%)	1 (1.23%)	2020	Manager	14 (15.73%)	7 (7.87%)	23.60%	Non-Manager	14 (15.73%)	64 (60.67%)	76.40%	2021	Manager	13 (13.54%)	8 (8.33%)	21.88%	Non-Manager	8 (8.33%)	65 (67.71%)	78.13%	<p>Number of ASPEED's Employees by Position and Age</p> <table><tr><th>Year</th><th>Position</th><th>Under 30 years old</th><th>31-50 years old</th><th>Over 50 years old</th></tr><tr><td rowspan="2">2020</td><td>Manager</td><td>23 (25.84%)</td><td>7 (7.87%)</td><td>33.71%</td></tr><tr><td>Non-Manager</td><td>14 (15.73%)</td><td>45 (50.56%)</td><td>66.29%</td></tr><tr><td rowspan="2">2021</td><td>Manager</td><td>22 (22.92%)</td><td>10 (10.42%)</td><td>33.33%</td></tr><tr><td>Non-Manager</td><td>8 (8.33%)</td><td>56 (58.33%)</td><td>66.67%</td></tr><tr><td rowspan="2">2022</td><td>Manager</td><td>33 (31.13%)</td><td>11 (10.38%)</td><td>41.51%</td></tr><tr><td>Non-Manager</td><td>8 (7.55%)</td><td>54 (50.94%)</td><td>58.49%</td></tr></table>	Year	Position	Under 30 years old	31-50 years old	Over 50 years old	2020	Manager	23 (25.84%)	7 (7.87%)	33.71%	Non-Manager	14 (15.73%)	45 (50.56%)	66.29%	2021	Manager	22 (22.92%)	10 (10.42%)	33.33%	Non-Manager	8 (8.33%)	56 (58.33%)	66.67%	2022	Manager	33 (31.13%)	11 (10.38%)	41.51%	Non-Manager	8 (7.55%)	54 (50.94%)	58.49%
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**Published by** | Sustainability Committee of Aspeed Technology

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**Date of Publication** | September, 2023

**Website** | [www.aspeedtech.com](http://www.aspeedtech.com)



2022  
Sustainability Report (CH)



2022  
Annual Report