

2022

Vanguard International
Semiconductor Corporation

Sustainability Report



Contents

Letter from the Chairman

Change and Innovation: Steadily Implementing a Vision for Sustainability

2022 was a year of global turmoil. Life disrupted by the epidemic has yet to convalesce while the world continues to face geopolitical conflicts. Extreme weather raised the frequency of natural disasters such as floods, torrential rains, droughts, and heat waves; with the drastic impacts brought in their wake, climate change is now a reality that no one can escape. As a leading specialty IC foundry service provider and a responsible corporate citizen, VIS is responsible for taking proactive steps to fulfill our corporate responsibility and protect the global environment that we are a part of. Therefore, we joined the RE100 global renewable energy initiative in 2022 and pledged to source 100% renewable energy for our global operations by 2040, becoming the first company in Taiwan semiconductor industry to commit to achieving the RE100 targets by 2040. We have also developed a roadmap to steadily reach the goal of net zero emissions by 2050.

For the semiconductor industry, 2022 was also a year full of challenges. Despite these obstacles, with its operational resilience and competitiveness within the sector, VIS was able to achieve an annual consolidated revenue of NT\$51.69 billion, with the gross profit margin reaching 46.3% and a return on equity reaching 38% — setting record highs in these areas. Holding steadfast to the belief that growth and sustainability go hand in hand, in 2022, VIS continued to take concrete actions to echo the United Nations (UN) Sustainable Development Goals (SDGs) while actively implementing our mission for sustainability that includes the goals of implementing corporate governance, promoting environmental sustainability, establishing a friendly workplace, and contributing to social engagement.

In implementing corporate governance, VIS works in line with the international trend to enhance the scope of ESG-related information disclosure, and renamed the VIS Corporate Social Responsibility Principle as the VIS Sustainable Development Best Practice Principles, making this the company's guideline for ESG implementation. In addition, VIS has elected an independent board member to enhance the diversity and independence of the Board of Directors. To encourage management team members to retain the company's shares over a long period of time and link the performance of the executives with the long-term interests of the company's shareholders, the



company instituted the Corporate Officer Shareholding Policy and incorporated ESG into the performance evaluation index of board members in an effort to enhance the sustainable value of the company. In 2022, VIS actively promoted a company-wide digital transformation and achieved successes that extended to all fabs.

When it comes to promoting environmental sustainability, VIS is fully committed to green manufacturing by including energy efficiency, water conservation, and waste reduction practices. Our consumption of water and electricity as well as rate of waste recycling per wafer area have all met annual targets. We have also inaugurated the VIS Commitment to Biodiversity, pledging to refrain from developing and operating in statutory designated ecological reserves and biodiversity-sensitive areas both domestically and abroad and to implement relevant conservation measures where needed. Besides taking part in RE100 in 2022, we also built a solar power system in Fab 2, which annually generates about 300,000 kWh. This is a concrete manifestation of our commitment to renewable energy and endeavor to build and realize self-sufficiency in our energy usage.

To establish a friendly workplace, VIS puts our employees first and follows the VIS Human Rights Policy that stipulates respect for all colleagues while aiming to provide them with a work environment that is safe, healthy, challenging, and fun as well as training and educational measures for personal development. During the year 2022, we continued to foster a work environment that prizes open communication while moving toward an open management style to further strengthen employee relations. To help our colleagues cultivate an awareness of their health and related conditions, VIS launched a number of related initiatives, such as an optimized health management app and online walking activities. During this year, we were recognized for our workplace wellness services, employee benefits, epidemic prevention efforts, and motherhood-friendly work environment practices.

Contributing to social engagement is another key area of focus for VIS, and we concentrate on the five priorities of diverse empowerment, environmental conservation, and sustainability initiatives along with care for the disadvantaged groups and for elderly citizens living alone. Striving to meet the UN SDGs, which call for promoting sustainable development and social welfare projects, we invited our suppliers and customers to join our related efforts in hope of expanding our positive impact on society. During 2022, we zeroed in on cultivating talent and promoting education as these are critical challenges

faced by our industry and aimed to empower disadvantaged groups through practical efforts and assistance. By prioritizing care for the disadvantaged groups and diverse empowerment, we focused on themes including empowerment for the disadvantaged, educational sessions on the semiconductor industry, and reduction of the gap between learning and application. Our aim is to help disadvantaged groups through organizing semiconductor popular science events that incorporate core business information and career lectures, which has the added value of expanding recruitment for the entire industry. In addition, the VIS Corporate Sustainability Committee, at the recommendation of the Board of Directors, proposed medium- and long-term goals for these five areas of priority at the board meeting, which received the full support of the board. In the years to come, we will continue to strive towards sustainable development and achieve all related goals.

Our ESG efforts in 2022 were recognized by a number of important domestic and international indexes and awards, including being named as a constituent of DJSI World for two consecutive years and being selected as a constituent of the Emerging Markets Index for the first time. VIS also received a score of A- in the Carbon Disclosure Project's (CDP) climate change questionnaire and overall ratings of twA+/twA-1 and was rated with a stable outlook in the Taiwan Ratings. In the corporate governance evaluation conducted by the Taiwan Stock Exchange, we had the honor of being in the Top 5% of Listed Companies of TPEX for the ninth consecutive year.

Looking ahead, VIS will not only focus on our core business, but we will also expand our efforts to achieve sustainability — building deeper roots and expanding our initiatives — while integrating the spirit of ESG into our daily operations, set goals and implementation strategies, and regularly review our action plans and results. We will also work with our upstream and downstream partners to expand our influence in ESG while maintaining good relationships with stakeholders to grow together and realize the vision of cultivating sustainable value and creating social common good.



Chairman, Leuh Fang

Sustainability Focus

2022 VIM² Award — Digital Implementation Improves Operation Performance

Beginning in 2019, VIS proposed the operational focus on Intelligent Manufacturing and Intelligent Management, known as VIM², and established the VIM² Award, which has now been held for three consecutive years since its inception in 2020. The inaugural VIM² Award asked teams to find smart solutions that factored in the VIM² concepts. Digital ubiquity was the theme of the second VIM² Award held in 2021; each team was tasked with using digital transformation tools to streamline operation. The 2022 VIM² Award featured digital implementation and encouraged teams to link digital tools to daily operations to improve operational performance.

To further digital implementation, we have incorporated Power BI and Robotic Process Automation (RPA) into our operations. As of 2022, 1,021 employees have been trained in these processes, which prompted the development of 1,488 Power BI applications and 522 RPA flows that power automated tasks across departments. Daily operation as well as data-driven decision making and related rules have been integrated into the Vanguard Intelligence (VI) platform. By 2022, 89% of IDLs have used the VI platform to strengthen the company's competitiveness in operational management. The 2022 VIM² Award focused on leveraging digital transformation for daily tasks. This main theme aimed to improve the effectiveness of operational performance, and each function across departments and fabs were reviewed in 2022 for its achievements.

The work of our teams was evaluated by a panel of experts composed of supervisors from VIM²-related departments. They judged the different functions across departments and fabs through an on-site review of the team's digital tools. The expert panel raised a series of questions for the teams on topics ranging from the popularity of the digital tools and its rate of adoption, rate of usage, degree of familiarity, and the integration of information to the protocol of digital hierarchy, amount of data insight, improvement of processes, and overall operational performance. The expert panel selected winners based on how well each team fielded and responded to the questions.

The expert panel shared the highlights from the 2022 Award's digital transformation theme. They spoke of how this annual competition has become an organization-wide endeavor and the continuous improvement of intelligent manufacturing through adding value with digital tools, solidifying daily management practices, providing quicker management responses, and developing cross-department analytics.

By seeking innovation in digital systems, digital leadership, and daily operation based on data-driven decision making systems, VIM² continues to provide impetus for short-, medium-, and long-term competitive goals that promote advancements in the management of semiconductor manufacturing services. Working together on these goals, we will certainly achieve new heights in the quality and efficiency of our work environment.



2022 VIM² Award-winning Projects

Award	Project Title
First Prize (Intelligent Manufacturing Group)	Fab 1 Daily Management: Integrated Production and Management
Exemplary Prize (Intelligent Manufacturing Group)	Speak through System!
First Prize (Intelligent Management Group)	RD&E New Digital Vision World
Exemplary Prize (Intelligent Management Group)	Intelligent Cost Management
Exemplary Prize (Intelligent Management Group)	MRP System Revolution
Special Prize for Innovation Promotion	OES War Room

Sustainability Focus

Delighting in Cherry Blossoms by Day and Fireflies by Night: VIS Transforms Cherry Blossom Park into a Glamorous Urban Landscape

Environmental conservation is one of VIS' important social engagement tasks. VIS has proactively cooperated with the River Management Office to carry out a remediation project for the Cherry Blossom Park section of Kezihu Creek since 2015, and, after that, formally took the responsibility for maintaining a 4.9-hectare vegetation and water area in Hsinchu City's Qianjia Park, Cherry Blossom Park, and Kezihu Creek banks. In addition to maintaining ecosystems in the area, VIS has also planted Taiwan cherry (also known as bellflower cherry) trees and Japanese green oak trees (commonly known as "Ko-su" in Hakka) in Cherry Blossom Park to create a feature for the park. Moreover, VIS has implemented a four-year Firefly Restoration Project since 2020 at the floodwater detention pond next to Cherry Blossom Park. So far, more than 6,500 fireflies have been successfully released into the wild.

In 2022, VIS started a further transformation of Cherry Blossom Park's ecological environment, including the planting of Sumizome-zakura trees and Shōwa-zakura trees, supporting the existing Taiwan cherry trees and Japanese green oak trees, growing flowering plants, and setting up a featured landscape, to make Cherry Blossom Park become an ecological and landscape highlight in Hsinchu Science Park's surrounding area. By the end of 2022, VIS has planted 10 Taiwan cherry trees, 200 Japanese green oak trees, 33 Sumizome-zakura trees, and 4 Shōwa-zakura trees in Cherry Blossom Park. Additionally, carpet grass has been replanted to increase green cover spaces, and a 327-meter granite walking path has been resurfaced with its pattern being adjusted to match the public users' habit. Moreover, vines have been planted at pavilion areas, and the Cherry Blossom Tunnel, Petal Swing landscape artwork installation, and Falling Flower Pavilion have also been designed and established for Instagram selfies. It is hoped that people can enjoy the beautiful images created with efforts when taking a walk in the band-style Cherry Blossom Park. Besides, with the firefly release activities held by the side of floodwater detention pond in Aprils, the 1.09-hectare Cherry Blossom Park and its surrounding areas can be built into a feature with water accessibility: Delight in Cherry Blossoms by Day and Fireflies by Night, and an ecological emerald in the East District of Hsinchu City.

In addition to environmental maintenance and landscape reconstruction, we also actively promote the concept of environmental protection and ecological conservation. We hold regular environmental education course sessions, and invite neighboring community residents and students to participate. It is hoped that Cherry Blossom Park can not only be a popular site for recreation, but can also serve as an environmental education field for the promotion of sustainability education, and a contribution to the conservation of public green space.

By emphasizing interests of shareholders, VIS will continue to grow with employees, suppliers, communities and society, and other stakeholders in the future, and will keep following the sustainability principles and adhere to a down-to-earth spirit to achieve the co-existence and mutual-prosperity with the environment and society, and make progress in corporate sustainability management.



Sustainability Focus

Our Vision for Empowering the Disadvantaged

In 2022, VIS continued to implement social engagement programs in the five main areas of providing care for the disadvantaged groups and elderly citizens living alone as well as diverse empowerment, sustainability initiatives, and environmental conservation. 2022 also marks the eight consecutive year the company held a year-end donation drive. We have had long-standing partnerships with the Huashan Social Welfare Foundation, Eden Social Welfare Foundation, and a special program to spend Chinese New Year with seniors through the Old Five Old Foundation. In recent years, we have further set up annual themes and expanded our efforts to identify social welfare organizations in need of resources, inviting our employees and supply chain partners to join the endeavor.

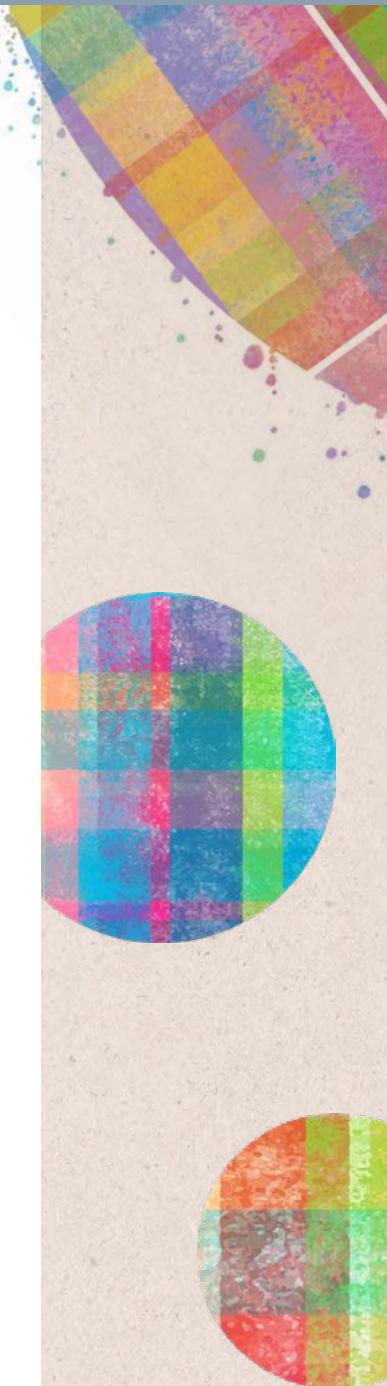
In 2021, we discovered that the epidemic had a serious impact on disadvantaged students, and thus embarked to provide additional resources to keep these students in school, focusing on high-risk groups mitigate high dropout rates. Building on these successes, during 2022, we focused on bringing resources to neglected areas with the theme of empowering the disadvantaged and expanded our outreach. We worked with The Garden of Hope Foundation, which serves women facing domestic violence, the Bornanew Youth Caring Association that helps rehabilitated youths reintegrate into society, and the Lezhi Charity Association, which brings together the homeless to repair the homes of elderly seniors living alone. With the enthusiastic participation of our kind-hearted colleagues, the amount of donations raised reached a new high.

In addition to the year-end donation drives, for the past two years, we have also been in close contact with front-line organizations working on empowerment and advancing the education of the disadvantaged. Our experience made us deeply aware of a systemic dilemma: As disadvantaged students have limited knowledge and understanding of career choices, most of them follow the footsteps of those in their community, emulating their career choices and lifestyles. This conundrum makes it difficult for

them to escape their original plight and make career choices that can have a greater impact on their lives. In light of this, VIS collaborated with social welfare organizations to put on semiconductor career lectures that combine basic industry knowledge and introduces related job. Through practical and proactive measures, we hope to empower these disadvantaged young students to think both practically and positively about their future by partnering with organizations to expose them to the semiconductor industry early on, helping them learn and understand different career possibilities.

The first seminar was held in 2022 at the Boyo Social Welfare Foundation's Zhudong Center for over 130 students from remote and disadvantaged middle schools in Zhudong, Jianshi, and Wufeng in the Hsinchu County. Our post-event survey showed that more than 80% of the student participants expressed that the event would help them in their future, and over 60% of them felt that they would consider careers in the semiconductor industry. "Although these children live close to the Hsinchu Science Park, they have always been outsiders who lack the opportunity to learn about the workings of the industry. This seminar organized by VIS has helped overcome this barrier," remarked Lin Qiaoting, supervisor of the Boyo Social Welfare Foundation. Building on the success for this first seminar, we then put on a second similar one at the end of 2022 at the Blue Sky Home, another long-time partner of ours. From now on, we will continue to hold related career lectures and also expand our target audience so that more students can learn about the semiconductor industry.

Education is the cornerstone of hope and progress. During the year of 2022, our company expanded efforts to empower the disadvantaged, ensuring that the goodwill of our colleagues reach a pinnacle of influence. In the future, VIS will continue to expand both our company and commitment to taking action to fulfill our corporate social responsibility. We hope that our commitment to empowerment will continue to have a positive reach and impact on society.



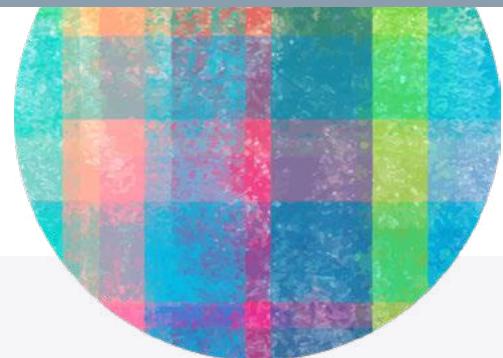
Achievements

Awards and Initiatives

- A constituent of S&P Global DJSI-World Index
- A constituent of S&P Global DJSI-Emerging Markets Index
- Join the RE100 global renewable energy initiative and pledges to source 100% renewable electricity for its global operations by 2040
- Carbon Disclosure Project (CDP): Rating A-
- Ranked in top 5% of TPEx listed companies (non-categorized) in the Corporate Governance Evaluation for nine consecutive years
- Ranked in top 10% of TWSE/TPEx listed companies (non-categorized electronic companies with a market capitalization more than NT\$10 billion) in the Corporate Governance Evaluation for nine consecutive years
- A constituent of TIP Taiwan ESG Index
- Taiwan Ratings: Rating of twA+/twA-1; Outlook: Stable
- EPA's National Enterprise Environmental Protection Award: Honor Award
- EPA's National Enterprise Environmental Protection Award: Silver Award
- Recognized by EPA as an Outstanding Adopter of Air Quality Purification Zone
- Recognized by Water Resources Agency, MOEA as an Excellent-performance Unit for Waterfront Land Adoption and Maintenance through Greening/Landscaping
- Ranked in top 10% outstanding enterprises by Ministry of Labor for the disclosure of occupational health and safety performance indicators in Corporate Sustainability Report
- Global Corporate Sustainability Awards (GCSA): Silver Award
- TCSA (Taiwan Corporate Sustainability Awards): Platinum Award for Electronic Information Products Manufacturing (Category 1)
- TCSA: Taiwan's Top 100 Corporate Sustainability Exemplary Award
- CommonWealth Magazine's Excellence in Corporate Social Responsibility Award: Ranked 18th
- Common Health Magazine's Corporate Health Responsibility (CHR) Awards (group with more than 5,000 employees): Silver Award
- Hsinchu City Government's Breastfeeding Friendly Room Certification: Outstanding
- Hsinchu County Private Enterprises and Groups Green Procurement Excellent-performance Unit: Special-contribution Award

Certification

- ISO 14001 Environmental Management System Certification
- ISO 14046 Product Water Footprint Verification
- ISO 14064-1 Greenhouse Gas Inventory Verification
- ISO 14067 Product Carbon Footprint Verification
- ISO 14051 Material Flow Cost Accounting (MFCA) Verification
- ISO 45001 Occupational Safety and Health Management System Certification (formerly OHSAS 18001)
- CNS 45001 Taiwan Occupational Safety and Health Management System Certification (formerly TOSHMS)
- ISO 46001 Water Efficiency Management Systems
- ISO 50001 Energy Management System Certification
- BS 8001 Circular Economy Verification
- Sony Green Partner Certification
- ISO 9001 Quality Management System Certification
- IATF 16949 Automotive Quality Management System Certification
- ISO 26262 Road Vehicle Functional Safety Certification
- QC 080000 Hazardous Substance Process Management (HSPM) System Certification
- ISO 27001 Information Security Management System Certification
- AEO: Authorized Economic Operator
- Enhanced Band Strategic Trade Scheme Certification



About VIS

As a leading specialty IC foundry service provider, Vanguard International Semiconductor Corporation (VIS) adheres to a customer-oriented business philosophy and firmly moves forward on the path of fulfilling corporate social responsibility.

\$51.69 billion

Annual consolidated revenue reached
NT\$51.69 billion

\$9.07

Earnings per share was NT\$9.07

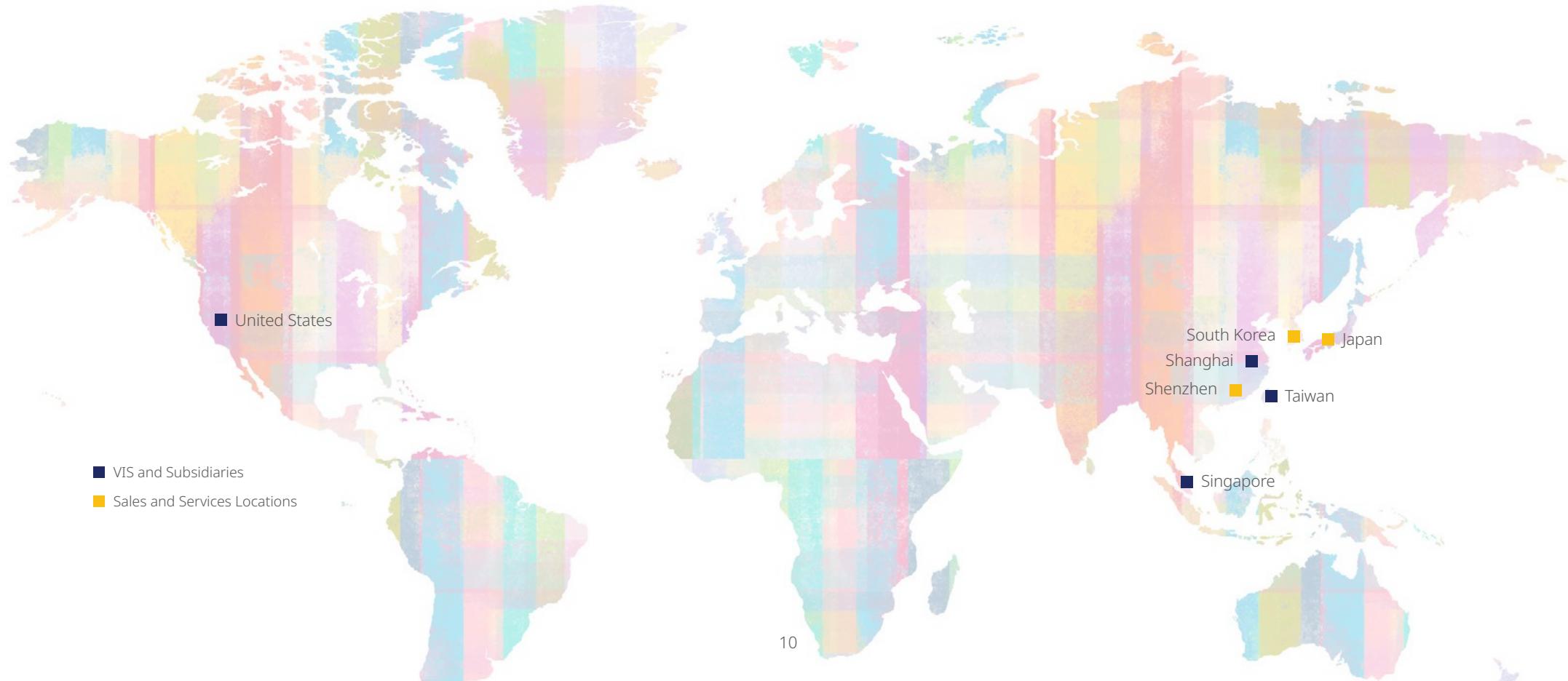
38%

Returns on equity was 38%



1.1 Company Profile

As a leading specialty IC foundry service provider, Vanguard International Semiconductor Corporation (VIS) adheres to a customer-oriented business philosophy and is committed to providing customers with the most competitive complete solutions and high value-added services. While taking into account shareholders' rights and interests, we also work together and grow together with our stakeholders including employees and suppliers as well as communities and society. VIS adheres to sustainable missions of implementing corporate governance, promoting environmental sustainability, establishing a friendly workplace, and contributing to social engagement. We co-prosper with society and environment. The VIS headquarters is located in Hsinchu Science Park, Taiwan. We currently have five 8-inch wafer fabs, four in Taiwan and one in Singapore. The number of employees in 2022 was about 6,641. To provide the best support services for customers around the world, in addition to our headquarters in Taiwan, VIS has also established sales and service offices in major IC locations around the world.



In 2022, VIS' annual consolidated revenues reached NT\$51.69 billion, an increase of 18% from the previous year. The net income was NT\$15.28 billion, an annual increase of 29%. The earning per share was NT\$9.07, an annual increase of 27%. The gross profit margin increased from 43.6% to 46.3% compared with previous year, and the returns on equity increased about 38%. With our operational resilience and solid industrial competitiveness, VIS has achieved record highs in annual consolidated revenue, net income, gross profit margin, and return on equity.

To pursue sustainable growth and meet customers' medium and long-term production capacity demands, VIS continued the expansion of Fab 3 in 2022. At the same time, Fab L3B and facilities which VIS acquired from AUO in 2021 were successfully handed over in early 2022 to become VIS Fab 5. VIS continues to upgrade facilities and expand our capacity.

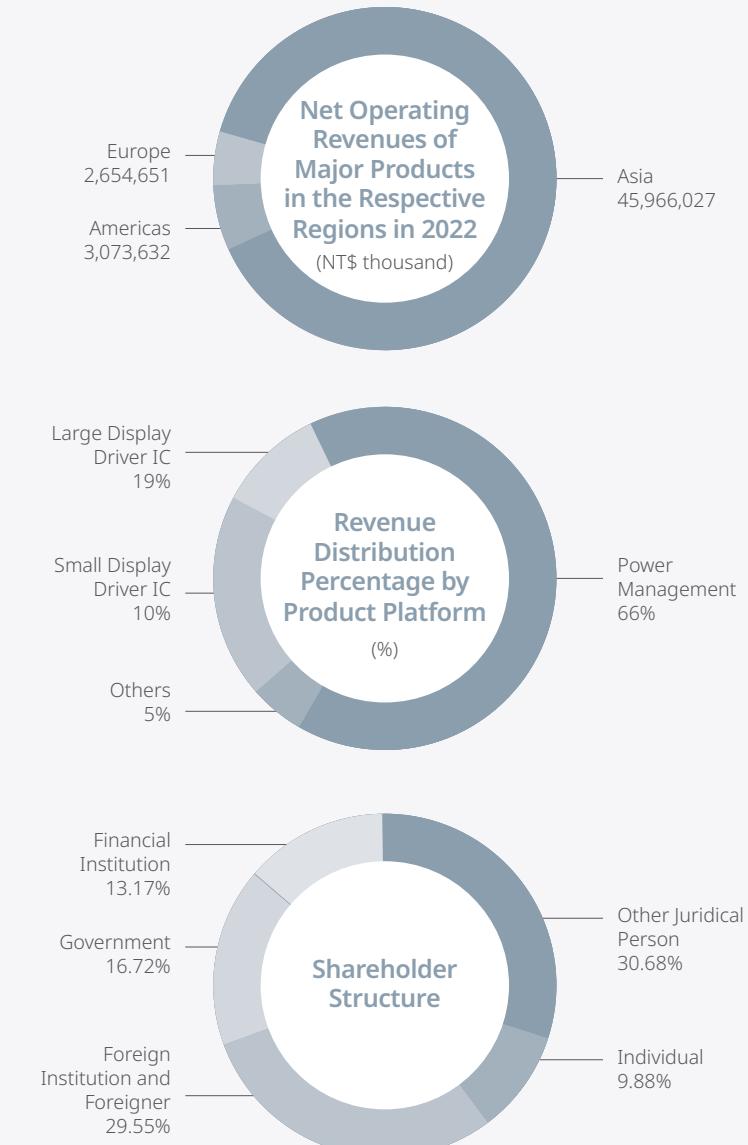
In 2022, VIS had an annual production capacity of approximately 3.15 million 8-inch wafers, with shipment amounting to 2.6 million 8-inch wafers at a capacity utilization rate of 87%. Annual capital expenditures were approximately NT\$19.4 billion. VIS is actively investing in R&D and advancing process and device technologies. We also plan to introduce more diversified product portfolios. Through upholding our corporate core values of integrity, customer-oriented, value-oriented, and commitment, and focus on our core business, we strive to enhance VIS' overall operation and implement corporate sustainability to maintain VIS' leading position in the area of special IC foundry service.



VIS Fab 5

Shareholder Structure

VIS was established in 1994 by Taiwan Semiconductor Manufacturing Company (TSMC), and 13 other companies. We were listed in March 1998 as a technology stock. The main shareholders include TSMC, the Executive Yuan's National Development Fund, and other juridical entities. The current shareholder structure is shown on the right side:



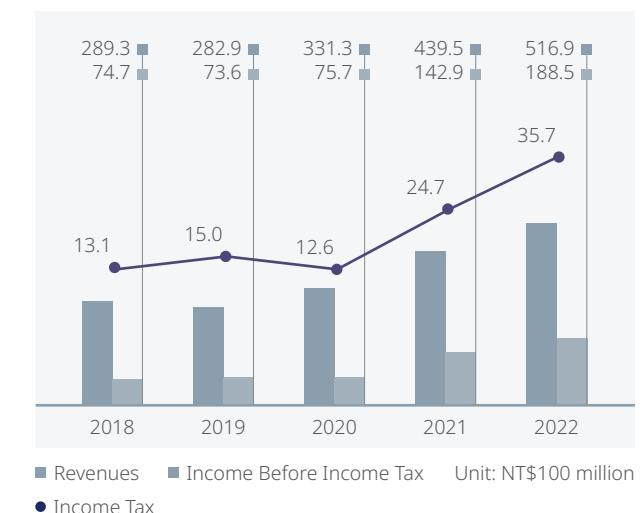
1.2 Financial Performance

VIS duly attends to our responsibilities and is committed to promoting our overall operation and taking the implementation of corporate sustainability as our core mission. A sound fund management strategy, a steady production capacity expansion plan, and good financial performance have created long-term and stable economic values for VIS and a solid financial foundation. VIS continues to deepen our long-term partnership with customers, while taking into account the shareholders' interests, to create values for all stakeholders.

In 2022 VIS proposed sustainable goals for financial performance, including (1) at least 25% for average returns on average shareholder equity and (2) average compound annual growth rate of operating income between 7% and 12%. In retrospect, the year of 2022 was a year full of challenges for the semiconductor industry. Factors such as geopolitical turmoil, interest rate hikes, inflation, and changes in consumer behavior in the COVID era all have a negative impact on economy. In addition, since the mid-2022, the ratio of semiconductor supply and demand has entered a period of structural changes. Overall, the industrial bloom has reversed significantly in the second half of 2022. For VIS, the year of 2022 was full of challenges and also a year of significant growth and opportunities. The annual consolidated revenue reached NT\$51.69 billion, an increase of 18% compared with NT\$43.95 billion from the previous year. Net income was NT\$15.28 billion, an annual increase of 29%. The earnings per share was NT\$9.07, an annual increase of 27%. The annual average gross margin increased from 43.6% to 46.3% compared with previous year. Returns on equity grew approximately 38%. By the means of our operational resilience and solid industrial competitiveness, VIS' annual consolidated revenue, profit, average gross margin, and returns on equity have all reached record highs and exceeded the originally set goals. VIS' contribution to national tax revenues reached NT\$3.63 billion.

VIS is committed to the transparency of financial information. In addition to regularly disclosing our latest financial report, we also deepen communication with investors to demonstrate VIS' corporate values through clear and quantifiable financial performance goals. In addition, owing to the rapid growth of 5G smartphones and the Internet of Things as well as the growing demand for automotive and power semiconductor wafers along with other favorable factors, the medium and long-term market demand for 8-inch wafers is still greater than supply. In the future, VIS will continue to expand production capacity in response to customers' needs and cooperate with customers. Accordingly, VIS has established short-term, medium-term, and long-term quantitative financial performance indicators as follows:

Income Before Income Tax and Income Tax



Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
	<ul style="list-style-type: none"> Annual consolidated revenue reached NT\$51.69 billion, an increase of about 18% compared with previous consolidated revenue of NT\$43.95 billion Return on shareholder equity increased approximately 38% 	<ul style="list-style-type: none"> Average compound annual operating revenue growth between 7% and 12% over the latest five years Average return on equity across economic cycles at least 25% over the latest five years 	<ul style="list-style-type: none"> Average compound annual operating revenue growth between 7% and 12% over the latest five years Average return on equity across economic cycles at least 25% over the latest five years 	<ul style="list-style-type: none"> Average compound annual operating revenue growth between 7% and 12% over the latest five years Returns on equity at least 25%

Consolidated Financial Information from the Past Three Years

Unit: NT\$ million

Category	Basic Elements	2020	2021	2022
Generated Direct Economic Value (A)	Revenues ^{Note 1}	33,282	44,139	52,739
Allocated Economic Value (B)	Operating costs ^{Note 2}	16,310	17,009	19,281
	Employee salaries and benefits ^{Note 3}	9,354	12,780	14,536
	Payments to investors ^{Note 4}	5,245	5,736	7,375
	Payments to the government ^{Note 5}	1,308	2,518	3,631
	Community investment ^{Note 6}	5	12	11
Retained Economic Value (A-B)		1,060	6,084	7,905

Note 1: Revenues include net operating revenues as well as non-operating income and expenses.

Note 2: Operating costs include cost of revenue and operating expenses. Employee salaries and benefits, payment of housing tax, stamp duty, official vehicle tax, other taxes, and community investment are excluded.

Note 3: Including bonuses, pensions, labor insurance, health insurance, and other employment expenses.

Note 4: Cash dividends distributed in the current year.

Note 5: Including company income tax, housing tax, stamp duty, official vehicle tax and other taxes.

Note 6: Referring to public welfare expenditures such as donations to government agencies and public welfare associations as well as other types of charities that are good for society.

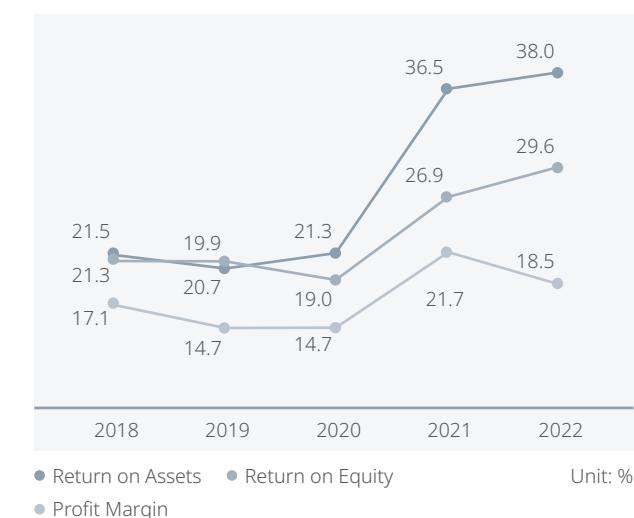
VIS' profitability comes from the efforts of all employees. In 2022, the average income per employee is NT\$7,671 million, and the average net profit per employee is NT\$2,267 million.

On a foundation of stable business growth, cash dividends have been distributed to shareholders every year since 2005. The earnings distribution in the past five years is as follows:

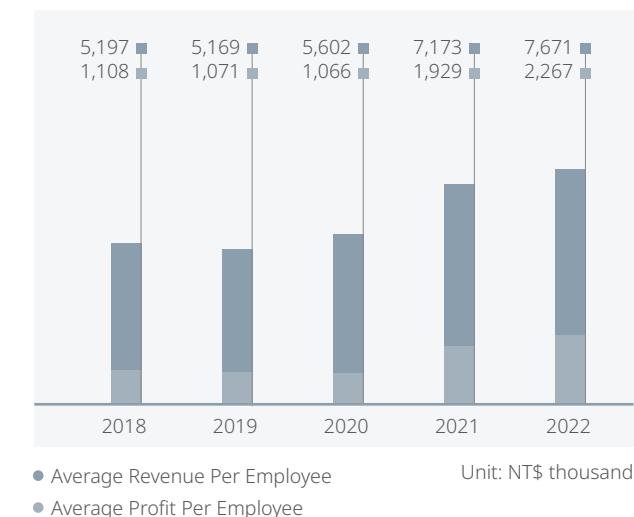
Category	2018	2019	2020	2021	2022
Earnings Distribution (NT\$ billion)	5.24	5.24	5.74	7.38	7.38
Amount (NT\$)	3.2	3.2	3.5	4.5	4.5

In addition to distributing cash dividends to shareholders, VIS also invests in capital expenditures and R&D in accordance with the direction of our business strategies. In 2022, VIS continued to invest in the fifth fab, factory facilities, and right-of-use assets to expand production capacity. We also actively invest in research and development and refining manufacturing process and component technology to ensure VIS' growth.

Company Profitability



Average Revenue and Profit Per Employee



1.3 Tax Policy

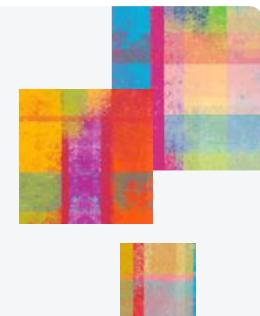
In response to the international trend of tax governance and multinational operating requirement, VIS has established the "VIS Tax Governance Policy" (hereinafter referred to as "the Policy") to enhance shareholder value, carry out sustainable development and fulfill its commitment to the corporate social responsibility.

Tax Governance Policy

In order to ensure effective implementation of tax governance mechanisms, the Board of Directors approved overall tax governance policies based on operational strategies and the business environment. VIS implement the conservative tax governance by complying with tax laws thoroughly, manage tax risk and take overall consideration of optimized tax cost. VIS does not avoid tax illegally without commercial substance, and endeavor to fulfill the social responsibility and the obligations of corporate citizen. The Policy was approved by the Board of Directors became effective on May 5, 2022. All subsidiaries included in the consolidated financial statements, both domestic and foreign, shall comply with the Policy.

The Tax Governance Principles

1. Act all times in accordance with tax laws, regulation and legislative spirit. File tax accurately and punctually in the jurisdictions where VIS operates.
2. Inter-company transactions are based on arm's-length principle, in compliance with internationally accepted transfer pricing guidance published by OECD. Not to use transfer pricing arrangement for manipulating profit.
3. Make appropriate planning of tax incentives and comply with regulation when use incentives.
4. Consider tax impact as part of major business decision.
5. Perform the tax planning rationally. Investment structures are in line with operation consideration. Not to use tax havens for purpose of tax avoidance, and not to undertake unusual tax structures to transfer value to low tax jurisdictions.
6. Develop honest and mutually respectful relationship with tax authorities, involve in the tax reform and provide the suggestions from practical viewpoint.
7. Tax related information is disclosed transparently in public financial reports, annual reports and corporate sustainability reports.
8. Maintain and update regulatory change all the time. Comprehensively assess the implications of changes in applicable tax laws and consider the adaptive responses. Managing tax risk to avoid disputes, consulting with tax advisors to obtain professional advice and opinion on uncertainty or complexity tax issues. Significant tax issue shall be reported to the Board of Directors.
9. Supporting tax personnel to ensure that they have the skills and ability to effectively and accurately fulfill their tax responsibilities by providing continuous training.



The location of VIS primary operations are in Taiwan and Singapore. VIS comply with tax laws and regulation in the jurisdictions where VIS operates. As the responsible taxpayer, VIS proactively complied with the government's tax regulations, promotion of tax administration, therefore, earned the recognition of the National Taxation Bureau, ROC, and won the Excellent Business Enterprise Award issued by the Ministry of Finance in 2014 and 2020, respectively. Any amendments of taxation laws and regulations will affect the company's effective tax rate and operational performances. In order to effectively manage tax risks, VIS maintain and update regulatory change all the time. Comprehensively assess the implications of changes in applicable tax laws and consider the adaptive responses. In addition, VIS devotes talent training, offer regular internal tax courses and encourage staff to join external seminars and courses; offer regular updates on domestic and international tax law to maintain timely control on tax law and ensure internal personnel have the skills and ability to effectively and accurately fulfill their tax responsibilities. With regard to major uncertain or complex tax issues, to avoid disputes, VIS and its subsidiaries will discuss and consult with external experts or apply for ruling from the tax authorities. Significant tax issue shall be reported to the Board of Directors.

VIS' primary activities, financial and tax information for each tax jurisdiction are list as following:

1. The Names of the Main Tax Resident Entities, Primary Activities and Number of Employees for Each Tax Jurisdiction in Which We Operate

Category	Taiwan	Singapore
Companies' Names	Vanguard International Semiconductor Corporation	Vanguard International Semiconductor Singapore Pte. Ltd.
Primary Activities	Manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing of masks	Manufacturing, selling and packaging
Average Number of Employees in 2022 ^{Note}	5,792	940

Note: The average number of employees is calculated by summing the number of employees at the end of each month in 2022 and dividing by 12 months.

2. Revenue, Income Before Income Tax, Income Tax and Income Tax Paid for Each Tax Jurisdiction in Which We Operate

Unit: NT\$ billion

Category	Tax Jurisdiction	2021		2022	
		Amount	%	Amount	%
Revenues	Taiwan		86		88
	Singapore	43.95	14	51.69	12
	Other		0		0
Income Before Income Tax	Taiwan		93		98
	Singapore	14.29	6	18.85	1
	Other		1		1
Current Income Tax	Taiwan		100		100
	Singapore	2.67	0	3.95	0
	Other		0		0
Income Tax Paid	Taiwan		100		100
	Singapore	1.66	0	2.90	0
	Other		0		0

Note: VIS Singapore operating income was positive in 2022 continuously. As the accumulative loss in previous years were carry forward to 2022, therefore, VIS SG was no need to pay the corporate income tax after deduction this accumulative loss.

3. Consolidated Financial Statements Tax Information

Unit: NT\$ billion

Category	2021	2022	Average Tax Rate for Two Consecutive Years
Income Before Income Tax	14.29	18.85	
Income Tax	2.47	3.57	
Effective Tax Rate	17%	19%	18%
Income Tax Paid	1.66	2.90	
Cash Tax Rate	12%	15%	14%

VIS' effective tax rate were 19% and 17% in 2022 and 2021 respectively, which were lower than the 20% of R.O.C statutory corporate income tax rate. The lower effective tax rates were mainly because of the R&D tax credit granted in accordance with the R.O.C. Statute for Upgrading Industries and the Statute for Industrial Innovation.

The cash effective tax rate in 2022 and 2021 were 15% and 12% respectively, which were both lower than the statutory corporate income tax rate 20%. The major reason is that the income tax expense estimated for each fiscal year, other than the actual cash payment in the following year, which is a time difference, i.e. 2022 and 2021 cash payment for tax was attributed to 2021 and 2020 earning and profit respectively. In addition, as the continuous growth on profit in 2022 and 2021 compared to previous years were resulted in the lower cash effective tax rate in both years based on such calculation rule.

In addition to income tax, VIS also pays other taxes, including housing tax and stamp duty. In 2022, we paid taxes of NT\$3.63 billion. The actual tax paid to the government in that year was NT\$2.96 billion.

Unit: NT\$ billion

Category	2018	2019	2020	2021	2022
Tax Expenses ^{Note}	1.33	1.53	1.31	2.52	3.63

Note: Tax expenses include business income tax, housing tax, stamp duty, official vehicle tax, and other taxes.

4. Government Subsidies

In 2022, VIS obtained subsidies of approximately NT\$212.65 million from Singapore government, which is mainly used for personnel training, research and development, and employees' salaries.

Sustainable Governance

In order to pursue long-term and stable profits, we quickly responded to the changes in the market, with continuous innovation momentum, to enhance the value of our products, to establish VIS' long-term business, and to create a win-win situation with our customers.

13 items

There are 13 topics of material interest to stakeholders

16 topics

A total of 16 items correspond to the United Nations Sustainable Development Goals

2.1 Corporate Sustainability Policy

Vanguard International Semiconductor Corporation (VIS) is a leading specialty IC foundry service provider in the world. Providing customers with the most competitive and comprehensive solutions, as well as high value-added services, which are the core of our development and the foundation of our sustainability. In order to pursue long-term and stable profitability, we have quickly responded to market changes and deepened cooperations with our customers to create a win-win situation. At the same time, we have collectively matured along with our employees, suppliers, community and society, while also taking care of our shareholders' rights and interests, and following the belief of sustainability to co-prosper with the environment and society.



2.2 Corporate Sustainability Management

2.2.1 Corporate Sustainability Committee

In order to fulfill its corporate social responsibility and promote the sustainable development of ESG (environmental, social, and economic), VIS established our Corporate Social Responsibility Policy in 2012 and set up the Corporate Social Responsibility Committee to build up our Corporate Social Responsibility management system. In 2020, VIS actively responded to the Corporate Governance 3.0 Blueprint for Sustainable Development promoted by the Financial Supervisory Commission by revising the relevant policies and renaming the Corporate Social Responsibility Policy and the Corporate Social Responsibility Committee to Corporate Sustainability Policy and Corporate Sustainability Committee in order to meet the international development trend and practical operational needs.

The Corporate Sustainability Committee, with the Chairman serving as Chairman of the committee and the Chief Financial Officer as the Vice Chairman, leads VIS in setting corporate sustainability goals and development guidelines, regularly reviewing and supervising the progress of implementation of each business area, and gathering the opinions of stakeholders to report to the Board of Directors every six months. The Board of Directors audits, monitors and guides the direction of VIS' ESG development, and gives instructions for amendments, including: (1) Overseeing the risks and opportunities of the various "economic, environmental and social" issues evaluated and managed by the Corporate Sustainability Committee; and (2) Approving policy and goal revisions for sustainability-related issues. If a donation amount is relatively high or if VIS is involved in a major incident, then it will be listed as a board meeting

resolution item or an interim meeting will be convened by the board to reach a resolution. In 2022, the Board of Directors approved an ESG donation proposal in response to National Yang Ming Chiao Tung University's Scholarship Program for Ukrainian Students, donating NT\$2 million in scholarships for two Ukrainian students to study at the university in Taiwan, with the hope that this will have the effect of getting the ball rolling and contribute to the cultivation of outstanding talent. The resolutions of the Board of Directors can be found at: https://www.vis.com.tw/en/cg_board.

The Corporate Sustainability Committee is composed of representatives from each business unit, and is responsible for the planning and implementation of various corporate sustainability tasks in accordance with the members' respective roles.

The Corporate Sustainability Committee meets regularly on a quarterly basis, with representatives from each business unit reporting on business progress and future plans. Through brainstorming, jointly reviewing the effectiveness of implementation and improvement plans, the Committee is continuously promoting sustainable growth in economic, social and environmental aspects of VIS. In February 2023, the Corporate Sustainability Committee followed the Board of Directors' recommendation and proposed a medium- to long-term plan for ESG social engagement in the five main areas of special projects, which was supported by the Board of Directors, and will continue to move toward sustainable development to achieve our specific goals.



2.2.2 Highlights of Sustainability Issues Presented to the Board of Directors



Corporate Governance

- The "VIS Tax Governance Policy" was established to respond to the international trend of multinational operations and tax governance.
- Introduced the Taiwan Intellectual Property Management System (TIPS).
- Held the training course "Risks and Opportunities of Climate Change" to enhance the knowledge and professional capabilities of directors in overseeing and guiding sustainable development in response to climate change issues.
- In order to strengthen the diversity of board members, Mr. Liang-Gee Chen, an independent director, was elected and an induction seminar for new directors was held. Independent directors account for 50% of the board of directors' seats.



Environmental Sustainability

- Joined the Global Renewable Energy Initiative (RE100) and pledged to use 100 percent renewable energy in our global operations by 2040.
- We have established the "VIS Commitment to Biodiversity" to achieve the goal of creating sustainable value by living in harmony with the environment.
- The Renewable Energy Development Act requires large consumers to install 10% of their contracted capacity in renewable energy by 2025, and VIS will meet this target ahead of schedule by 2023, from both purchased and self-built sources.
- Set a 2050 net-zero emissions target and carbon reduction pathway, setting a carbon reduction target of a 70% reduction in carbon emissions by 2040 as compared to 2021.
- Introduced ISO 46001 water efficiency management system.
- Completed greenhouse gas, carbon footprint, and water footprint inventories and obtained SGS certification.
- Completed QC 080000 Hazardous Substance Process Management System verification and obtained DQS certification.



Friendly Workplace

- Strengthened/implemented anti-pandemic policies, paid attention to pandemic developments, adjusted anti-pandemic measures, tracked pandemic health care for 5,389 people, and promoted vaccination.
- Actively implemented health management and promoted health improvements: H2U Health Bank+ app was downloaded by 3,395 people, providing employees with instant access to health examination reports and health grading.
- Promoted Healthy Exercise 2.0, with a total of 5,220 people using exercise coupons.
- Organized weight loss and online walking activities, with a total of 2,808 participants.



Social Engagement

- In the course of the pandemic, we continued to donate to 12 long-standing social welfare groups.
- For the eighth consecutive year-end donation: employees donated about NT\$4.37 million, and suppliers and customers were invited to join the effort.
- Participated in the Scholarship Program for Ukrainian Students of National Yang Ming Chiao Tung University to sponsor two Ukrainian students to study in Taiwan for four years.
- Partnered with the Boyo Social Welfare Foundation and the Blue Sky Home of the Catholic Church to hold a seminar on semiconductor careers for disadvantaged groups and junior high and elementary school students to share knowledge on semiconductor science.
- Initiated "Order Instead of Donate" campaign to support disadvantaged groups.
- Continued executing the "Firefly Restoration Project", a total of 4,500 fireflies were released into the wild in the end of 2022.

2.3 Material Topics and Stakeholders Communication

In 2022, VIS followed the latest GRI (Global Reporting Initiative) guidelines published in 2021 and the AA1000 Stakeholders Engagement Standards (SES), as well as domestic and international sustainability-related guidelines and material topics from peers in the industry. After discussions among the members of the Corporate Sustainability Committee, 22 sustainability issues were decided upon, and in accordance with the Double Materiality principle proposed by the European Union, the actual/potential and positive/negative impact levels were considered as criteria and dimensions. We then completed the questionnaires and conducted surveys to evaluate the economic, environmental, and human rights aspects of VIS' business from seven categories of key stakeholders who have close relationships with VIS or are sustainability professionals, including investors/shareholders, employees, customers, suppliers/partners, the media, government agencies/authorities, and community/non-profit organizations, to refine the number of questionnaires distributed this year and to improve the relevance of the results to VIS' current situation. In addition, 13 issues were selected as material topics on sustainability for the year 2022 for inclusion in VIS' risk management program and were reported to the Board of Directors. Please refer to section 3.2 Risk Management for a description of the risk management process at VIS.

2.3.1 Materiality Analysis

1

Stage I: Identification

With reference to the principles outlined in the AA1000 Stakeholder Engagement Standard as benchmarks, the representatives of each business unit on the Corporate Sustainability Committee defined "internal or external groups or individuals who have an impact on or are affected by the company" in relation to those with whom they deal in their daily operations, in order to determine the stakeholders of VIS.

2

Stage II: Analysis

By focusing on sustainability issues related to our operations through the themes of the Global Sustainability Initiative's (GRI) guidelines, domestic and international industry issues of concern, and global sustainability trends, we identified a list of sustainability issues for VIS.

VIS Corporate Sustainability Committee sent online and paper questionnaires to key stakeholders based on stakeholder categories to assess the economic, environmental and human rights impact ranking.

3

Stage III: Confirmation

The material topics were included in the key points of communication with stakeholders and in the scope of risk management, we reviewed whether the report presented a complete assessment of VIS' corporate sustainability management performance and impact identification, submitting to the Board of Directors, and disclosed in this report.

Step 1: Identify Stakeholders

7 Major Categories of Stakeholders

VIS values the voices of all stakeholders, and the Corporate Sustainability Committee has selected seven key communication targets based on the five dimensions of Dependency, Responsibility, Tension, Influence, and Communication Frequency, including investors/shareholders, employees, customers, suppliers/partners, the media, government agencies/authorities, and community/non-profit organizations.

Step 2: Identify Sustainability Issues

22 Sustainability Issues

Based on the themes of the Global Reporting Initiative's (GRI) guidelines, product specificity, domestic and international industry issues of concern, and global sustainability trends, we focused on the sustainability issues relevant to our operations, and ultimately identified 22 sustainability issues.

Step 3: Investigate the Degree of External Impact

235 Questionnaires

Through the distribution of questionnaires to key stakeholders with close ties to VIS and the receipt of specific feedback, 235 questionnaires were collected to examine the impact of each issue on the economy, environment, and human rights aspects.

Step 4: Analyze the Impact of Business Operations

16 Executives

The Corporate Sustainability Committee of VIS invited the management team and executives, such as the President, and the Vice President & CFO, to participate in the completion of a questionnaire to find out the actual and potential, positive and negative impacts of economic, product, environmental, and social issues on operations, including but not limited to: purchasing, finance, human resource management, and business. Through the participation of various executives, we increased the relevance of each issue to VIS.

Step 5: Mapping a Matrix of Material Topics

13 Topics

By calculating the weight of each stakeholder through the executive questionnaire and adjusting the percentage of stakeholder responses, a materiality matrix was generated based on the principle of double materiality, and 13 key material topics were selected through a rigorous discussion process.

Step 6: Review the Disclosure Contents

11 Standards

The 13 material topics were compared with the 11 GRI topic-specific standards, and the disclosure management guidelines and reporting requirements were followed.



VIS conducted a stakeholder survey using both online and paper questionnaires. A total of 235 questionnaires were returned, of which 229 were valid, including 126 employee questionnaires, 10 customer questionnaires, 7 shareholder questionnaires, 73 supplier questionnaires, 7 community, non-profit, and non-governmental organization questionnaires, 3 government and competent authority questionnaires, and 3 media questionnaires. A total of 16 supervisory questionnaires were returned, with 14 valid questionnaires. In order to ensure that the opinions of our employees were heard accurately, the valid questionnaires were distributed to employees of different levels, units, and nationalities, so that the samples were representative and reflected the opinions of all levels as much as possible, demonstrating that all employees are treated equally with equal importance by VIS.

Compared to the previous year's assessment, Customer Relationship Management is a new issue category for this year, and after a rigorous evaluation and analysis, it was ranked as the number one material topic for this year. VIS believes that through good customer relationship management, obtaining customer feedback and opinions, companies can identify customer needs and conduct reviews to improve them, so that they can build a deep and trusting relationship with their customers and possess solid competitiveness.

In addition, four new issues, including Energy Management, Waste Management, Integrity Management, and Innovation and R&D, were added as material topics this year compared to the previous year, which shows that VIS is putting more emphasis on each aspect year over year and striving to become a leading company in all aspects of sustainable development. In the area of climate change, we are aware of the importance of this issue and the high correlation between climate change and energy management, so we took the initiative to combine the two issues of Energy Management and Climate Change after the completion of the assessment of the issues, in order to ensure a comprehensive focus by VIS on the environment.

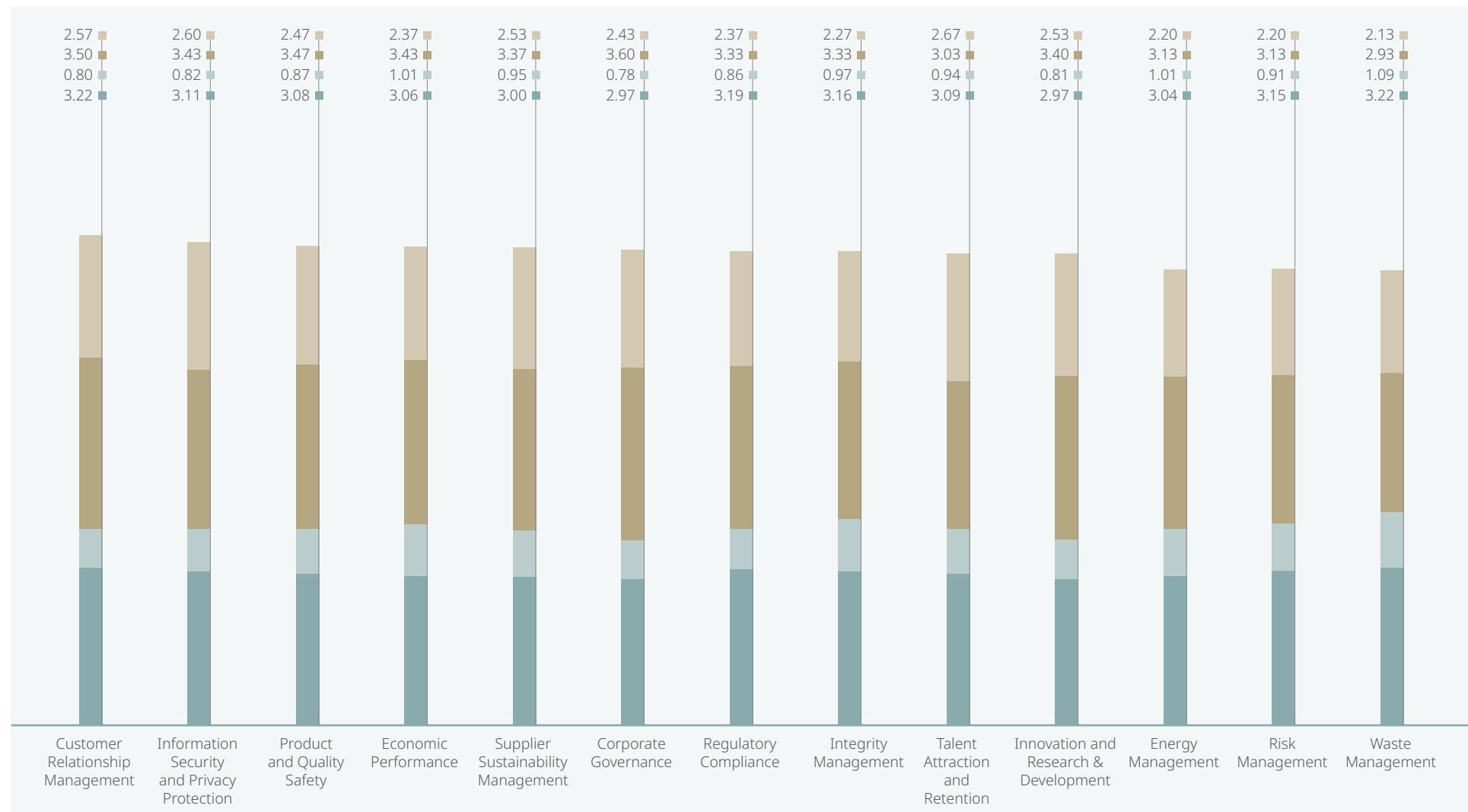
Adjustments to the Names of Material Topics for 2022

Material Topics	Difference	Reason for Adjustment
Climate Change and Energy Management	Combined with Climate Change	Because of the high correlation between Climate Change and Energy Management and the comprehensive nature and importance of Climate Change, this year, the two topics are combined into one material topic.
Product Quality and Safety	Name Adjustment	Renamed Quality Control to Product Quality and Safety.

Material Topics for 2021 and 2022



Statistical Results of VIS Double Materiality Topics' Positive/Negative Impacts



■ Positive Impact on Stakeholders

■ Negative Impact on Stakeholders

■ Positive Impact on the Enterprise

■ Negative Impact on the Enterprise

Note: Although VIS has taken the initiative to combine Climate Change and Energy Management, the statistical results here only present the positive and negative impact scores of Energy Management.

VIS' Approach to Managing Material Topics

Key Performance Indicators	Customer Relationship Management			
	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Customer Satisfaction	Goal: Above 90% Status: 95.7%	Above 90%	Above 90%	Above 90%

Value Chain Impact	Upstream	Procurement	●	Customer Engineering Service Department: To communicate with customers, understand their needs and cooperate with internal organizations to provide the best products and services to customers. Quality System Management Department: Execute annual customer satisfaction survey.
	VIS Operations	Wafer Fabrication	●	
		Packaging/Testing	●	
	Downstream	Customer Usage	●	
	Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		Failure to properly handle customer needs in a timely manner may result in lower customer satisfaction, which in turn may affect VIS' potential future interests and have a negative impact on the economic side.	
Management Policy		VIS is committed to ensuring that our customers' opinions are understood and properly addressed in order to provide them with the best possible products and services.	Annual customer satisfaction surveys are conducted regularly to understand customer satisfaction with various aspects of technology, quality, delivery, and service of VIS. 3.5 Quality and Customer Service - -	



Information Security and Privacy Protection

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Information Security Incidents	Goal: No information security incidents occurred Status: Achieved	Zero information security incidents per year	Zero information security incidents per year	Zero information security incidents per year
ISO 27001 Certification	Goal: ISO 27001 certified Status: Achieved	ISO 27001 certified every year	Obtain ISO 27001 certification every year and complete the new version conversion	ISO 27001 certified every year

Value Chain Impact	Upstream	Procurement	●	Responsible Unit Chief Information Security Officer (CISO): Jonathan Chang, Associate Vice President. ITEC: Integrated Information Security Management Unit. CIM: ISO 27001 Information Security Audited Unit.	
	VIS Operations	Wafer Fabrication	●		
		Packaging/Testing	●		
	Downstream	Customer Usage	●		
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		By focusing on the protection of information value, VIS will gain the trust of our customers and other business partners, enhance VIS' economic efficiency, and reduce the leakage of privacy and confidentiality through sound information security management to maintain VIS' competitive advantage and avoid impact on human rights.			
Management Policy		VIS focuses on the value of information generated by VIS' design, research and development, manufacturing, sales, and other functional units, keeps our commitment to customers, suppliers, and other business partners information due diligence, establishes management practices based on international information security standards, establishes corporate security precautions, and ensures that information assets are properly protected in order to maintain VIS' competitive advantage.			
Management Approach			<ul style="list-style-type: none"> Quarterly performance review and continuous improvement by the PIP Committee Ensure that the information security management system continues to comply with ISO 27001 certification 		
Corresponding Chapters			3.2.5 Information Security 3.5 Quality and Customer Service		
Corresponding GRI Topic-specific Standards			GRI 418 Customer Privacy		
Corresponding SASB Standards			-		



Product and Quality Safety

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)			Mid-term Goals (2024–2028)		Long-term Goals (2028–)
Third Party Audit Certification	<p>Goal: Third-party audit certification to ensure that the quality management system and hazardous material process management system continue to meet the requirements of ISO 9001/IATF 16949 and IECQ QC 080000</p> <p>Status: Achieved</p>				Continuous compliance with quality management system ISO 9001/IATF 16949 and hazardous material process management system IECQ QC 080000 requirements		
Continuous Quality Improvement Monetary Benefits	<p>Goal: NT\$1.137 billion</p> <p>Status: About NT\$1.282 billion</p>		NT\$1.119 billion		NT\$1.3 billion	NT\$1.3 billion	
Product Specifications	<p>Goal: 100% compliance with non-hazardous substances related regulations and customer specifications</p> <p>Status: Achieved</p>		100% compliance with non-hazardous substances related regulations and customer specifications				

Value Chain Impact	Upstream	Procurement	●	Responsible Unit	<p>Operation Organization: We continuously optimize our manufacturing capabilities, reduce product defects and improve process control.</p> <p>Quality Reliability Assurance Division: Working together with the operation organization, we have applied advanced statistical techniques and quality tools to establish a real-time prevention system to detect abnormalities early and prevent quality incidents from affecting customers.</p>		
	VIS Operations	Wafer Fabrication	●				
		Packaging/Testing	●				
	Downstream	Customer Usage	●				
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		<p>Abnormal quality or low yield of wafer products will cause losses to VIS and customers.</p> <p>Abnormal quality of raw materials may lead to product scrap and company loss.</p>		Management Approach	<p>By strengthening quality culture, improving quality capability, managing hazardous substances in products, and realizing quality applications, we are strengthening product quality and safety, continuously optimizing manufacturing capabilities, reducing product defects, and improving processes, and ensuring that we pass the requirements of our quality management system and hazardous substance process management system.</p>		
Management Policy		<ul style="list-style-type: none"> We are committed to providing excellent service and products to be the first choice of wafer fabrication for our customers worldwide We are concerned about the quality of our products, and we take a proactive approach to problems and deficiencies, promoting effective preventive measures to ensure that our customers receive the highest quality products and the best service 					
		<p>Corresponding Chapters</p> <p>3.5 Quality and Customer Service</p>					
		<p>Corresponding GRI Topic-specific Standards</p> <p>-</p>					
		<p>Corresponding SASB Standards</p> <p>TC-SC-410a.1</p>					



Economic Performance

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Return on Shareholders' Equity	Goal: Average over the last five years ≥ 25% Status: Achieved	25% or more on average over the last five years	25% or more on average over the last five years	25% or more on average over the last five years
Compounded Average Annual Growth Rate of Operating Revenue	Goal: Average 7%-12% over the past five years Status: Achieved	Average 7%-12% over the past five years	Average 7%-12% over the past five years	Average 7%-12% over the past five years

Value Chain Impact	Upstream	Procurement	●	The Accounting Division regularly reports financial data to the President on VIS' operating results to track operating performance in order to continue to create value for VIS and enhance shareholders' equity.
	VIS Operations	Wafer Fabrication	●	
		Packaging/Testing	●	
	Downstream	Customer Usage	●	
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		Through the pursuit of favorable financial performance to ensure the achievement of the goal of sustainable business operation, VIS has been able to create long-term and stable value for VIS through the growth of operating income and the continuous improvement of profitability, and has continued to make good use of profits to contribute positively to environmental protection, employee care and social give-back, bringing positive impact.		<p>Management Approach</p> <ul style="list-style-type: none"> Continued expansion of production capacity, decentralization of production sites and establishment of diverse product capabilities The financial information is disclosed in accordance with the International Financial Reporting Standards (IFRSs) approved by the Financial Supervisory Commission Regularly hold management review meetings and track operational performance to fully grasp the operational status and monitor the progress of achievement Board of Directors meetings are held quarterly to ensure the foresight and feasibility of management strategies
Management Policy		<ul style="list-style-type: none"> Procedures for Handling Material Inside Information Procedures for the Acquisition or Disposal of Assets Tax Governance Policy Procedures for Lending Funds to Others Procedures for Derivative Commodity Transactions Procedures for Endorsement and Guarantee 		<p>Corresponding Chapters</p> <p>1.2 Financial Performance</p> <p>Corresponding GRI Topic-specific Standards</p> <p>GRI 201 Economic Performance</p> <p>Corresponding SASB Standards</p> <p>-</p>



Supplier Sustainability Management

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Tier 1 Suppliers Sign the VIS Supplier code of Conduct and Fill the Sustainability Management Self-assessment Questionnaire	Goal: Completion rate of 100% Status: Achieved	Completion rate of 100%	Completion rate of 100%	Completion rate of 100%
Tier 1 Suppliers Sign the VIS Supplier Code of Conduct and Implement Internal Education and Training	Goal: Completion rate of 100% Status: Achieved	Completion rate of 100%	Completion rate of 100%	Perform conflict minerals due diligence on suppliers
Perform Conflict Minerals Due Diligence on Suppliers	Goal: 100% compliance rate of conflict-free production Status: Achieved	100% compliance rate of conflict-free production	100% compliance rate of conflict-free production	100% compliance rate of conflict-free production
With 2020 as the Base Year, Suppliers will be Required to Continuously Improve Processes, Increase Yields and Reduce Resource Consumption	Goal: Cumulative improvements reached 18 Status: Achieved	Cumulative improvements to reach 27	Cumulative improvements to reach 45	Cumulative improvements to reach 60
Supplier Audits	Goal: Tier 2 Significant suppliers join sustainability assessment (ESG) Complete ESG field reviews for 1-third of significant suppliers Status: Achieved	Tier 2 Significant suppliers join sustainability assessment (ESG) Complete 1-third of ESG field reviews for significant suppliers each year (One round completed every 3 years)		
Supplier Management	Goal: Excluding one-time transactions, 100% of all Tier 1 Significant suppliers with annual transaction volume over NT\$2 million are subject to sustainability risk surveys Status: Achieved	Excluding one-time transactions, 100% of all Tier 1 Significant suppliers with annual transaction volume over NT\$2 million are subject to sustainability risk surveys	Tier 2 Significant suppliers execute sustainability risk surveys for 1-third each year (One round completed every 3 years)	

Value Chain Impact	Upstream	Procurement	●	Responsible Unit Equipment Procurement & Logistics Management Division Material Procurement and Supply-chain Management Division
	VIS Operations	Wafer Fabrication	●	
		Packaging/Testing	●	
	Downstream	Customer Usage	●	
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS	By continuously improving the quality of supplies, saving costs, shortening lead times, promoting sustainable development, and strengthening partnerships with suppliers to maximize profits, we have a positive impact on the economy.			Management Approach We work with suppliers over the long term to build and develop strong relationships and urge them to commit to creating operating models that are responsible for the environment, society and corporate governance which are comply to RBA code of conduct.
Management Policy	<ul style="list-style-type: none"> • Procurement Practices • Supplier Code of Conduct for VIS 			Corresponding Chapters 5. Responsible Supply Chain
				Corresponding GRI Topic-specific Standards <ul style="list-style-type: none"> • GRI 204 Procurement Practices • GRI 308 Supplier Environmental Assessment • GRI 414 Supplier Social Assessment
				Corresponding SASB Standards -



Corporate Governance/Regulatory Compliance/Integrity Management

Note: "Significant Violation" is defined as a single incident with an accumulated fine of NT\$1 million or more.

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024-2028)	Long-Term Goals (2028-)
Corporate Governance Evaluation	Goal: Top 5% of the highest ranking Status: Achieved	Top 5% of the highest ranking		
Announcement of New/Amended Regulations	Goal: The Legal Department announced information on new/amended laws and regulations once a month, so that relevant units can regularly review and take corresponding measures Status: Achieved		Regularly announce information on new/amended laws and regulations	
Education, Training and Advocacy	Goal: Complete training and advocacy according to business attributes Status: Achieved		Complete training and advocacy according to business attributes	
Regulatory Compliance	Goal: No litigation related to anti-competitive behaviors, antitrust or monopoly regulations violations No significant violations of the law <small>Note</small> Status: Achieved		- No litigation related to anti-competitive behaviors, antitrust or monopoly regulations violations - No significant violations of the law <small>Note</small>	
Coverage Rate of the Code of Ethics and Integrity in Business Course	Goal: Coverage rate maintained at 100% Status: Achieved		Coverage rate maintained at 100%	

Value Chain Impact	Up-stream	Procurement	
	VIS Operations	Wafer Fabrication	
		Packaging/Testing	
	Down-stream	Customer Usage	

Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS
By identifying relevant laws and regulations that may have a significant impact on VIS' operations, business or finances, VIS establishes internal policies, procedures and implementation plans to avoid or reduce the negative economic impact of non-compliance with laws and regulations that may affect customer and investor confidence in VIS' sound operations and penalties through regulatory tracking, education, training and advocacy, and provision of reporting channels.

Management Policy	• Code of Conduct for Compliance with the Antitrust Act	• Strategy Committee Charter
	• Proprietary Information Protection Policy	• Board of Directors Performance Assessment Policy
	• Article of Incorporation	• Procedures for Handling Material Inside Information
	• Corporate Governance Practice Principles	• Code of Ethics for Directors
	• Rules of Procedure of Board of Directors Meetings	• Ethics and Business Conduct
	• Rules Governing the Election of Directors	• VIS Ethical Corporate Management Best Practice Principles
	• Audit Committee Charter	• Guidelines for Reporting and Handling Ethical Conduct Violations
	• Organizational Regulations of the Compensation Committee	

Responsible Unit	Corporate Governance Department: Promote corporate governance and assist directors in exercising their duties and responsibilities, coordinate board-related matters and interdepartmental operations. Legal Department and Corresponding Responsible Units to Legal Affairs Units Responsible for Corresponding with Legal Affairs and Related Regulations (e.g., Risk and Environmental Safety Department, Accounting Division, Internal Auditing, Corporate Governance Department, and Procurement Department). Human Resources Unit	
		<ul style="list-style-type: none"> Establish a Corporate Governance Department and appoint a head of corporate governance and special staff to assist the directors in exercising their authority and complying with the law Assist the Board of Directors in establishing criteria for diversity and independence of the Board of Directors, and in identifying, reviewing and nominating candidates for election as directors Assist in the appointment of directors, handle director training courses, execute the performance evaluation of the board of directors and individual directors, and regularly appoint an external organization to evaluate the performance of the board of directors Participate in important domestic and international evaluations and actively improve on the targets not yet achieved
		<ul style="list-style-type: none"> Periodic announcement of new/amended laws and regulations Each department identifies business-related regulations and regularly reviews and responds to changes Periodic regulatory tracking, education, training and promotion, provide reporting channels, self-review and auditing Advocate for Ethics Code of and Business Conduct and promote multiple channels for employee feedback Provide training on antitrust laws to employees in business, customer service and procurement departments Maintain an open channel for reporting incidents of ethical violations
Management Approach	<ul style="list-style-type: none"> 3.1 Corporate Governance 3.3 Integrity and Transparency 	
Corresponding Chapters	3.3 Integrity and Transparency	
Corresponding GRI Topic-specific Standards	GRI 206 Anti-competitive Behavior	
Corresponding SASB Standards	-	



Talent Attraction and Retention

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Communication Meeting Completion Rate	Goal: 100% Status: Achieved	100%	100%	100%
Employee Feedback Resolution Rate	Goal: 100% Status: Achieved	100%	100%	100%
Turnover Rate	Goal: 5%-10% Status: 9.5%	5%-10%	5%-10%	5%-10%
Key Talent Retention Rate	Goal: ≥ 97% Status: 92.1%	≥ 97%	≥ 97%	≥ 97%
Percentage of Female Executives	Goal: 19% Status: 19.1%	19%	20%	20%

Value Chain Impact	Upstream	Procurement	●	Responsible Unit The Supervisor Responsible for Each Organizational Unit Human Resources Unit	
	VIS Operations	Wafer Fabrication	●		
		Packaging/Testing	●		
	Downstream	Customer Usage	●		
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		Failure to attract and retain a sufficient number of talented individuals may affect technological development and productivity, and VIS' business may be affected, resulting in a negative economic impact.			
Management Policy		Regularly review the compensation structure to maintain the competitiveness of the talent market; build a talent development system to cultivate the professional and managerial talent needed by VIS.			
Management Approach		<ul style="list-style-type: none"> We provide benefits that are better than what's stipulated by the regulations and meet the needs of our employees, as well as a comprehensive leave management system Regularly conduct Employee Opinion Survey on Company Management Philosophy to ensure that employees identify with VIS' management philosophy We are committed to providing our shareholders with above-average returns on their investment in VIS and to providing our employees with above-average benefits 			
		Corresponding Chapters 6.1 Talent Attraction and Retention			
		Corresponding GRI Topic-specific Standards GRI 401 Labor/Management Relations GRI 405 Diversity and Equal Opportunity			
Corresponding SASB Standards		TC-SC-330a.1			



Innovation and Research & Development

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Allocate a Percentage of Revenue for R&D and Innovation Investment	Goal: 5% Status: Achieved	6%	6%	6%
Number of Patent Applications Worldwide	Goal: Total applications >3,200 Status: Achieved	Total applications >3,300	Total applications >3,700	Total applications >4,000
Number of Trade Secret Registrations	Goal: Total registrations >1,000 Status: Achieved	Total registrations >3,500	Total registrations >8,000	Total registrations >10,000

Value Chain Impact	Upstream	Procurement	●	Responsible Unit PMO (Project Management Office): Responsible for managing the R&D content and progress of each project TD (Technical Development Division): Responsible for technical research and development Intellectual Property Division: Responsible for patent application execution and management	
	VIS Operations	Wafer Fabrication	●		
		Packaging/Testing	●		
	Downstream	Customer Usage	●		
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		Green innovation and R&D enable foundries to produce IC products with low power consumption and high performance, which in turn can save energy and reduce carbon emissions and have a positive impact on the environment. Continuous innovation and R&D can create new markets for VIS, but the short-term decline in product benefits due to R&D cost investment is equivalent to a short-term negative impact on the economy, while still having a positive impact on the economy in the long run.	Management Approach <ul style="list-style-type: none"> Weekly and quarterly reviews reduce R&D time and labor costs, and protect VIS' R&D results for patent placement and trade secret management to make innovative products more competitive 		
Management Policy		<ul style="list-style-type: none"> R&D Management Regulations Intellectual Property Management Manual and Intellectual Property Management Policy Patent Application and Incentive Regulations Registration of Trade Secrets and Rules for Incentives 	Corresponding Chapters 3.4 Innovation Management Corresponding GRI Topic-specific Standards -		
			Corresponding SASB Standards TC-SC-520a.1		



Climate Change and Energy Management

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Conduct Regular Reviews of Climate Change Risk Control Measures	<p>Goal: Four quarterly reviews of climate change risk management measures and regular reports to the Management Team</p> <p>Status: Achieved</p>	Four quarterly reviews of climate change risk management measures and regular reports to the Management Team		
Report Regularly to the Board of Directors on the Results of the Implementation of Risk Control Measures	<p>Goal: Once a year</p> <p>Status: Completion of the Executive Outcomes Report by the Board of Directors in May 2022</p>	Once a year	Once a year	Once a year
Establish Annual Carbon Reduction KPI, and Have the Energy Saving and Carbon Reduction Committee Carry Out Improvement Project Tracking	<p>Goal: Reduce carbon emissions by 37,000 tons (CO₂-equivalent), or 4.2% of the total carbon emissions in Scope 1 and Scope 2 in 2020.</p> <p>Status: The actual completion of 86 carbon reduction projects resulted in a reduction of approximately 55,000 tons (CO₂-equivalent), or 6.14% of the total carbon emissions in Scope 1 and Scope 2 in 2020</p>	Reduce carbon emissions by 59,000 tons (CO ₂ -equivalent), or 6% of the total carbon emissions in Scope 1 and Scope 2 in 2021	<p>Continuous research on carbon reduction/energy saving project technologies, including:</p> <p>Scope 1: Greenhouse gas usage reduction and Greenhouse gas local treatment equipment installation</p> <p>Scope 2: Introduction of electricity saving technologies and low energy consumption equipment, assessment of negative carbon and natural carbon sinks</p>	<p>2040: 8-inch fabs reduce carbon emissions by 70% compared to 2021</p> <p>2050: Achieve net zero emissions</p>
Use of Renewable Energy	<p>Goal: Completed the self-installed solar photovoltaic system with a capacity of 270kW</p> <p>Status: Achieved and joined RE100 in December 2022</p>	Continued acquisition of renewable energy and renewable energy generation equipment is expected to result in 8,437kW of renewable energy capacity by 2023	<p>Based on the status of the energy supply market, we will continue to evaluate the opportunities and possibilities of acquiring renewable energy and renewable energy generation equipment, and increase the capacity of renewable energy construction and acquisition</p>	<p>Achieve 100% renewable energy by 2040</p> <p>0 days of production interruptions caused by climate disasters</p>
Energy Management System ISO 50001	<p>Goal: Continuously improve energy saving performance through the Energy Management System ISO 50001</p> <p>Status: Passed the third party audit certification of the Energy Management System ISO 50001 and ISO 14064-1 Greenhouse Gas Inventory Management System</p>	Continuously comply with the requirements of the ISO 50001 Energy Management System	Continuously comply with the requirements of the ISO 50001 Energy Management System	Continuously comply with the requirements of the ISO 50001 Energy Management System
Decrease in Power Consumption Per Unit Wafer Area	<p>Goal: A decrease of approximately 20% from 2015</p> <p>Status: Compared to 2015, power consumption per unit wafer area decreased from 1.01 kWh/cm² to 0.8 kWh/cm², a reduction of about 21%</p>	30% reduction in electricity consumption by 2023 compared to 2015	Electricity consumption reduced by another 40% compared to 2015	Continuously propose energy-saving projects to reduce electricity consumption per wafer area and save 200 million kWh of energy by 2030
Production Disruptions Caused by Climate Disasters	<p>Goal: Zero days of production disruption</p> <p>Status: Achieved</p>	Zero days of production disruption	Zero days of production disruption	Zero days of production disruption

[Previous Page](#)

Value Chain Impact	Upstream	Procurement		In response to the risk of climate change, governments and supply chains are forcing companies to promote carbon reduction by economic means (carbon tax/ carbon rights/low-carbon products, etc.). In order to maintain sustainable business operations and fulfill our responsibilities as good corporate citizens, all employees of VIS participate in the operation of energy management systems based on risk management, green production, and energy impact considerations, to achieve compliance with regulations and customer requirements, to improve energy efficiency, to set energy-saving goals toward energy conservation and sustainability, and to reduce the operating costs and negative impacts on the environment and economy caused by the carbon tax/carbon fee/green energy/low-carbon transformation/green energy-saving products trend.	Management Mechanism: Board of Directors>>Management Team>>Executive Committee (Corporate Sustainability Committee/Enterprise Risk Management Committee/Energy Saving and Carbon Reduction Committee). Responsibilities: Board of Directors: Supervise the overall climate change management of VIS/ review the management team's compensation and ESG performance linkage. Management Team (Composed of the Chairman, President, Area Head and the Head of Unit Which Under President Office): The highest level decision center for climate change management at VIS, with a clear understanding of climate risks and opportunities; describes the organization's business/strategy/ research and development direction and financial planning. Define medium and long-term goals and development strategies for climate change and renewable energy. Review corporate ESG-related strategies and goals on a quarterly basis. Executive Committee: Energy and Carbon Reduction Committee (Chair: Regional Head of Operations and Environmental Safety): Responsible for managing the risks and opportunities of the transformation of the climate change entity. Corporate Sustainability Committee (Chair: Chairman, Vice President: Vice President & CFO): Responsible for cross-departmental communication platform on climate change issues (economic, environmental, social and governance), covering topics such as carbon asset management, supply chain management, energy efficiency and carbon reduction.		
	VIS Operations	Wafer Fabrication					
		Packaging/ Testing					
	Downstream	Customer Usage					
Actual/Potential and Negative/ Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS							
Management Policy		<ul style="list-style-type: none"> In the face of climate change, VIS not only focuses on long-term climate initiatives, but also carefully evaluates the climate risks and opportunities of VIS. In particular, we are taking a proactive approach to address and plan strategies to respond to natural disasters caused by extreme weather, water and electricity resources that the semiconductor industry needs to rely on, and carbon taxes/fees, in order to continuously strengthen the climate-resilient development of our company In order to achieve corporate sustainability and environmental sustainability, we must move toward a low-carbon transformation and, in a responsible manner, plan a sustainability blueprint that moves from compliance to commitment, with the goal of achieving net zero emissions by 2050 					
		<ul style="list-style-type: none"> The VIS climate change governance and management structure is based on a three-tier top-down management mechanism with a board of directors, a management team, and an executive committee In order to strengthen effective communication on climate change, the Corporate Sustainability Committee is used as a cross-departmental communication platform. The scope of communication includes three major themes: carbon asset management, energy saving and carbon reduction, and supply chain management; each of these themes is led by the FAB/division director and supervisor, and the management team is reported on the control management results of each theme In terms of the climate change risk management process, it is controlled in accordance with the operating procedures of VIS In addition, according to the different scopes of operation and energy use of VIS, we have implemented action plans for low-carbon transformation and passed the third-party audit certification of the energy management system ISO 50001/ ISO 14064-1 and the greenhouse gas inventory management system 					
		<p>Corresponding Chapters</p> <p>4.1 Climate Change and Energy Management</p>					
		<p>Corresponding GRI Topic-specific Standards</p> <p>GRI 302 Energy GRI 305 Emissions</p>					
		<p>Corresponding SASB Standards</p> <p>TC-SC-110a.1 TC-SC-110a.2 TC-SC-130a.1</p>					



Risk Management

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024–2028)	Long-term Goals (2028–)
Annual Risk Factor Validation	Goal: Complete in Q1 2022 Status: Completed in January 2022	Complete in Q1 2023	Conduct annual risk factor audits once a year	Conduct annual risk factor audits once a year
Company-wide Annual Risk Review for the Previous Year	Goal: Completed in Q1 2022 Status: Completed in January 2022	Complete in Q1 2023	Conduct an annual review of the previous year's risk factors	Conduct an annual review of the previous year's risk factors
Audit Committee and Board of Directors Risk Execution Results Report for the Previous Year	Goal: Completed in Q2 2022 Status: Completed in May 2022 (Board of Directors approved 18 company-wide managed risk factors for 2022)	Complete in Q2 2023	Conduct an annual report on the results of the previous year's audit committee and board of directors' risk execution	
Mid-year Risk Review Report: Each Unit Head (Fab, Division or Regional Direct Department) Reports to the Regional Management Committee at Mid-year	Goal: Complete in Q3 2022 Status: All 45 units completed review reports in the Q3 of 2022	Complete in Q3 2023	Mid-year risk review report once a year	
Annual Regional Risk Review: Reviewed and Reported by the Regional Management Committee	Goal: Complete in Q4 2022 Status: All 7 regions completed reviews in Q4 2022	Complete in Q4 2023	Conduct annual regional risk review once a year	

[Previous Page](#)

Value Chain Impact	Up-stream	Procure-ment			
	VIS Opera-tions	Wafer Fabri-cation			
		Packaging/Testing			
	Down-stream	Customer Usage			
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		<p>In order to ensure the effective implementation of VIS' business strategies to achieve operational goals, we have formulated risk management policies and strengthened the organizational culture of risk management, implemented corporate governance and established overall risk management systems, procedures and methods, in order to grasp the qualitative and quantitative management results as the basis for reference in the formulation of business strategies, stabilizing the profitability foundation of VIS and having a positive impact on the economy.</p>			
Management Policy		<p>VIS actively performs risk prevention and loss control through domestic and international risk assessment expertise and concepts, and through effective insurance engineering techniques and risk management mechanisms, all employees are engaged in educational training and continuous improvement. Risk management measures are integrated into daily internal control operations, and each unit is required to regularly review our own risk control situation, and the board of directors and senior management review the effectiveness of risk control implementation, so that VIS' risks can be effectively controlled within acceptable limits.</p>			
Responsible Unit		<p>VIS has a risk management committee, of which the committee members are: Chairman: The President assumes this role. Area Management Committee Members: Composed of the top executives of each area and the general manager of each subsidiary, and one of the Area Management Committee Members is appointed by the Chairman as the general coordinator. FAB/division Executive Committee Members: Composed of the top executive of each FAB/division. Risk Management Project: Composed of area representatives, who are appointed by the Area Committee Member from among the executives at or above the division level, and the general coordinator appoints an executive at or above the division level to serve as the secretary-general. The Risk Management Committee has the following powers and responsibilities: Formulate risk management policies and procedures and submit them to the Board of Directors for approval and implementation. Report to the Audit Committee and the Board of Directors on risk management operations on an annual basis. Formulate risk management practices. Identify and approve the priority of risk control. Plan, review and implement risk identification results and control measures. Supervise the improvement of risk management.</p>			
		<p>Risk Project Formulation and Control Measures Planning:</p> <ul style="list-style-type: none"> Each business unit conducts risk identification and risk measurement to identify risk factors Develop risk control measures to effectively monitor and respond to risk factors <p>Mid-year Review:</p> <ul style="list-style-type: none"> The head of each unit (FAB, division or Area department) reports to the regional management committee: <ul style="list-style-type: none"> (1) The effectiveness of risk factor control measures, risk monitoring and response mechanisms (2) Adjustment of risk factors or control measures according to operational changes (3) Review results and revisions of risk factors and control measures <p>Annual Area Risk Review:</p> <ul style="list-style-type: none"> The regional management committee member reviews <ul style="list-style-type: none"> (1) The results of risk management implementation and continuous improvement measures for each unit in the current year (2) The risk factors and control measures that should be continuously or newly listed in the new year <p>Company-wide Annual Risk Review Meeting:</p> <ul style="list-style-type: none"> The Risk Management Committee meeting is held to <ul style="list-style-type: none"> (1) Review the results of the current year's risk control and execution of each area (2) Review the risk factors and control measures of each area for the new year (3) Review and set the risk factors for the whole company in the new year <p>Annual Audit Committee and Board of Directors' Report on Risk Execution Results: The chairman (or his or her designated member) reports regularly on risk management execution results.</p>			
		<p>Corresponding Chapters</p> <p>3.2 Risk Management</p>			
		<p>Corresponding GRI Topic-specific Standards</p> <p>-</p>			
		<p>Corresponding SASB Standards</p> <p>-</p>			



Waste Management

Key Performance Indicators	2022 Goals and Achievements	Short-term Goals (2023)	Mid-term Goals (2024-2028)	Long-term Goals (2028-)
		92%+	93%+	93%+
Waste Recovery Rate	Goal: 92%+ Status: 93.64%	92%+	93%+	93%+
Waste Reduction Improvement Program	Goal: ≥ 30 improvements/year Status: Total of 35 improvements in 2022	≥ 40 improvements/year	≥ 50 improvements/year	≥ 50 improvements/year
Waste Landfill Rate	Goal: <1% Status: 0.08%	<1%	<0.5%	<0.5%
Auditing and Counseling Rate of Waste Disposal Vendors	Goal: 100% Status: Achieved	Counseling rate 100%	Counseling rate 100%	Counseling rate 100%
Waste Treatment Vendors Obtain ISO 14001 and Other International Environmental Safety and Health Management Certifications	Goal: Achieve 40% Status: Certification rate of 53.6%	50% certification rate	60% certification rate	70% certification rate
No Violation of Environmental Regulations	Goal: Violation of environmental protection regulations: 0 incidents Status: Achieved	Violation of environmental protection regulations: 0 incidents	Violation of environmental protection regulations: 0 incidents	Violation of environmental protection regulations: 0 incidents
Environmental Related Awards	Goal: National Environmental Protection Award: 1 Status: Executive Yuan Environmental Protection Administration Corporate Environmental Protection Award Silver Award and Honorary Trophy Goal: County/municipal Environmental Protection Award: 1 Status: Hsinchu County Private Enterprises and Organizations Green Procurement Excellence Unit - Special Contribution Award Hsinchu City Private Enterprises and Organizations Green Procurement Excellence Unit	National Environmental Protection Award: 1 County/Municipal Environmental Protection Awards: 2	National Environmental Protection Award: 1 County/Municipal Environmental Protection Awards: 2	National Environmental Protection Award: 1 County/Municipal Environmental Protection Awards: 2

Value Chain Impact	Upstream	Procurement	●
	VIS Operations	Wafer Fabrication	●
		Packaging/Testing	●
	Downstream	Customer Usage	●
Actual/Potential and Negative/Positive Impacts on the Economy, Environment, and People (Human Rights) of VIS		Good waste management can reduce waste generation and disposal costs, and recyclable waste can be reused to improve efficiency, which has a positive impact on the economic and environmental aspects.	
Management Policy		<ul style="list-style-type: none"> • Waste Disposal Control Procedures • VIS Waste Reporting Operation Management Procedures • VIS fab area and each laboratory business waste removal management measures 	

Responsible Unit	Facilities Engineering Department Operation and Environmental Safety Department Employee Service Department
Management Approach	Improve FAB management practices through ISO 14001 management system operation and third party audit verification.
Corresponding Chapters	4.3 Waste Management
Corresponding GRI Topic-specific Standards	GRI 306 Waste
Corresponding SASB Standards	TC-SC-150a.1

Risk Management of Material Issues for VIS

VIS invited internal executives to participate in a questionnaire to imagine the risks and crises that each unit and the entire enterprise may encounter in sustainability issues. We have assessed the degree and frequency of negative impacts on the operations based on VIS' material issues, and categorized the risks for each issue to facilitate corporate management. The following table shows the impact (risk) management of material issues for the year 2022:

Product Economic Social Environmental

Material Issues	Actual/Potential and Negative/Positive Impacts of Vis on the Economy, the Environment, and People (Human Rights)	Risk Management Scope	Risk Management Assessment ^{Note}		
			Likelihood	Impact	Risk Level
Customer Relationship Management	Failure to properly handle customer needs in a timely manner may result in lower customer satisfaction, which in turn may affect VIS' potential future interests and have a negative impact on the economic side.	Strategic Risk	3	4	Medium
Information Security and Privacy Protection	By focusing on the protection of information value, VIS will gain the trust of customers and other business partners, improve the economic efficiency of VIS, and at the same time reduce the leakage of privacy and confidentiality through sound information security management, thus maintaining VIS' competitive advantage and avoiding the impact on human rights.	Operational Risk	2	3	Medium
Product and Quality Safety	Abnormal quality or low yield of wafer products will cause damages to VIS and customers. Abnormal quality of raw materials may lead to product scrap and company loss.	Operational Risk	3	2	Medium
Economic Performance	Through the pursuit of favorable financial performance to ensure the achievement of the goal of sustainable business operation, VIS has been able to create long-term and stable value for VIS through the growth of operating income and the continuous improvement of profitability, and has continued to make good use of profits to contribute positively to environmental protection, employee care and social givebacks, bringing positive impact.	Financial Risk	3	2	Medium
Supplier Sustainability Management	By continuously improving the quality of suppliers, saving costs, shortening lead times, promoting sustainable development, and securing partnerships with suppliers to maximize profits, we have a positive impact on the economy.	Operational Risk	3	2	Medium
Corporate Governance	By identifying relevant laws and regulations that may have a significant impact on VIS' operations, business or finances, VIS establishes internal policies, procedures and implementation plans to avoid or reduce the negative economic impact of non-compliance with laws and regulations that may affect customer and investor confidence in VIS' sound operations as well as penalties, through regulatory tracking, educational training and advocacy, and provision of reporting channels.	Compliance Risk	1	3	Low
Regulatory Compliance		Compliance Risk	1	3	Low
Integrity Management		Compliance Risk	1	3	Low
Talent Attraction and Retention	Failure to attract and retain a sufficient number of talented individuals may affect technological development and productivity, and VIS' business may be affected, resulting in a negative economic impact.	Operational Risk	4	2	Medium
Innovation and Research & Development	Green innovation and R&D enable foundries to produce IC products with low power consumption and high performance, which in turn can save energy, reduce carbon emissions, and have a positive impact on the environment. Continuous innovation and R&D can create new markets for VIS, but the short-term decline in product benefits due to R&D costs can have a negative impact on the economy in the short term, but still have a positive impact on the economy in the long run.	Research and Development Risk	3	4	Medium

Note: Please refer to VIS Risk Assessment Scale for the score definition.

Material Issues	Actual/Potential and Negative/Positive Impacts of Vis on the Economy, the Environment, and People (Human Rights)	Risk Management Scope	Risk Management Assessment <small>Note</small>		
			Likelihood	Impact	Risk Level
Climate Change and Energy Management	In response to the risk of climate change, governments and supply chains are using economic measures (carbon tax/carbon rights/l-low-carbon products, etc.) to force companies to reduce carbon emissions. VIS is committed to maintaining sustainable business operations and fulfilling our responsibilities as a good corporate citizen, based on risk management, green production, and energy impact considerations, with full participation in the operation of energy management systems to achieve compliance with regulations and customer requirements, to improve energy efficiency, to set energy-saving goals toward energy conservation and sustainability, and to reduce the operating costs and negative impacts on the environment and economy caused by the carbon tax/carbon fee/green energy/l-low-carbon transformation/green energy-saving products trend.	Hazard Risk	2	5	Medium
Risk Management	In order to ensure the effective implementation of VIS' business strategies to achieve our operational objectives, VIS has formulated risk management policies and strengthened the organizational culture of risk management, implemented corporate governance and established overall risk management systems, procedures and methods, in order to obtain qualitative and quantitative management results as a basis for reference in the formulation of business strategies and to stabilize the profitability baseline for VIS, which has a positive impact on the economy.	Compliance Risk	1	3	Low
Waste Management	Good waste management can reduce waste generation and disposal costs, and recyclable waste can be reused to improve efficiency, which has a positive impact on the economy and the environment.	Compliance Risk	1	3	Low

Note: Please refer to VIS Risk Assessment Scale for the score definition.

VIS Risk Assessment Scale

Score	1	2	3	4	5
Likelihood	Happened/will not happen in the next 10 years	Happened/will happen in the next 1-10 years	Happened/will happen in the next 1 year	Happened/will happen in the next 1 month	Happened/will happen in the next 1 week
Impact	Losses (NT\$)	<3 million	3 million-30 million	30 million-150 million	150 million-300 million
	Production Interruption (time)	<1 hour	1 hour-1 day	1 day-2 days	2 days-5 days
					>5 days

2.3.2 Stakeholder Communication



Customers

What it Means for VIS

Customers are our partners, and we place the utmost importance on our customers and continue to implement the concept of "customers are partners". We regard our customers' competitiveness as our company's competitiveness, and our customers' success is also our success. This positioning is the key to our future growth.

Communication Method

- Annual Customer Satisfaction Survey/Annually
- Quarterly Business Review/Quarterly
- Customer Visits/Non-periodic
- VIS-Online Customer Communication System/Non-periodic

Communication Frequency

- Customer Relationship Management
- Water Resource Management
- Air Pollution Prevention
- Climate Change
- Product Quality and Safety

Content of Concern

- Domestic and foreign political and economic developments and regulatory developments
- VIS' technology development schedule and plans
- Company capacity planning and production information
- Intelligent manufacturing and intelligent management capabilities

VIS Response

- The customer coverage rate of the 2022 Customer Satisfaction Survey was 100% and the overall customer satisfaction rate was 95.7%, reaching the target of greater than 90% satisfaction
- We have introduced tools such as RPA, Big Data Intelligence, and artificial intelligence to create a highly automated decision-making semiconductor manufacturing environment that optimizes the speed, productivity, and quality of manufacturing

100%

Customer satisfaction survey coverage

95.7%

Overall customer satisfaction, achieving the goal of greater than 90% satisfaction



Thank you VIS team for helping us to develop the next generation MVS GTMOSFET platform!

100V-120V SGT MOSFETs products successfully produced (can be extended to 80V/60V), product performance is better than the world's first-class manufacturers!

In addition, our customers have chosen to mass produce!

Our products are especially successful in the following applications:

- (1) Automotive power modules for 48V DC/DC Converter!
- (2) Automotive LED lamp module
- (3) GaNPD Adapters

Special thanks to:
VIS-TD team's strong engineering capability and
VIS-BD/FTS/CE's strong support.

VIS-PIE team's quick response to the production line, VIS-Sales for giving opportunities during the tight production capacity.

And any other VIS partners who have helped Leadpower Semiconductor.

Respectfully submitted by Yeh Jen-nhao,
Chairman of Leadpower Semiconductor,
and the entire team



Employees

What it Means for VIS	The 8 th of our 10 management philosophies, "Create a challenging and fun work environment", is believed to be more important to most of our employees than monetary rewards, namely a challenging, continuous learning, and fun work environment. VIS must always shape and maintain such an environment to attract and retain like-minded and best-in-class talent.
Communication Method/Frequency	<ul style="list-style-type: none">• Professional Ethics Training/Annually• Labor Conference/Quarterly• Chairman's Communication Meeting/At least twice a year• Executive Communication Meetings at All Levels/Quarterly• Staff Feedback Channels/Non-periodic
Topics of Concern	<ul style="list-style-type: none">• Economic Performance• Innovation and Research & Development• Talent Attraction and Retention• Waste Management• Information Security and Privacy Protection
Content of Concern	<ul style="list-style-type: none">• Smooth and effective communication channels between employee and employer• Talent attraction, development and retention• Provide employees with a healthy work environment and workplace in compliance with the law
VIS Response	<ul style="list-style-type: none">• Improve the quality and quantity of internal communication and increase employees' understanding of VIS' current status and future direction of development• Collaboration with the International College of Semiconductor Technology, NYCU and the College of Semiconductor Research of National Tsing Hua University on technology development; Yuan Ze University and National Taitung Junior College are offering courses to nurture the talents needed for future development• VIS continues to strengthen employees' awareness of self-health management and was awarded the 2022 National Performance Health Workplace Award

Performance Health Workplace Award

2022 National Performance Health Workplace Award



The National Yang Ming Chiao Tung University Industrial Engineering and Management Department and VIS jointly established the VIS x NYCU Intelligent Manufacturing and Management Lab to train and nurture digital transformation talents for the semiconductor industry. Prof. Chang Yung-chia, the laboratory chair, said, "Semiconductor is an industry where the industrial engineering profession can be effective, and many of our faculty members hold important positions in the semiconductor industry. By establishing this laboratory in collaboration with VIS, we hope to bridge the gap between industry, academia, and research, and work together for the research and development of Taiwan's semiconductor industry and the cultivation of talents.

**Department of Industrial Engineering
and Management
Prof. Chang Yung-chia**



I am very grateful for the management seeing my potential.

The fact that my hard work has been recognized instills the confidence in me to work with best of my abilities for the interest of the organization.

Working with experts in different domains at VIS is great, new ideas and suggestions are welcome, and most of them can be adopted to streamline the working process.

I will keep my enthusiasm up in my future work and make sure that I will proceed with the higher level of diligence in my work in the future. Again thank you very much VIS for this great honor. To God be the Glory.

**Fab 1/Manufacturing Department
Mary Manlangit**



Suppliers/Partners

100%

Compliance sign-up completion rate for the Corporate Sustainability Policy and Supplier Code of Conduct for Tier 1 suppliers

What it Means for VIS

Suppliers are important partners in VIS' operations. We continue to refine and deepen our relationships with them in terms of new process technology development, quality improvement, environmental safety and health regulations, and code of conduct, so as to drive them to work together to achieve mutual sustainable benefits in the supply chain.

Communication Method/Frequency

- Corporate Sustainability Policy Advocacy/Annually
- Supplier Self-Assessment Questionnaire/Annually
- Counseling and Auditing/Non-periodic

Topics of Concern

- Risk Management
- Regulatory Compliance
- Economic Performance
- Innovation and Research & Development
- Quality Management

Content of Concern

- Focus on international standards and trends
- Implement sustainable actions and continuous improvement
- Emphasis on raw material quality requirements
- Compliance with Hazardous Substance Free Policy and Risk Management
- Establish an effective responsible mineral management mechanism

VIS Response

- 100% compliance sign-up completion rate for the Corporate Sustainability Policy and Supplier Code of Conduct for Tier 1 suppliers
- 100% achievement rate of suppliers signing a commitment to be free of hazardous substances and providing a hazardous substance risk assessment report
- 100% compliance rate of responsible usage of minerals

100%

Achievement rate of suppliers signing a commitment to be free of hazardous substances and providing a hazardous substance risk assessment report



In light of its vision, "becoming a customer-centered solution provider of semiconductor materials", Wafer Works is committed to providing high-standard products and services to meet customers' needs and satisfactions.

In line with Vanguard, Wafer Works prioritizes Corporate Sustainability during the course of our development. Both companies will proactively work together on the implementation of ESG (Environmental, Social, and Governance) in future.

Apart from working with partners along the supply-chain to achieve low-carbon sustainability, with the strong corporate governance foundation that our leadership has built, we are also committed to providing our employees with a friendly and diverse workplace, which in turn improves their life quality. Wafer Works looks forward to working with Vanguard on fulfilling the roles as accountable corporate citizens and making our society more sustainable.

Chairman of Wafer Works
Pat Chiao





Investors/Shareholders

What it Means for VIS	While actively developing, we are also mindful of the interests of our shareholders. By providing investors with transparent information on VIS' management strategy and financial policies, we aim to increase the value of their investments.
Communication Method/Frequency	<ul style="list-style-type: none">Shareholders' Meeting/AnnuallyBoard of Directors' Meetings and Investor Conference/QuarterlyRelease of Operating Income/MonthlyMarket Observation Post System/Live updatesCompany Website/Live updates
Topics of Concern	<ul style="list-style-type: none">Water Resources ManagementAir Pollution PreventionWaste ManagementIntegrity ManagementInformation Security and Privacy Protection
Content of Concern	<ul style="list-style-type: none">Impact of political and economic conditions on operating resultsMarket competition conditions and changesFinancial performanceFuture profitability of VISDividend Stabilization Growth Strategy
VIS Response	<ul style="list-style-type: none">4 investor conferencesOver 200 investor meetings to proactively communicate to investors19 consecutive years of positive returns for investors

>200

Over 200 investors' meetings

19 years

19 consecutive years of positive returns for investors



We have covered Vanguard Semiconductor for 16 years and have found the management team transparent in its communications and forthcoming in sharing its view on the industry outlook throughout the industry cycle. VIS has demonstrated a track record of careful and thought-out organic and inorganic capacity expansion over the years which has enabled a fairly high level of utilization, consistent growth in profitability in an otherwise cyclical industry and rising cash flows along with stable to rising dividend payout levels. Vanguard has also maintained steady and strong customer relationships, with top customers keeping it as primary foundry throughout the decade and through its steadily growing power management business which has grown at double digit growth rates throughout the past decade. VIS also has a strong corporate access with the management and Investor Relations team accessible for updates on the business, in-person investor visits (barring COVID-19 controls) and attendance throughout the year at major investor conferences.

Research Analyst, Credit Suisse
Randy Abrams



Media

What it Means for VIS

The media is the primary channel through which VIS discloses VIS' performance and actions to the public. VIS has a dedicated spokesperson system for external communications and messaging to ensure that information is accurate and consistent, and that the disclosure process is open and transparent.

Communication Method/Frequency

- Press Release/At least once per month
- Investors Conference/Quarterly
- Press Conference/At least twice a year
- Media Correspondents Networking/At least once per year
- Company Annual Report, Sustainability Report/Annually
- Telephone and Email Responses to Media Inquiries/Non-periodic
- Clarification of Media Misrepresentation and Reporting at Market Observation Post System/ Non-periodic

Topics of Concern

- Social Engagement
- Economic Performance
- Corporate Governance
- Supplier Sustainability Management
- Information Security and Privacy Protection

Content of Concern

- Company's recent performance and future outlook
- Company's specific achievements and future plans for corporate sustainability/ESG
- Company major events and awards track record

VIS Response

- Issued 16 earnings-related press releases and 11 non-earnings-related press releases
- 4 investor conferences to discuss VIS' recent performance and future outlook
- Explain corporate sustainability/ESG practices

16

Issued 16 earnings-related press releases

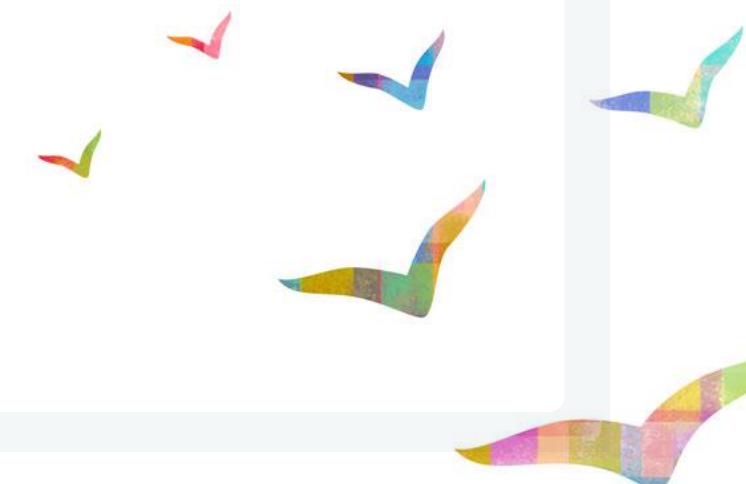
11

Issued 11 non-earnings-related press releases



VIS values communication and mutual trust with stakeholders, including the media, and communicates information openly and transparently. While deeply engaged in developing its core business, VIS also actively promotes ESG-related actions to contribute to the development of the semiconductor industry and a sustainable supply chain.

Senior Reporter, DIGITIMES
Monica Chen





Government Agencies/Public Associations

What it Means for VIS

VIS maintains a smooth and effective communication channel with relevant government agencies to keep abreast of government policies and regulatory developments. VIS also works with our affiliated public associations to propose government policies to create an industry environment conducive to semiconductor development, so as to assess the impact on VIS' financial performance accordingly.

Communication Method/ Frequency

- Correspondence or email replies to financial and operational information requested by the competent authorities/Non-periodic
- Participate in communication meetings/forums/seminars or public hearings organized by government entities/Non-periodic
- Provide industry expertise and advice through industry-related associations in response to current and draft regulations from the government/Non-periodic
- Provide financial reports or information in accordance with the requirements and regulations of the competent authorities at each level/Monthly

Topics of Concern

- | | |
|-------------------------|------------------------------|
| • Waste Management | • Climate Change |
| • Regulatory Compliance | • Product Quality and Safety |
| • Risk Management | • Economic Performance |

Content of Concern

- CDC Regulatory Updates on the COVID-19 Pandemic
- The impact of tax policies and industry-related policies on the business environment
- The impact of the international political and economic situation on the business environment and the countermeasures
- Response and advice on environmental regulations and the supply of water and electricity in the semiconductor industry

VIS Response

- Participated in meetings and seminars with government agencies and public associations
- An anti-pandemic committee was set up to follow the latest government regulations on the COVID-19 outbreak and deployed VIS' internal anti-pandemic measures
- Provided or responded to relevant financial and operational information on a regular basis in accordance with the requirements of laws and regulations
- Participated in the Taiwan Semiconductor Industry Association and the Allied Association For Science Industries to communicate and discuss with the Environmental Protection Administration (EPA) on policies related to environmental protection in the semiconductor industry, including: reclaimed water use and multiple water management measures, air pollutant emission standards, regulations on self- or commissioned testing and reporting of stationary pollution sources, waste cleanup laws, management of listed toxic chemicals and their operational management issues, climate change response laws, investigation of perfluorooctanoic acid (PFOA) effluent, and the legal direction on fire safety equipment installation standards for various types of establishments

24

Participated in 24 public associations and organizations

>\$4.48 million

The amount of investment exceeded NT\$4.48 million



Taiwan Semiconductor Industry Association (TSIA) upholds the principle of "caring for the development of the industry" and aims to forge consensus on the industry's development through its activities, facilitating healthy development of the entire industry. VIS is a founding member of TSIA and jointly promotes a number of industry policies with other member enterprises, while also actively participating in related seminars and forums. Through sharing and exchanging practical experience with member enterprises and reflecting industry opinions and needs as references for the government to formulate industry policies, VIS helps to strengthen exchange among the industry, academia and government, ultimately enhancing the overall competitiveness of Taiwan's semiconductor industry.

President of Taiwan Semiconductor Industry Association
Tao-Yuan Wu





Society/Community

What it Means for VIS

Under the regular review and supervision of the Corporate Sustainability Committee, VIS carries out social welfare projects under the five main themes of Caring for the Disadvantaged Groups, Caring for the Elderly Living Alone, Diverse Empowerment, Environmental Conservation, and Sustainability Initiatives, actively responding to the United Nations' Sustainable Development Goals and evaluating the impact of VIS' operations on the community and society. Through donations, volunteer services, and resource investment, VIS promotes related projects and devotes itself to environmental education and community building to enhance community recognition and residents' awareness of environmental sustainability.

Communication Method/Frequency

- Organize Donation Campaigns/Annually
- Conduct Volunteer Service Activities/Non-periodic
- Organize Community Building or Environmental Education Activities/Non-periodic
- Invite Community Residents and Social Welfare Groups to Participate in Corporate Events/Non-periodic

Topics of Concern

- Integrity Management
- Waste Management
- Talent Attraction and Retention
- Social Engagement
- Human Rights

Content of Concern

- Impact of VIS' operations on the community and society
- Environmental Education and Community Building Results
- The number of beneficiaries and the impact of volunteer services
- Engaging the supply chain to participate in corporate sustainability activities

VIS Response

- A year-end donation campaign was launched, inviting employees, customers and suppliers to participate and raising NT\$4.37 million for six social welfare organizations, with 4,274 person-times. Another NT\$1.2 million was allocated to 12 social welfare organizations that have had a long standing relationship with VIS
- In response to the Boys' Brigade Share-a-Gift event in Singapore, 120 gifts were collected and given by VS1 volunteers to nursing homes for the elderly in Singapore
- Sponsored the Sunrise Program at Tsinghua University and the Ukraine Project at National Yang Ming Chiao Tung University
- Partnered with National Taitung Junior College to offer a Micro-credit Course on Semiconductor Manufacturing and Equipment, providing scholarships, faculty, and internship opportunities
- Hosted the Boyo Social Welfare Foundation's career seminar on the semiconductor industry for over 130 middle school students from underprivileged families/rural/aboriginal areas of Hsinchu County
- Sponsored Junyi Academy to hold four winter break cloud study workshops for over 4,147 teachers
- Jointly organized a training seminar with Junyi Academy for educational volunteers, with over 100 participants
- The number of environmental volunteer hours performed by staff reached 2,026 and the number of students and community members participating in environmental education activities reached 1,271
- Planted trees for Hsinchu City Cherry Blossom Park to create a beautiful city for residents to enjoy the water, cherry blossoms and fireflies
- We adopted a park in Qianjia, Hsinchu City, the largest air quality purification area in the city, and have been an excellent adopter of the Environmental Protection Agency's air quality purification area for four consecutive years
- Through long-term maintenance of the shoreline of Kezihu and the Hsinchu Science Park detention basin, the ecosystem has been successfully restored and the biodiversity of the waters has been enhanced through the annual release of 2,500 to 3,000 firefly larvae into the wild
- Sponsored the Focus Taiwan: Jennifer Shen's talk radio program, which produced 52 episodes in 2022 and advocated at least 13 United Nations Sustainable Development Goals with a reach that impacted 1,312,000 people
- The total value of social engagement in 2022 was approximately NT\$33.68 million

2,026 hours

2,026 hours of environmental volunteer time

\$33.68 million

Total value of social engagement was approximately NT\$33.68 million



Three and a half years ago, in cooperation with VIS and Hsinchu City Government, we carried out the planned adoption of cherry blossom park, planted hundreds of Japanese blue oak trees, adopted three century-old trees along the Kezihu stream and rehabilitated fireflies. In 2022, VIS spent more than NT\$6 million to create 'an urban forest secret hideout', using the idea of 'subtractive aesthetics', and again carried out dozens of cherry blossom transplants and new plantings of cherry blossoms, improved the soil in the plant troughs, and rearranged the trails. In addition, sculptures were set up as check-in spots to recreate a beautiful environment in the cherry blossom park. A more comfortable and beautiful space was provided for the public.

Former Alderman of Jinshan Village, Director of Jinshanmian Culture and History Studio Wu Ching-chieh



The Garden of Hope Foundation would like to thank the entire staff of VIS and suppliers of the foundation for their support of our One More Mile Project, and for donating funds to help women who are victims of violence to move towards a more independent life. In the process of rebuilding their lives, the first thing that battered women and children face is the problem of finances. The Garden of Hope Foundation has set up a preparatory workplace to help women find employment, earn a stable income through their own efforts, and achieve financial independence, as well as help the clients develop their abilities to become productive citizens and have a life of self-reliance. Thank you once again for the steady strength and support from VIS!

CEO of The Garden of Hope Foundation Wang Yueh-hao

2.3.3 Domestic and International Public Association

VIS follows a sustainable mission of implementing corporate governance, promoting environmental sustainability, establishing a friendly workplace, and contributing to social engagement, and strives to improve our capabilities and achieve social betterment; at the same time, we actively participate in domestic and international industrial public association and related non-profit organizations to effectively advocate our company's position of support, share our views, and contribute to our industry and society through exchanges and sharing with public association members or by joining public associations as board members.

In terms of corporate lobbying or public affairs engagement, VIS has established the "[VIS Public Affairs Participation Policy](#)", which covers VIS' global operations to actively engage in the promotion of public affairs, join industry associations and participate in the formulation of relevant industry policies, while developing our core business and taking into account the interests of our shareholders. VIS supports organizations that primarily: contribute to the development of VIS' core businesses, organizations that share VIS' views on corporate sustainability issues, and organizations that serve as a platform for discussion of public policy issues and advocate for common business interests. In addition,

VIS annually reviews and updates our participation in public associations, as well as our membership status, for review by the Chairman to confirm that the policy positions of participating public associations on key issues, including those related to climate change, are consistent with those of VIS.

In 2022, VIS participated in 24 domestic and international public organizations and associations, plus public policy initiatives, with an investment of more than NT\$4.477 million, focusing on issues such as industrial development, technological innovation, talent cultivation, corporate governance, environmental sustainability, human rights and supply chain management ^{Note}; promoting public affairs in the semiconductor industry in Taiwan and Singapore, where the plants are located, together with other industry players. We also participate in the formulation of public policies that contribute to the development of the industry and society.

Note: VIS is politically neutral and does not make political contributions in our corporate name; VIS only devotes resources to support public affairs and to promote public policies that contribute to the development of the industry and society.

With our "Climate Change Statement", VIS recognizes that climate change is one of the most serious challenges facing businesses and society today, and that action is imperative. VIS supports the Paris Agreement goals and policies related to climate change mitigation and low carbon transformation, and will continue to

VIS Public Affairs Involvement and Expenditures

Unit: NT\$ million

	2019	2020	2021	2022
Interest Group Lobbying	-	-	-	-
Contribution to Local, Regional or National Political Activities, Political Organizations and Candidates	-	-	-	-
Participation in Nonprofit Organizations Such As Chambers of Commerce and Think Tanks	4.338	4.107	5.286	4.477
Election or Referendum-related Expenses	-	-	-	-
Total Contribution/Expenditure of Public Affairs Participation	4.338	4.107	5.286	4.477
Data Range Coverage	100%	100%	100%	100%

participate in efforts to keep global warming below 1.5 degrees Celsius by distancing itself from public associations with differing positions on the issue and encouraging them to support climate risk mitigation goals that are consistent with VIS' own, and by advocating and promoting policies for a net-zero future through public associations in an effort to address climate change. In 2022, VIS joined RE100, a global renewable energy advocacy group, and pledged to use 100% renewable energy in our global operations by 2040, making us the first company in Taiwan's semiconductor industry to pledge to reach RE100 by 2040, and to set a net-zero pathway to move steadily toward the 2050 net-zero emissions target. If a public association in which VIS participates has a different position on climate change-related issues than VIS, VIS will make efforts to communicate and clearly convey our views and give constructive suggestions, and if communication is unsuccessful, it will opt out of the association during the annual membership review process.

List of VIS' Participation in Public Associations and Organizations

Category	Name of Organization
Industry	SEMI TAIWAN*
	SEMI Southeast Asia*
	Taiwan Semiconductor Industry Association*
	The Allied Association For Science Park Industries*
	Taiwan Mergers & Acquisitions and Private Equity Council**
	Taiwan High Tech Facilities Association*
	Singapore Business Federation (SBF)**
	Singapore National Employers Federation (SNEF)**
	Singapore Semiconductor Industry Association (SSIA)*
	Taiwan IC Industry and Academia Research Alliance**
	Chinese Society for Management Of Technology*
	Taiwan Electrical and Electronic Manufacturers' Association*
	Chinese National Association of Industry and Commerce, Taiwan*
	Responsible Business Alliance (RBA)*
	Global Corporate Renewable Energy Initiative (RE100)*

Category	Name of Organization
Social	Taiwan Business Council for Sustainable Development*
	CommonWealth Sustainability Association*
	Friends of the Second Special Police Corps, National Police Agency**
	Internal Audit Association of the Republic of China**
Professional	Hsinchu City Nurses Association**
	Hsinchu County Nurses Association**
	Taoyuan City Nurses Association**
	Hsinchu City Human Resources Management Association**
	Taiwan Association of Occupational Health Nurses**

* Indicates that the Association and VIS are in agreement on the issue of climate change. VIS evaluates this by its publicly statement of the support for the Paris Agreement goals or related policy positions, and by conducting internal discussions or deliberations on policies related to climate change and low carbon transformation.

** The evaluation criteria do not apply to this association because it was founded to focus on a specific topic and has not expressed an opinion on this issue.

In 2022, the public association groups in which VIS actively participated or served as a board member and exerted influence are detailed below:

Taiwan Semiconductor Industry Association (TSIA)

VIS is a founding member of the Taiwan Semiconductor Industry Association and has participated in the association since 1996, working with other member companies in the industry to promote various industrial policies; since 1996, VIS has served on the Board of Directors as a Supervisor.

In 2022, public policies that VIS has been involved in discussing and promoting through the Association included:

- Promoted the Environmental Protection Agency's Climate Change Response Act amendment
- Participated in the Environmental Protection Agency's Air Pollution Control and Emissions Standards for the Semiconductor Industry regulatory amendment meeting
- Participated in the EPA's Regulations for the Administration of Self- or Commissioned Testing and Reporting of Stationary Pollution Sources regulatory amendment meeting

Investment Amount
NT\$814,200

The Allied Association for Science Park Industries

VIS has been a member of The Allied Association for Science Park Industries since 1996, and has served on the Board of Directors since our fifth year as a Supervisor, and has served as the convener and vice convener of various functional committees under the Association to promote the development of industry standards in the Science Park and to exchange experiences with member companies. In 2022, in addition to serving as a member of the Board of Directors, VIS also served as the Vice Convener of four committees, including the Finance and Accounting Committee, the Water Resources Team of the Utilities Supply Committee, the Import and Export Bonding Operations Committee, and the Public Relations Committee.

In 2022, public policies that VIS, through the Association, was involved in discussing and promoting included:

- Participation in the discussions on the Environmental Protection Administration's Regulations on Self- or Commissioned Testing and Reporting of Stationary Pollution Sources, Waste Disposal Act, Management of Listed Toxic Chemical Substances and Their Operation, Climate Change Response Act, Standards for Air Pollutant Emission from Stationary Pollution Sources, and the installation standards for fire safety equipment in various types of establishments
- Participation in water conservation counseling, water conservation observation and other environmental related activities
- Participation in the discussion on the use of recycled water and the direction of diversified water management measures
- Participation in the discussion on the amendment of the Regulations Governing the Bonding Operations in Science Parks and the seminar on the bonding business
- Assisted in promoting the addition of a new function for the central competent authority to automatically send a confirmation letter from the completion system of the online reporting information system (platform)
- Assisted in promoting a circular economy with the Science Park to achieve net zero waste production

Investment Amount
NT\$312,000

SEMI Taiwan

VIS is a participating company of SEMI Taiwan and a member of SEMI Taiwan's Power and Compound Semiconductor Committee. In addition to participating in the technical forums associated with the annual conference, VIS also works with other members to promote industry policy development and voice our concerns to the government. To assist the industry in communicating with the government, SEMI Taiwan regularly organizes "A Date of Official" elite luncheons and invites government officials to communicate with industry executives on industry issues.

In 2022, the communication targets and issues included:

Communication Target	Communication Issues
Ministry of Economic Affairs, Ministry of Transportation	Creating a supply chain for automotive chips in Taiwan
U.S. Department of State Officials, American Institute in Taiwan	CHIPS for America Act
Filip Grzegorzecki, Director, European Economic and Trade Office	European Chips Act
Investment Amount	NT\$591,500

Taiwan Mergers & Acquisitions and Private Equity Council

VIS is a member of the Taiwan Mergers & Acquisitions and Private Equity Council, helping to build a comprehensive M&A and private equity investment environment in Taiwan and serving as a bridge between the private sector, the government and the international community. VIS serves as a supervisor in the Council, which makes policy recommendations to the competent authorities every year and conducts extensive exchanges and cooperation with international organizations.

In 2022, the public policies that VIS was involved in discussing and promoting through the Council included:

- Assisted in the promotion of the National Development Council's Key Points in Industry Counseling Management for Promoting Private Equity Investment
- Assisted in the promotion of the Business Mergers and Acquisitions Act

Investment Amount
NT\$120,000

Taiwan IC Industry and Academia Research Alliance

As a member of the Taiwan IC Industry and Academia Research Alliance (TIARA), VIS supports the alliance to promote new forms of industry-academia cooperation and focus on high-level talent cultivation in the semiconductor field to maintain the strength of Taiwan's semiconductor technology development and industry growth.

In 2022, VIS supported TIARA's continued advancement of related programs including:

- The A + A' Industry-Academia Laureate Project: The A Project is a joint venture between corporate members and academia to develop pre-competitive technologies that are in demand in the industry, while the A' Project is subsidized by the government to conduct forward-looking academic research related to the themes of the A Project for academia teams that have formed or will form the A Project
- Supported the TIARA Semiconductor Research Youth Forum ("Youth Forum"): to encourage more young students to engage in research work and the technology industry, and to inspire them to "understand technology and make good use of it"

Investment Amount
NT\$200,000

2.4 Implementing the United Nations Sustainable Development Goals

VIS is taking concrete action to achieve the UN's Sustainability Goals, and the 2022 Sustainability Initiative has achieved its 16 goals.

SDGs	Specific Actions Taken in 2022	SDGs	Specific Actions Taken in 2022
No Poverty 	<ul style="list-style-type: none"> During the Mid-Autumn Festival and Lunar New Year, we organized the "Order Instead of Donate" campaign to encourage employees to order social enterprise or sheltered workshop gift boxes first. In response to The Boys' Brigade Share-a-Gift campaign in Singapore, 120 gifts were collected for the nursing homes for the elderly in Singapore. The "Sending Love Home in Winter" was held and 27 boxes of supplies were collected for the homeless and the elderly living alone. Under the themes of Empowerment for the Disadvantaged and Spending the New Year with the Elderly, Year-end Charity Donation Campaign was held and employees, customers and suppliers were invited to make donations, raising NT\$4.37 million for six social welfare organizations. A donation of NT\$1.2 million was made to the 12 social welfare groups that had a long standing relationship with VIS. 	Good Health and Wellbeing 	<ul style="list-style-type: none"> We gave out medical masks to the disadvantaged elderly and children from halfway houses who have been in our care for a long time. A donation of NT\$1.2 million was made to the 12 social welfare organizations with long standing relationships, including the Foundation for Rare Disorders, the Sunshine Foundation, the Syin-Lu Social Welfare Foundation, and other support groups for the physically and mentally challenged and disabled. Passed ISO 45001 and CNS 45001 verification of the occupational safety and health management system every year, and there were 0 incidents of major injuries caused by occupational disasters in 2022. The annual influenza vaccination service is provided to employees, and the subsidy was increased in 2022. 1,611 people were registered for the vaccination, and the total subsidy was NT\$1,531,000. We provide employee health examination benefits that are better than the frequency required by law, including physical and health examinations for new recruits, special workers and current employees. For employees with abnormal health checkups, the nurse practitioner will arrange factory medical clinics, provide individualized health consultation, and strengthen medical assistance and follow-up for employees with medium and high health risks. VIS issued Healthy Exercise 2.0 exercise coupons to encourage employees to exercise for free to maintain their physical and mental health. 107 exercise classes were opened within VIS in 2022, and 31 exercise locations were established with 7 partner organizations externally. In order to promote employees' understanding of personal health risks, we have added a personal health classification in the exclusive health management app, which allows employees to grasp their health status over the years, and it also integrates with the My Health Bank NHI platform to compile medical consultation and medication records, and connects with personal wearable devices to completely record daily health information such as sleeping and walking. A maternal health protection management program is in place to arrange health counseling, work safety assessment, pregnancy and postpartum health guidance for pregnant and expectant mothers to ensure the physical and mental health of female employees during pregnancy, after childbirth, and while breastfeeding. Pregnancy check-ups, pregnancy checkup accompaniment, and paternity leave are increased from the legally-mandated 7 days to 10 days. Maternity leave is increased from the legally-mandated 56 days to 70 days. International employees enjoy the same welfare benefits as local employees; no distinction is made for nationality. When an employee in a same-sex marriage adopts a child of the other spouse, he or she may apply for a leave of absence without pay for childcare. We established an employee assistance program, EAP 2.0, which provides expert consultation and medical services to employees in the areas of psychology, law, finance, health, and management, all of which are protected by a privacy policy.
Zero Hunger 	<ul style="list-style-type: none"> Conducted the Spending the New Year with the Elderly year-end donation campaign to support social welfare organizations to provide nutritious Lunar New Year dishes for the elderly living alone and the physically and mentally challenged. In support of local agriculture, 600 boxes of sugar-apples were ordered for the staff and 10 social welfare organizations to enjoy. Participated in the Willing Hearts charity meal delivery in Singapore. A donation of NT\$1.2 million was made to the 12 social welfare organizations with long standing relationships, including halfway houses and nurseries. 		

SDGs	Specific Actions Taken in 2022	SDGs	Specific Actions Taken in 2022
Quality Education 	<ul style="list-style-type: none"> Established the VIS x NYCU Intelligent Manufacturing and Management Lab with the Department of Engineering and Management of National Yang Ming Chiao Tung University. 10 industry-academic collaborations with 5 colleges and universities, including Tsinghua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University. Provided 32 students from domestic and international universities and industry-academic cooperation programs to participate in the summer internship program. In partnership with National Taitung Junior College, we offered a Micro-credit Course on semiconductor manufacturing and equipment, providing scholarships, teachers, and internship opportunities to extend the concept of equal rights in education to rural areas. Sponsored the Scholarship Program for Ukrainian Students of National Yang Ming Chiao Tung University to support two Ukrainian students to study in Taiwan. Sponsored Tsinghua University's Sunrise Program by providing scholarships and female mentors to support three disadvantaged female students in their studies. Sponsored the Junyi Academy to hold four winter break cloud-based study workshops for over 4,147 teachers. Sponsored the Junyi Academy to deepen teacher training study in Miaoli, reaching 96 schools in the region. Jointly organized a training seminar with Junyi Academy for educational volunteers, with over 100 participants. With the aim of "Diverse Empowerment", we hosted the Boyo Social Welfare Foundation's career seminar on the semiconductor industry for over 130 middle school students from underprivileged families/rural/aboriginal areas of Hsinchu County. Organized Blue Sky Home Funfest to give talks on semiconductor science and career to the youth of the halfway house. Conducted the Empowerment for the Disadvantaged year-end donation campaign, inviting employees, customers, and suppliers to donate to support related social welfare organizations. A donation of NT\$1.2 million was made to 12 social welfare organizations with long standing relationships, including the Boyo Social Welfare Foundation and the World Community Service Association, and other disadvantaged educational service organizations. Organized environmental education activities for 1,271 students and community residents. Donated used laptops to Dongshan Elementary School in a remote area of Tainan to help children in remote areas diversify their learning. In collaboration with ASUS, the Refurbished Computer and Digital Training Program to disadvantaged groups to eliminate the digital gap in society, 8,432 computers, monitors and other electronic products have been donated since 2009. 	Gender Equality 	<ul style="list-style-type: none"> A maternal health protection management program is in place to arrange health counseling, work safety assessment, pregnancy and postpartum health guidance for pregnant and expectant mothers to ensure the physical and mental health of female employees during pregnancy, after childbirth and while breastfeeding. Pregnancy check-ups, pregnancy checkup accompaniment, and paternity leave are increased from the legally-mandated 7 days to 10 days. Maternity leave is increased from the legally-mandated 56 days to 70 days. International employees enjoy the same welfare benefits as local employees; no distinction is made for nationality. When an employee in a same-sex marriage adopts a child of the other spouse, he or she may apply for a leave of absence without pay for childcare. Established a sexual harassment prevention and management system, insisting on zero tolerance for discrimination; established a sexual harassment complaint box, with the Chief Legal Counsel as the highest responsible person; included sexual harassment issues in the annual mandatory training course. Respect for equal pay for equal work for women and men, adherence to the criterion of equality, the ratio of female to male pay for junior staff was nearly 1 to 1 in 2022. In order to encourage female students to join the technology industry, female executives of VIS are arranged to serve as mentors for disadvantaged female university students on a one-to-one basis, providing academic, life and career support.
Clean Water and Sanitation 	<ul style="list-style-type: none"> LHF-R recycling system began to operate in 2022 for the fab in Singapore and the recovery rate will increase by 6.4%. Water consumption per unit wafer area decreased from 6.70 liters in 2015 to 6.07 liters, a reduction of about 9.38%. The average wastewater discharge per unit wafer area decreased from 5.08 liters in 2015 to 4.19 liters, a reduction of approximately 17.43%. Accumulated process water recycling volume since 2015 exceeds 70 million tons. Passed the third-party verification of ISO 14046 for product water footprint. The plant and the surrounding water sources were purified and maintained (the Science Park Administration's detention basin and Kezihu Creek) to restore their ecological systems and restore the fireflies. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings. 		

SDGs	Specific Actions Taken in 2022	SDGs	Specific Actions Taken in 2022
Affordable and Clean Energy 	<ul style="list-style-type: none"> VIS joined RE100 and committed to achieve 100% renewable energy use by 2040, making us the first company in Taiwan's semiconductor industry to commit to achieving the RE100 target by 2040. Received approval from the Taipei Exchange to issue NT\$7 billion in corporate bonds, including NT\$1 billion in green bonds, for the development of renewable energy and other projects. 70,573 kWh of solar power was generated in 2022. In line with the government's power saving policy, we invested NT\$447.12 million in the replacement of energy-saving equipment, and completed a power saving of 22.03 million kilowatt hours, with an energy saving rate of 2.3% in 2022, resulting in an economic benefit, based on internal estimates, of approximately NT\$58.81 million. Power consumption per unit wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21%. Passed the third-party certification of ISO 50001 for the energy management system. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings. 	8 Decent Work and Economic Growth 	<ul style="list-style-type: none"> The 0.35-micron 650 V GaN process has entered mass production, making VIS the first company to mass-produce this technology in the specialty IC manufacturing service area. Established the VIS x NYCU Intelligent Manufacturing and Management Lab with the Department of Engineering and Management of National Yang Ming Chiao Tung University. Provided 32 students from domestic and international universities and industry-academic cooperation programs to participate in the summer internship program. In partnership with National Taitung Junior College, we offered a Micro-credit Course on semiconductor manufacturing and equipment, providing scholarships, teachers, and internship opportunities to extend the concept of equal rights in education to rural areas. Conducted the Empowerment for the Disadvantaged year-end donation campaign and filmed the annual CSR video to invite employees, customers and suppliers to recognize and support employment for the underprivileged. During the Mid-Autumn Festival and Lunar New Year, we organized the "Order Instead of Donate" campaign to encourage employees to order social enterprise or sheltered workshop gift boxes first. The number of people with physical and mental disabilities hired is better than what is required by law, and job design and counseling are provided in cooperation with the Career Center to help them adapt to employment. 2022 saw the addition of campus recruitment representative duties to actively build quality and diverse job opportunities. We realized zero hiring fees for 100% of foreign employees, strictly verified the information of the employment agencies, and improved human rights protection in the supply chain, and there were no complaints of non-compliance in 2022. In line with the government's power saving policy, we invested NT\$447.12 million in the replacement of energy-saving equipment, and completed a power saving of 22.03 million kilowatt hours, with an energy saving rate of 2.3% in 2022, resulting in an economic benefit, based on internal estimates, of approximately NT\$58.81 million. Power consumption per unit wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21%. Water consumption per unit wafer area decreased from 6.70 liters in 2015 to 6.07 liters, a reduction of about 9.38%. The average wastewater discharge per unit wafer area decreased from 5.08 liters in 2015 to 4.19 liters, a reduction of approximately 17.43%. LHF-R recycling system began to operate in 2022 for the fab in Singapore and the recovery rate will increase by 6.4%. Accumulated process water recycling volume since 2015 exceeds 70 million tons. The waste recovery rate was 93.64% and the landfill rate was 0.08%. The audit and counseling rate of waste treatment companies was 100%, and the percentage of companies that obtained ISO 14001 and other international environmental safety and health management certification reached 53.6%. In 2022, a total of 2,012 grassroots improvement proposals and 619 continuous improvement group activities were proposed and implemented, generating benefits of over NT\$1.282 billion. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings.
Decent Work and Economic Growth	<ul style="list-style-type: none"> Consolidated revenue for the year reached NT\$51.69 billion, an increase of approximately 18% over the previous year's revenue of NT\$43.95 billion. Return on shareholders' equity increased by approximately 38%. The overall gender ratio of employees is balanced, with 50.1% of men and 49.9% of women. Respect for equal pay for equal work for women and men, adherence to the criterion of equality, the ratio of female to male pay for junior staff was nearly 1 to 1 in 2022. In accordance with international human rights conventions and policies, we formulated and implemented the VIS Human Rights Policy, to assess human rights risks and formulate mitigation measures on a regular basis. Passed ISO 45001 and CNS 45001 verification of the occupational safety and health management system every year, and there were 0 incidents of major injuries caused by occupational disasters in 2022. A public complaint box is available to all interested stakeholders. Employees can file complaints through the complaint box and employee suggestion box. 437 complaints were reported by internal employees in 2022, with a 100% closure rate. In addition to the quarterly labor-management meetings held at each plant, we also held five chairman communication meetings in 2022, including supervisory communication meetings and employee communication meetings open to all employees, where the chairman personally answered all questions from employees to promote effective two-way communication. We allocated 5% of our revenue to R&D to invest in technology development. Revenue from advanced processes below 0.18 micron accounted for approximately 46%. 	8 Decent Work and Economic Growth	<ul style="list-style-type: none"> The 0.35-micron 650 V GaN process has entered mass production, making VIS the first company to mass-produce this technology in the specialty IC manufacturing service area. Established the VIS x NYCU Intelligent Manufacturing and Management Lab with the Department of Engineering and Management of National Yang Ming Chiao Tung University. Provided 32 students from domestic and international universities and industry-academic cooperation programs to participate in the summer internship program. In partnership with National Taitung Junior College, we offered a Micro-credit Course on semiconductor manufacturing and equipment, providing scholarships, teachers, and internship opportunities to extend the concept of equal rights in education to rural areas. Conducted the Empowerment for the Disadvantaged year-end donation campaign and filmed the annual CSR video to invite employees, customers and suppliers to recognize and support employment for the underprivileged. During the Mid-Autumn Festival and Lunar New Year, we organized the "Order Instead of Donate" campaign to encourage employees to order social enterprise or sheltered workshop gift boxes first. The number of people with physical and mental disabilities hired is better than what is required by law, and job design and counseling are provided in cooperation with the Career Center to help them adapt to employment. 2022 saw the addition of campus recruitment representative duties to actively build quality and diverse job opportunities. We realized zero hiring fees for 100% of foreign employees, strictly verified the information of the employment agencies, and improved human rights protection in the supply chain, and there were no complaints of non-compliance in 2022. In line with the government's power saving policy, we invested NT\$447.12 million in the replacement of energy-saving equipment, and completed a power saving of 22.03 million kilowatt hours, with an energy saving rate of 2.3% in 2022, resulting in an economic benefit, based on internal estimates, of approximately NT\$58.81 million. Power consumption per unit wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21%. Water consumption per unit wafer area decreased from 6.70 liters in 2015 to 6.07 liters, a reduction of about 9.38%. The average wastewater discharge per unit wafer area decreased from 5.08 liters in 2015 to 4.19 liters, a reduction of approximately 17.43%. LHF-R recycling system began to operate in 2022 for the fab in Singapore and the recovery rate will increase by 6.4%. Accumulated process water recycling volume since 2015 exceeds 70 million tons. The waste recovery rate was 93.64% and the landfill rate was 0.08%. The audit and counseling rate of waste treatment companies was 100%, and the percentage of companies that obtained ISO 14001 and other international environmental safety and health management certification reached 53.6%. In 2022, a total of 2,012 grassroots improvement proposals and 619 continuous improvement group activities were proposed and implemented, generating benefits of over NT\$1.282 billion. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings.

SDGs	Specific Actions Taken in 2022	SDGs	Specific Actions Taken in 2022
Industry, Innovation, and Infrastructure 	<ul style="list-style-type: none"> We allocated 5% of our revenue to R&D to invest in technology development. Revenue from advanced processes below 0.18 micron accounted for approximately 46%. The 0.35-micron 650 V GaN process has entered mass production, making VIS the first company to mass-produce this technology in the specialty IC manufacturing service area. Cumulative number of global patent applications >3,200; cumulative number of trade secret registrations >2,000. Established the VIS x NYCU Intelligent Manufacturing and Management Lab with the Department of Engineering and Management of National Yang Ming Chiao Tung University. 10 industrial-academic collaborations with five universities, including Tsinghua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University, and sponsorship of the TSIA Semiconductor Industrial Award and Industrial Fund. We have passed the third party verification of the quality management system ISO 9001, IATF 16949 and the hazardous material process management system IECQ QC 080000. Our products are 100% hazardous substance-free, conflict-free and comply with the relevant regulations and customer specifications of the human rights conventions. Third party verification of energy management system ISO 50001 and greenhouse gas inventory management system ISO 14064-1. Third party verification of product water footprint ISO 14046 and product carbon footprint ISO 14067. VIS joined RE100 and committed to achieve 100% renewable energy use by 2040, making us the first company in Taiwan's semiconductor industry to commit to achieving the RE100 target by 2040. Received approval from the Taipei Exchange to issue NT\$7 billion in corporate bonds, including NT\$1 billion in green bonds, for the development of renewable energy and other projects. 70,573 kWh of solar power was generated in 2022. Power consumption per unit wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21%. Greenhouse gas emissions per unit wafer area were 23% lower than in 2015; fluorinated greenhouse gas emissions per unit wafer area were 33% lower than in 2015. Air pollutant emissions per unit wafer area decreased by 20.09% compared to 2015. Water consumption per unit wafer area decreased from 6.70 liters in 2015 to 6.07 liters, a reduction of about 9.38%. The average wastewater discharge per unit wafer area decreased from 5.08 liters in 2015 to 4.19 liters, a reduction of approximately 17.43%. The waste recovery rate was 93.64% and the landfill rate was 0.08%. In 2022, a total of 2,012 grassroots improvement proposals and 619 continuous improvement group activities were proposed and implemented, generating benefits of over NT\$1.282 billion. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings. 	Reduced Inequalities 	<ul style="list-style-type: none"> In accordance with international human rights conventions and policies, we formulated and implemented the VIS Human Rights Policy, to assess human rights risks and formulate mitigation measures on a regular basis. The number of people with physical and mental disabilities hired is better than what is required by law, and job design and counseling are provided in cooperation with the Career Center to help them adapt to employment. 2022 saw the addition of campus recruitment representative duties to actively build quality and diverse job opportunities. We realized zero hiring fees for 100% of foreign employees, strictly verified the information of the employment agencies, and improved human rights protection in the supply chain, and there were no complaints of non-compliance in 2022. Respect for equal pay for equal work for women and men, adherence to the criterion of equality, the ratio of female to male pay for junior staff was nearly 1 to 1 in 2022. Established a sexual harassment prevention and management system, insisting on zero tolerance for discrimination; established a sexual harassment complaint box, with the Chief Legal Counsel as the highest responsible person; included sexual harassment issues in the annual mandatory training course. When an employee in a same-sex marriage adopts a child of the other spouse, he or she may apply for a leave of absence without pay for childcare. During the Mid-Autumn Festival and Lunar New Year, we organized the "Order Instead of Donate" campaign to encourage employees to order social enterprise or sheltered workshop gift boxes first. Conducted the Empowerment for the Disadvantaged year-end donation campaign and filmed the annual CSR video to invite employees, customers and suppliers to recognize and support employment for the underprivileged.
Sustainable Cities and Communities 	<ul style="list-style-type: none"> We adopted a park in Qianjia, Hsinchu City, the largest air quality purification area in the city, and have been an excellent adopter of the Environmental Protection Agency's air quality purification area for four consecutive years. Planted trees for Hsinchu City Cherry Blossom Park to create a beautiful city for residents to enjoy the water, cherry blossoms and fireflies. Provided urban green public space, totaling 4.9 hectares. Air pollutant emissions per unit wafer area decreased by 20.09% compared to 2015. The average wastewater discharge per unit wafer area decreased from 5.08 liters in 2015 to 4.19 liters, a reduction of approximately 17.43%. The waste recovery rate was 93.64% and the landfill rate was 0.08%. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings. 		

SDGs	Specific Actions Taken in 2022	SDGs	Specific Actions Taken in 2022
Responsible Consumption and Production 	<ul style="list-style-type: none"> We conduct annual stakeholder surveys on important issues, compile sustainability reports, and make corporate sustainability information available to the public. We have established a Corporate Sustainability Committee, which follows the VIS Corporate Sustainability Policy and sets sustainability goals and development guidelines. It meets regularly on a quarterly basis to review and supervise the progress of each business, and reports to the Board of Directors every six months. There is an Energy and Carbon Reduction Committee, chaired by the Regional Director of Operations and Environmental Safety. The three main topics covered in the scope of communication are Carbon Asset Management, Energy Saving and Carbon Reduction, and Supply Chain Management, and each topic is chaired by the plant manager and supervisor. VIS joined RE100 and committed to achieve 100% renewable energy use by 2040, making us the first company in Taiwan's semiconductor industry to commit to achieving the RE100 target by 2040. Received approval from the Taipei Exchange to issue NT\$7 billion in corporate bonds, including NT\$1 billion in green bonds, for the development of renewable energy and other projects. 70,573 kWh of solar power was generated in 2022. In line with the government's power saving policy, we invested NT\$447.12 million in the replacement of energy-saving equipment, and completed a power saving of 22.03 million kilowatt hours, with an energy saving rate of 2.3% in 2022, resulting in an economic benefit, based on internal estimates, of approximately NT\$58.81 million. Power consumption per unit wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21%. Greenhouse gas emissions per unit wafer area were 23% lower than in 2015; fluorinated greenhouse gas emissions per unit wafer area were 33% lower than in 2015. Air pollutant emissions per unit wafer area decreased by 20.09% compared to 2015. Water consumption per unit wafer area decreased from 6.70 liters in 2015 to 6.07 liters, a reduction of about 9.38%. The average wastewater discharge per unit wafer area decreased from 5.08 liters in 2015 to 4.19 liters, a reduction of approximately 17.43%. LHF-R recycling system began to operate in 2022 for the fab in Singapore and the recovery rate will increase by 6.4%. Accumulated process water recycling volume since 2015 exceeds 70 million tons. The waste recovery rate was 93.64% and the landfill rate was 0.08%. The audit and counseling rate of waste treatment companies was 100%, and the percentage of companies that obtained ISO 14001 and other international environmental safety and health management certification reached 53.6%. In collaboration with ASUS, the Refurbished Computer and Digital Training Program to disadvantaged groups to eliminate the digital gap in society. 8,432 computers, monitors and other electronic products have been donated since 2009. This represented a reduction of 191.096 metric tons of CO₂ emissions which translates to 15,924.029 fewer trees being cut down. 	<ul style="list-style-type: none"> In 2022, a total of 2,012 grassroots improvement proposals and 619 continuous improvement group activities were proposed and implemented, generating benefits of over NT\$1.282 billion. We have passed the third party verification of the quality management system ISO 9001, IATF 16949 and the hazardous material process management system IEQ-CQC 080000. Our products are 100% hazardous substance-free, conflict-free and comply with the relevant regulations and customer specifications of the human rights conventions. Passed ISO 45001 and CNS 45001 verification of the occupational safety and health management system every year, and there were 0 incidents of major injuries caused by occupational disasters in 2022. During the Mid-Autumn Festival and Lunar New Year, we organized the "Order Instead of Donate" campaign to encourage employees to order social enterprise or sheltered workshop gift boxes first. In support of local agriculture, 600 boxes of sugar-apple were ordered for the staff and 10 social welfare organizations to enjoy. We are committed to realizing the local procurement strategy to reduce the carbon footprint of raw materials transportation, and to foster local related industrial chains and create local employment opportunities. In 2022, local suppliers from Taiwan and Singapore accounted for more than 75%. The completion rate of Tier 1 suppliers signing the VIS Supplier Code of Conduct and Sustainability Management Self-Assessment Questionnaire reached 100%; the completion rate of internal education and training conducted by Tier 1 suppliers reached 100%. Excluding a one-time only transaction, 100% of all Tier 1 Significant suppliers with an annual transaction volume of more than NT\$2 million were subject to a sustainability risk survey; 30% or more of key suppliers' ESG field reviews are completed each year. Using 2020 as the base year, suppliers have successfully improved their processes/quality, reduced resource consumption, and continuously reduced carbon emissions, and have provided supporting documentation, with a cumulative total of 18 improvements. Include "biodiversity, zero deforestation or land conservation" as part of the supplier's behavior criteria. Established the Biodiversity Pledge, pledging not to engage in development and operation activities in domestic or overseas legal ecological protection areas and biodiversity sensitive areas, and to take relevant protection measures to reduce the impact on biodiversity and forest ecology. The number of environmental volunteer hours performed by staff reached 2,026; environmental education activities were held with 1,271 participants from students and residents of the community. Sponsored the Focus Taiwan: Jennifer Shen's talk radio program, which produced 52 episodes in 2022 and advocated at least 13 United Nations Sustainable Development Goals with a reach that impacted 1,312,000 people. Participated in a green deposit issued by Sumitomo Mitsui Banking Corporation (SMBC) Taipei Branch with US\$10 million. The funds from this green deposit will be used for green development projects such as developing renewable energy, improving energy efficiency, pollution prevention, electric vehicles, and green buildings. 	

SDGs	Specific Actions Taken in 2022
Climate Action 	<ul style="list-style-type: none"> A Risk Management Committee has been established to manage the potential risks and financial impacts of climate change and is responsible for identifying and implementing climate change risk control programs. The TCFD framework was introduced to identify climate risks and opportunities for VIS. Strengthened climate resilience, with 0 days of production disruptions due to climate disasters in 2022. A total of five plants in Taiwan and Singapore responded to the one-hour initiative to turn off the lights. VIS joined RE100 and committed to achieve 100% renewable energy use by 2040, making us the first company in Taiwan's semiconductor industry to commit to achieving the RE100 target by 2040. Received approval from the Taipei Exchange to issue NT\$7 billion in corporate bonds, including NT\$1 billion in green bonds, for the development of renewable energy and other projects. 70,573 kWh of solar power was generated in 2022. In line with the government's power saving policy, we invested NT\$447.12 million in the replacement of energy-saving equipment, and completed a power saving of 22.03 million kilowatt hours, with an energy saving rate of 2.3% in 2022, resulting in an economic benefit, based on internal estimates, of approximately NT\$58.81 million. Power consumption per unit wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21%. There is an Energy and Carbon Reduction Committee, chaired by the Regional Director of Operations and Environmental Safety. The three main topics covered in the scope of communication are Carbon Asset Management, Energy Saving and Carbon Reduction, and Supply Chain Management, and each topic is chaired by the plant manager and supervisor. Set short-, medium- and long-term sustainability goals for greenhouse gas emissions, adoption of renewable energy, and reduction of electricity consumption. Greenhouse gas emissions per unit wafer area were 23% lower than in 2015; fluorinated greenhouse gas emissions per unit wafer area were 33% lower than in 2015. Third party verification of energy management system ISO 50001 and greenhouse gas inventory management system ISO 14064-1. We are committed to realizing the local procurement strategy to reduce the carbon footprint of raw materials transportation, and to foster local related industrial chains and create local employment opportunities. In 2022, local suppliers from Taiwan and Singapore accounted for more than 75%. The number of environmental volunteer hours performed by staff reached 2,026; environmental education activities were held with 1,271 participants from students and residents of the community.
Life on Land 	<ul style="list-style-type: none"> The plant and its surrounding water sources were purified and maintained (the Science Park Bureau's detention basin and the Kezhiu Creek) to restore its ecosystem. In collaboration with firefly expert Dr. Wu Chia-hsiung, we have successfully rehabilitated fireflies in our adopted land. The number of environmental volunteer hours performed by staff reached 2,026; environmental education activities were held with 1,271 participants from students and residents of the community. Brought the beetle ecological education course to Hsinchu County's Erchong and Shuangxi elementary schools and Hsinchu City's Longshan elementary school. Established the Biodiversity Pledge, pledging not to engage in development and operation activities in domestic or overseas legal ecological protection areas and biodiversity sensitive areas, and to take relevant protection measures to reduce the impact on biodiversity and forest ecology. Include "biodiversity, zero deforestation or land conservation" as part of the supplier's behavior criteria.
Peace, Justice and Strong Institutions 	<ul style="list-style-type: none"> In accordance with international human rights conventions and policies, we formulated and implemented the VIS Human Rights Policy to assess human rights risks and formulate mitigation measures on a regular basis. We realized zero hiring fees for 100% of foreign employees, strictly verified employment agencies' information, and improved human rights protection in the supply chain. There were no complaints of non-compliance in 2022. We established an employee assistance program, EAP 2.0, which provides expert consultation and medical services to employees in the areas of psychology, law, finance, health, and management, all of which are protected by a privacy policy. Established a sexual harassment prevention and management system, insisting on zero tolerance for discrimination; established a sexual harassment complaint box, with the Chief Legal Counsel as the highest responsible person; and included sexual harassment issues in the annual mandatory training course. A public complaint box is available to all interested stakeholders. Employees can file complaints through the complaint box and employee suggestion box. 437 complaints were reported by internal employees in 2022, with a 100% closure rate. Our products are 100% hazardous substance-free, conflict-free and comply with the relevant regulations and customer specifications of the human rights conventions.
Partnerships for the Goals 	<ul style="list-style-type: none"> The completion rate of Tier 1 suppliers signing the VIS Supplier Code of Conduct and Sustainability Management Self-Assessment Questionnaire reached 100%; the completion rate of internal education and training conducted by Tier 1 suppliers reached 100%. Excluding a one-time only transaction, 100% of all Tier 1 Significant suppliers with an annual transaction volume of more than NT\$2 million were subject to a sustainability risk survey; 30% or more of significant suppliers' ESG field reviews are completed each year. Using 2020 as the base year, suppliers have successfully improved their processes/quality, reduced resource consumption, and continuously reduced carbon emissions, and have provided supporting documentation, with a cumulative total of 18 improvements. The audit and counseling rate of waste treatment companies was 100%, and the percentage of companies that obtained ISO 14001 and other international environmental safety and health management certification reached 53.6%. Under the themes of Empowerment for the Disadvantaged and Spending the New Year with the Elderly, a year-end donation campaign was held and employees, customers and suppliers were invited to make donations, raising NT\$4.37 million for six social welfare organizations. Sponsored the Focus Taiwan: Jennifer Shen's talk radio program, which produced 52 episodes in 2022 and advocated at least 13 United Nations Sustainable Development Goals with a reach that impacted 1,312,000 people.



Governance and Innovation

Technological innovation and manufacturing innovation are the two innovative themes of VIS, coupled with our patent portfolio, VIS ensures proper protection of our innovative fruits, while also generating deserving commercial values.

5%

Ranked in top 5% of TPEX listed companies (non-categorized) in the Corporate Governance Evaluation for nine consecutive years

3,200

The cumulative number of global patent applications
>3,200 applications

95.7%

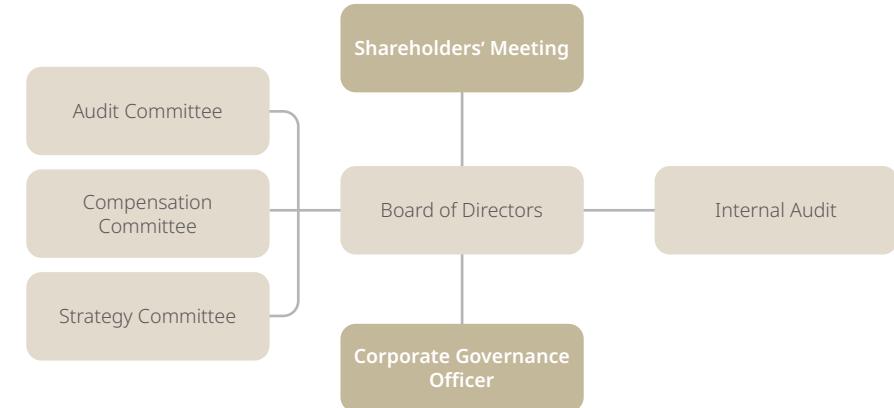
The overall customer satisfaction rate was 95.7%

3.1 Corporate Governance



3.1.1 Corporate Governance Structure

The highest governance unit of Vanguard International Semiconductor Corporation (VIS) is the Board of Directors, which guides VIS' strategies and supervises the management. In order to implement corporate governance and strengthen the Board of Directors' management, the Audit Committee, Compensation Committee and Strategy Committee were set up under the Board of Directors to assist the Board of Directors in performing its supervisory duties. On April 29, 2019, the Board of Directors approved to appoint the Corporate Governance Officer. The Corporate Sustainability Committee is in charge of making decisions on economic, environmental and social topics, and reports the implementation status to the Board of Directors every six months; the Board of Directors reviews, supervises, guides various ESG goals and development directions, and gives feedback, the content of which includes: (1) supervising the risks and opportunities of various topics assessed and managed by the Corporate Sustainability Committee; (2) approving the revision and policies of goals for topics related to sustainability. VIS has continued to cultivate and work hard on "environment, society, and governance" for many years. In February 2023, following the recommendations of the Board of Directors, the Corporate Sustainability Committee proposed the medium- and long-term plans for the project containing five main axes in ESG social engagement to the Board of Directors, and received the support of the Board of Directors. In the future, it will continue to move towards sustainable development and achieve specific goals.



VIS has won wide recognition externally for its highly implemented corporate governance, including being ranked in the top 5% of TPEx listed companies without classification in terms of performance for nine consecutive years in the corporate governance evaluation organized by the Taiwan Stock Exchange and Taipei Exchange, being selected as a world index constituent of the Dow Jones Sustainability Index (DJSI) for two consecutive years, and being selected as a constituent of the emerging market index for the first time; in addition, it has also been selected as a constituent of the TIP Taiwan TPEx ESG Index for two consecutive years.

3.1.2 Composition of the Highest Governance Structure

VIS insists on operational transparency, pays attention to shareholder equity, and believes that a sound and efficient Board of Directors is the basis of good corporate governance.

Organization of the Board of Directors

VIS adopts a candidate nomination system to elect directors and independent directors, and has formulated the Rules Governing the Election of Directors (please refer to VIS' [website](#) for details). The candidates are nominated by shareholders holding 1% or more of the total issued shares or the Board of Directors, and then the Board of Directors considers their professional knowledge as well as academic background and work experience taking account of the diversity and independence requirements for the composition of the Board of Directors. It also evaluates the diversity of directors and independence of independent directors, reviews the qualifications required, and submits a list of candidates. The shareholders elect the directors and independent directors from the list of candidates at the shareholders' meeting, and the term of office of directors is three years. VIS re-elected a total of seven directors (including three independent directors) for the tenth board at the 2021 annual general shareholders' meeting. Together with an additional independent director elected at the 2022 annual general shareholders' meeting, currently the Board of Directors consists of eight experienced and outstanding directors from industry and academia. Among them, the four independent directors are: Mr. Kenneth Kin, the former Senior Vice President of TSMC; Mr. Benson W.C. Liu, the former chairman of the Taiwan Corporate Governance Association; Mr. Chintay Shih, the former chairman of the Institute for Information Industry; and Mr. Liang-Gee Chen, the former Minister of Science and Technology of the Republic of China. Among the other four directors, there are three representatives of the corporate directors, namely, Mr. Leuh Fang, the representative of TSMC (Chairman of VIS); Mr. F.C. Tseng, the representative of TSMC (Vice Chairman of VIS); Mr. Lai-Shou Su, the representative of the National Development Fund, Executive Yuan; and a natural person director: Mr. Edward Y. Way, the former Managing Partner & CEO of Deloitte Taiwan.

Operational Status of the Board of Directors

The Board of Directors is the highest governance unit and the major business decision-making center of VIS. Its functions and responsibilities include appointing and guiding VIS' management, overseeing business performance, making resolutions on important issues, preventing conflicts of interest, and ensuring that VIS exercises its duties and responsibilities in compliance with various laws and regulations, VIS' Articles of Incorporation or resolutions of shareholders' meetings.

The Board of Directors of VIS holds at least one meeting every quarter and at least five meetings every year to listen to the report of the management team and evaluate the development strategy and various proposals put forward by the management team. VIS held a total of six board meetings in 2022, and all the directors attended the meetings in person.

VIS also provides directors with various meeting plans and information through the corporate governance unit to facilitate the grasp of important information of VIS in real time by directors. In June 2022, VIS elected an additional independent director. In order to assist the new director in understanding VIS, VIS held an induction lecture for the new director in July 2022, explaining VIS' overall organizational structure, business operations and development, as well as the duties and responsibilities of serving as an independent director. Afterwards, the Corporate Governance Department continued to assist the director in understanding VIS' latest developments, as well as coordinated and connected with VIS' management team as an intermediary. In addition to the board meeting, it also arranged several meetings to allow the directors to understand VIS' operating outlook, business market planning, research and development directions, and other issues, so that they can promptly grasp VIS' development and put forward guidance and recommendations, thereby drawing up favorable development directions and strategies. Through the aforementioned arrangements, the support system VIS has provided for the Board of Directors has been fairly complete.

Diversity, professionalism, and independence of board members

The Corporate Governance Practice Principles of VIS stipulates that the composition of the Board of Directors shall be diversified. According to the diversity policy, the number of directors who concurrently serve as VIS' manager shall not exceed one third of the director seats, and all directors have different professional backgrounds, fields of work, etc., and possess the knowledge, skills and literacy necessary to perform their duties. In addition, in order to be in line with the sustainable development and ESG internationally, VIS expanded the definition of the board diversity in 2021, the content of which includes the diversity of nationalities, ethnicities, and other aspects, in the hope of making it closer to the developmental trend in the international capital market. In 2022, the Corporate Governance Practice Principles was added that it is advisable to have the proportion of female directors reach one third of the director seats, and the revision was made that it is not advisable to have the number of independent directors be less than one third of the director seats, so as to strengthen the diversity and independence of the Board of Directors.

In addition, VIS re-elected the tenth Board of Director at the 2021 annual general shareholders' meeting, and elected an additional independent director at the 2022 annual general shareholders' meeting. The directors meet the goals and requirements of diversity. Among the directors, the Chairman Mr. Leuh Fang, the Vice Chairman Mr. F.C. Tseng, the independent director Mr. Kenneth Kin, the independent director Mr. Chintay Shih, and the independent director Mr. Liang-Gee Chen all have experience in the information technology industry, while the independent director Mr. Benson W.C. Liu, the director Mr. Edward Y. Way, and the director Mr. Lai-Shou Su have experience in finance and auditing (Financials), corporate governance and social welfare.

In order to achieve the ideal goal of corporate governance, the capabilities and experience that the Board of Directors shall have as a whole shall include leadership, strategic decision-making, business management, global market perspective, industry insight, financial management and analysis, operating judgments, risk/crisis management, and sustainability governance.

Operational Status of the Board of Directors in 2022

The Board of Directors held six meetings in the most recent year, and the attendance status of directors is as follows:

Title	Name	Actual Times in Attendance (Participation)	Attendance by Proxy	Actual Attendance Rate (%)
Chairman	TSMC Representative: Leuh Fang	6	0	100%
Vice Chairman	TSMC Representative: F.C. Tseng	6	0	100%
Director	National Development Fund, Executive Yuan Representative: Lai-Shou Su	6	0	100%
Director	Edward Y. Way	6	0	100%
Independent Director	Chintay Shih	6	0	100%
Independent Director	Benson W.C. Liu	6	0	100%
Independent Director	Kenneth Kin	6	0	100%
Independent Director	Liang-Gee Chen ^{Note}	4	0	100%
Average Attendance Rate				100%

Note: Mr. Liang-Gee Chen has served as an independent director of VIS since June 14, 2022, and the number of board meetings to be attended in 2022 was 4 times.

Meanwhile, VIS has also established specific management goals at this stage. In order to achieve specific management goals, a professional ESG lecturer was invited to lecture on Risks and Opportunities of Climate Change from the perspective of board supervision, guidance and management to the eight directors on December 13, 2022, so as to enhance the directors' knowledge literacy and professional competences in response to climate change issues. In November 2022, the Taiwan Corporate Governance Association was commissioned to conduct an external evaluation of the effectiveness of VIS' Board of Directors. The Taiwan Corporate Governance Association highly recognized the diversity of VIS' Board of Directors and suggested increasing the number of female directors. VIS responded that it would actively seek at least one suitable female director candidate in the reelection of directors in 2024 so to achieve VIS' specific management goals. Looking ahead into the future, VIS will continue to examine the elements of composition of diversity, continue to strengthen the diversity of the composition of the Board of Directors, and set appropriate goals.

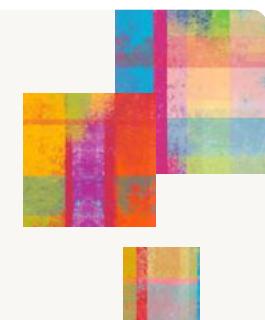
In terms of the professionalism of the Board of Directors, among the current eight board members, there are four independent directors (accounting for 50% of the board seats), whose professional qualifications and experience cover semiconductor expertise and technology, business operation and management, business marketing, financial accounting, corporate governance, and other aspects. They generally possess the knowledge, skills and literacy necessary to perform their duties.

In terms of independence, the directors of VIS are not in any of the circumstances stipulated in Paragraphs 3 and 4 of Article 26-3 of the Securities Exchange Act, that is, there is no relationship of the spouse or relatives within the second degree among them. The current Chairman Mr. Leuh Fang joined the management team of VIS in 2009 as the President and concurrently held a key position in the operation of the subsidiary. In 2015, he was elected by the shareholders' meeting to join the Board of Directors and take over the position of Chairman. He spared no effort to participate in VIS' direction and strategy as well as to guide and communicate with the management, which is a success story for VIS' board members succession plan. Mr. Leuh Fang has extensive experience in the semiconductor industry, and VIS needs his insight to guide the future direction and improve VIS' operations.

According to the corporate governance structure of VIS, the corporate decisions are jointly decided by all the directors, including the four independent directors. VIS' Articles of Incorporation prescribe the authorization, duties and responsibilities of the Chairman and President, and stipulate the organization of functional committees specifying their functions and responsibilities. Thus, the President has to report to the Board of Directors on VIS' operation, business and financial status every quarter, and accept supervision and guidance of other board members; therefore, there is sufficient independence between the Board of Directors and the management.

Diversified Specific Management Goals

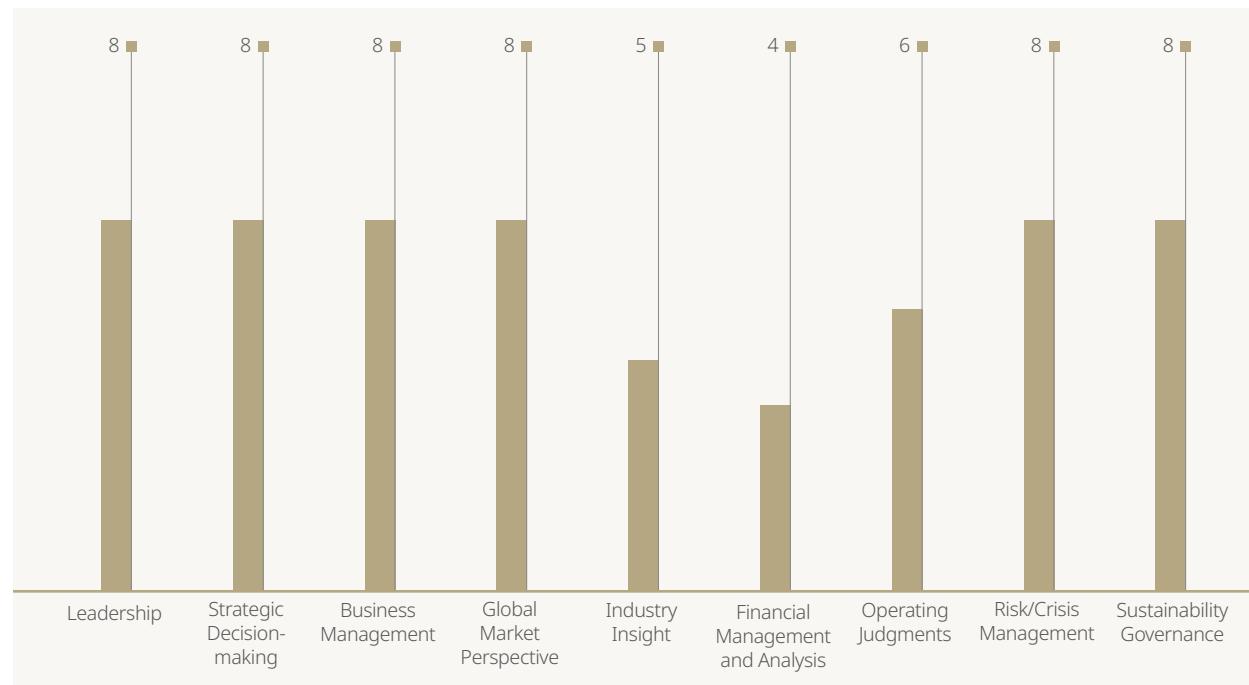
1. VIS pays attention to gender equality in the composition of board members, and the goal is to have one seat or to achieve a ratio of 10% or more of female directors.
2. Gradually increase the number of board members with professional backgrounds relating to corporate governance, environmental sustainability, corporate social responsibility, and law, so as to better oversee and guide VIS in response to the international developmental trend in ESG.



Overall speaking, except for the Chairman Leuh Fang, none of the other seven directors has worked in VIS, and the directors who are not employees of VIS account for seven eighths of the director seats, that is, more than half of the directors do not concurrently serve as employees or managers. Meanwhile, more than half of VIS' directors are external directors that can independently and impartially oversee the management with substantial independence. The Board of Directors and the management team perform their respective responsibilities for supervision of decision making and operations management so as to ensure the maximization of long-term shareholders' interests. It is expected to bring a new look to the diversification of VIS' board members and effectively enhance the independence of VIS' board members.

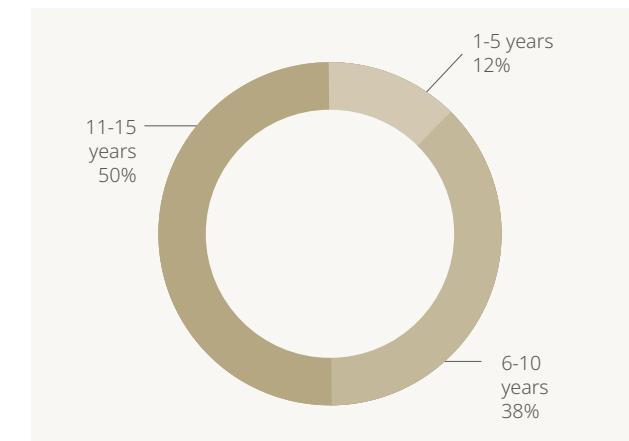
For information on the directors' professional qualifications and independence of independent directors, please refer to VIS' [2022 annual report](#) or the [official website](#).

Directors' Professional Competence and Experience



Unit: People

Continuous Term of Directors



Title	Name	Continuous Term of Office	Gender	Age (years old)	Independence ^{Note 3}	Professional Competence and Experience									Global Industry Classification Standard (GICS) ^{Note 4}
						Leadership	Strategic Decision-making	Business Management	Global Market Perspective	Industry Insight	Financial Management and Analysis	Operating Judgments	Risk/Crisis Management	Sustainability Governance	
Chairman	TSMC Representative: Leuh Fang ^{Note 1}	8 years	Male	61-70		V	V	V	V	V	V	V	V	V	Information technology industry
Vice Chairman	TSMC Representative: F.C. Tseng	10 years	Male	71-80	V	V	V	V	V	V	V	V	V	V	Information technology industry
Director	National Development Fund, Executive Yuan Representative: Lai-Shou Su	6 years	Male	61-70	V	V	V	V	V	V	V	V	V	V	Financial industry
Director	Edward Y. Way	13 years	Male	71-80	V	V	V	V	V	V	V	V	V	V	Financial industry
Independent Director	Benson W.C. Liu ^{Note 2}	11 years	Male	71-80	V	V	V	V	V	V	V	V	V	V	Financial industry
Independent Director	Kenneth Kin ^{Note 2}	11 years	Male	71-80	V	V	V	V	V	V	V	V	V	V	Information technology industry
Independent Director	Chintay Shih ^{Note 2}	11 years	Male	71-80	V	V	V	V	V	V	V	V	V	V	Information technology industry
Independent Director	Liang-Gee Chen	1 year	Male	61-70	V	V	V	V	V	V	V	V	V	V	Information technology industry

Note 1: In the re-election of directors at the shareholders' meeting in 2021, the President Mr. Leuh Fang was elected as a director and also selected as the Chairman. The semiconductor industry is a rapidly changing and highly competitive industry. Mr. Leuh Fang has extensive experience in the semiconductor industry and VIS needs his insights to guide VIS' future direction as well as his leadership to improve VIS' operations. VIS' decisions are jointly decided by all directors of the Board of Directors, which include four independent directors, accounting for half of the board seats, and are not controlled by the Chairman. VIS' Articles of Incorporation have clearly defined the authorization, duties and responsibilities of the Chairman and President, and the Functional Committee Charter has also been formulated to clearly prescribe its functions and responsibilities. The President has to report VIS' operation, business and financial status to the Board of Directors on a quarterly basis, and accept the supervision and guidance of the Board of Directors; therefore, there is sufficient independence between the Board of Directors and the management. In addition, none of the other 7 directors work for VIS, that is, more than half of the directors do not concurrently serve as employees or managers, and are substantially independent. The Board of Directors and the management team perform their respective responsibilities for overseeing decision making and operations management.

Note 2: Reasons for the independent director serving more than three consecutive terms:

1. Dr. Chintay Shih has rich experience and professional skills in the semiconductor industry, and has forward-looking insights on industrial development. VIS needs his expertise to improve the quality of board decision making and the exhaustiveness of operational decision making.
2. Mr. Benson W.C. Liu specializes in corporate management, finance, and corporate governance. VIS needs his professional knowledge and independent judgment to help the Board of Directors strengthen its supervisory function and deepen corporate governance.
3. Dr. Kenneth Kin has extensive experience in semiconductor marketing, global operations, and brand management. VIS needs his insights and industrial experience to guide VIS' future development direction and provide strategic guidance for VIS' product development.

Note 3: According to DJSI's criteria for judging the independence of directors, except for the Chairman, the other seven directors at least meet the requirements under 4 out of the following 9 indicators, among which at least the requirements under 2 out of the first 3 indicators are met:

1. The director must not have been employed by the company in an executive capacity within the last year.
2. The director must not accept or have a "Family Member who accepts any payments from the company or any parent or subsidiary of the company in excess of \$60,000 during the current fiscal year", other than those permitted by SEC Rule 4200 Definitions, including i) payments arising solely from investments in the company's securities; or ii) payments under non-discretionary charitable contribution matching programs. Payments that do not meet these two criteria are disallowed.
3. The director must not be a "Family Member of an individual who is [...] employed by the company or by any parent or subsidiary of the company as an executive officer."
4. The director must not be (and must not be affiliated with a company that is) an adviser or consultant to the company or a member of the company's senior management.
5. The director must not be affiliated with a significant customer or supplier of the company.
6. The director must have no personal services contract(s) with the company or a member of the company's senior management.
7. The director must not be affiliated with a not-for-profit entity that receives significant contributions from the company.
8. The director must not have been a partner or employee of the company's outside auditor during the past year.
9. The director must not have any other conflict of interest that the board itself determines to mean they cannot be considered independent.

Note 4: The Global Industry Classification Standard (GICS) includes 11 major industries: energy, materials, industrials, consumer discretionary, consumer staples, healthcare, financials, information technology, communication services, utilities, and real estate.

Note 5: The members of the current Board of Directors are all males at the age of 50 or more. For the education background and work experience of the directors and the concurrent positions in other companies, please refer to the annual report or website of VIS.

Communication Procedures for Key Significant Events

In addition to quarterly reporting to the Board of Directors on VIS' operations and business status, as well as current and future financial forecasts, the management of VIS also communicates on major asset transactions, lending of funds, endorsement or guarantee, and other matters to be submitted to the Board of Directors for resolutions in accordance with laws, regulations, the Articles of Incorporation, or requirements of the competent authority through the discussions and resolutions of the Audit Committee, Strategy Committee and the Board of Directors. In addition, in the event of special circumstances in the daily operation and management of VIS which may have a certain impact on VIS' management, the President will promptly contact the directors by phone or email to explain and listen to their opinions and viewpoints. In the event that there are major decisions or matters that have a major impact on VIS' shareholder equity requiring the approval of the resolution by the Board of Directors, VIS will also hold an extraordinary Board of Directors at any time for discussion and communication.

VIS has formulated the Procedures for Handling Material Inside Information, and the handling of material information and related operating procedures are also applicable to members of the Board of Directors. In addition, when a major accident occurs that affects the normal production of the fab or product delivery, VIS also has the Operation Continuity Management Guidelines and the Business Continuity Plan Management Guidelines in place, according to which the crisis team is to be formed by the management, assigning task forces divided according to powers and responsibilities, launching company-wide corresponding plans, procedures and activities, and reporting such to the counterparty according to the definition of disaster notification, and finally the President will report such to the directors depending on the impact status. When there is any material information to be released to the public in accordance with the Taipei Exchange Procedures for Verification and Disclosure of Material Information of Companies with TPEx Listed Securities, VIS will also notify the directors by email simultaneously.

For the nature and total number of key significant events in 2022, please refer to the material information released by VIS on the Market Observation Post System.

Performance Evaluation of the Board of Directors and Functional Committees

VIS has formulated the Board of Directors Performance Assessment Policy, which stipulates that internal evaluation shall be conducted at least once a year and external evaluation shall be conducted every three years; VIS formulates the next year's performance evaluation criteria in the fourth quarter of each year, conducts evaluation at the end of the year, and combines the evaluation result with the remuneration of director. In addition, when VIS' Board of Directors selects or nominates directors, the performance evaluation result of the individual director will be used as a reference for selection.

The scope of performance evaluation of the Board of Directors includes: individual director members, the overall Board of Directors, and various functional committees. The two evaluation methods include the approach of selecting either the internal evaluation or external evaluation and the approach of the combined use of the internal evaluation and external evaluation. The internal evaluation method includes: self-evaluation by board members, internal self-evaluation by the Board of Directors, internal self-evaluation by functional committees, re-evaluation by the Compensation Committee, and resolutions of the Board of Directors; while the external evaluation is conducted by appointing external professional institutions, experts or other appropriate methods.

The evaluation method of individual directors and functional committees is carried out by means of the internal evaluation, while the performance evaluation of the overall Board of Directors is carried out by means of the combined use of the internal evaluation and external evaluation.

VIS attaches importance to and actively promotes ESG. In order to connect directors' performance with VIS' sustainable development goals, ESG performance is included in the evaluation criteria of the Compensation Committee's re-evaluation since 2022. For the performance evaluation of individual directors, in the fourth quarter of each year, the Compensation Committee prepares the director performance evaluation criteria and evaluation form for the next year incorporating ESG performance based on individual powers and responsibilities, and conducts the evaluation in the first quarter after the end of the next year. The compensation and remuneration structure and standard of directors are regularly reviewed and adjusted every year. The amount of fixed remuneration is determined after performance evaluation by the Compensation Committee in the first quarter of each year, and a recommendation is made and submitted

to the Board of Directors for approval. One of the performance self-evaluation criteria of individual directors "having conducted appropriate review, supervision and guidance on major issues reported or discussed in the Board of Directors meeting, including finance, risk, environmental protection, social engagement and corporate governance, or other identified major issues" indicates the individual director's active operation in the supervision and guidance, as well as implementation of ESG and commitment to enhancing the sustainable value of the enterprise.

Performance Evaluation Criteria for Individual Directors	Performance Evaluation Criteria for the Overall Board of Directors and Each Functional Committee
1. Mastery of VIS' goals and tasks	1. Participation in VIS' operations
2. Awareness of directors' responsibilities	2. Improvement of the quality of the Board of Directors' decision making
3. Participation in VIS' operations	3. Composition and structure of the Board of Directors
4. Internal relationship management and communication	4. Election and continuing education of directors
5. Professionalism and continuing education of directors	5. Internal controls
6. Internal controls	

2022 Board Performance Self-evaluation Results and Improvement Actions

Evaluation Period	January 1, 2022 to December 31, 2022
Results of the Internal Performance Evaluation of Individual Directors	The performance of directors is in line with expectations
Results of the Internal Performance Evaluation of the Overall Board of Directors	The performance of the overall Board of Directors is in line with expectations
Results of the Internal Performance Evaluation of Functional Committees	The performance of the Audit Committee, Compensation Committee and Strategy Committee is in line with expectations
Results of the Board Performance Evaluation	Approved by the Board of Directors on February 20, 2023

On August 10, 2022, VIS commissioned the Taiwan Corporate Governance Association to conduct the external performance evaluation of the Board of Directors. This institution has no business dealing with VIS and is independent. The Taiwan Corporate Governance Association evaluated the 8 aspects, namely composition, guidance, authorization, supervision, communication, self-discipline, internal control, risk management and others of the Board of Directors respectively by means of questionnaires and on-site visits, and put forward the performance evaluation results and improvements recommendations. VIS reported the aforementioned evaluation results to the Board of Directors on February 20, 2023, and proposed specific improvement actions for the recommendations.

Results and Recommendations of the External Evaluation of Board Effectiveness

Evaluation Period	October 1, 2021 to September 30, 2022
Results and Recommendations of the Overall Evaluation	<p>The evaluation report indicates that the composition of VIS' Board of Directors has a balance of independence and professionalism, all functional committees are fully functioning, and the management team fully supports the directors in exercising their duties. VIS has a clear succession plan for senior management, and the performance evaluation criteria of each senior executive have incorporated ESG related indicators, showing that VIS has been actively promoting and putting emphasis on ESG. VIS' being selected as a world index constituent of the Dow Jones Sustainability Index (DJSI) indicates the effectiveness of the Board of Directors' supervision and guidance on sustainable management.</p>

The evaluation report also put forward recommendations on the diversity of the board composition as well as the mechanism for the Compensation Committee to regularly review the development plan and implementation status of senior managers as a reference for VIS to improve the operational efficiency of the Board of Directors. VIS has proposed specific improvement plans to the Board of Directors on February 20, 2023 based on such recommendations, including (1) actively seeking and nominating appropriate female director candidates to the shareholders' meeting when director reelection is to be held in 2024, and (2) incorporating the duty and responsibility to regularly report to the Compensation Committee on the training plan and implementation status of senior managers in the Organizational Regulations of the Compensation Committee so as to strengthen the effectiveness of functional committees in assisting the Board of Directors.

VIS' 2022 internal and external evaluation results have been disclosed on VIS' [website](#)

The Link Between Directors' Performance and Remuneration

According to Article 29 of VIS' Articles of Incorporation, VIS distributes director remuneration at not more than 1% of the profit for the current year as well as employee remuneration at not lower than 10% of the profit for the current year. The remuneration of directors is based on VIS' Director Performance Evaluation and Remuneration Policy, System, Standard and Structure, and reasonable remuneration is given according to VIS' operating results as well as the level of participation and contribution value of individual directors. Thus, remuneration is closely related to operating performance. The performance evaluation and remuneration are regularly reviewed and adjusted by the Compensation Committee and the Board of Directors every year.

Diversified Continuing Education for Board Members

In order to improve the professional knowledge and legal literacy of VIS' directors, cultivate their excellent characteristics and decision-making skills, strengthen their experience sharing, exchange and interaction, as well as actively and effectively implement the corporate governance system, VIS provides directors with information on continuing education courses every month. It also commissioned the Taiwan Corporate Governance Association in December 2022 to arrange the doorstep continuing education courses. All the 8 directors of VIS met the requirement of at least 6 hours of continuing education in the current year. The total number of continuing education hours in 2022 was 86 hours. In addition to the basic responsibilities and obligations of directors, the courses also covered the most important current global issues on information security governance practices and promotion of sustainable development.

Functional Committee Organization and Operation

In order to effectively bring the functions of the Board of Directors into full play, VIS established the Audit Committee and the Compensation Committee in accordance with the law, and set up the Strategy Committee on August 13, 2021; the composition, meeting frequency, purpose of establishment and operational status of each functional committee in 2022 are set out as follows:

	Audit Committee	Compensation Committee	Strategy Committee
Member Composition	Convenor Benson W.C. Liu, independent director Kenneth Kin, independent director Chintay Shih, and independent director Liang-Gee Chen	Convenor Kenneth Kin, independent director Benson W.C. Liu, independent director Chintay Shih, and independent director Liang-Gee Chen	Convenor and Chairman Leuh Fang, Vice Chairman F.C. Tseng, independent director Kenneth Kin, independent director Chintay Shih, and independent director Liang-Gee Chen
Meeting Frequency	Held at least once a quarter	Held at least 4 times a year	Held at least once a year
Purpose	Strengthen the supervisory function of the Board of Directors, and be in charge of overseeing the fair presentation of VIS' financial statements, the selection (removal), competence, independence and performance of certified public accountants, the effective implementation of VIS' internal control, VIS' compliance with laws and regulations and rules, and the management and control of VIS' existing or potential risks.	Assist the Board of Directors in formulating VIS' overall remuneration policy and structure so as to attract, motivate, reward and retain outstanding talents.	Guide and plan VIS' major growth strategies and issues.

	Audit Committee	Compensation Committee	Strategy Committee
Operational status in 2022			
Number of Meetings	4 times	4 times	1 time
Average Actual Attendance Rate	100%	100%	100%

3.1.3 Internal Audit

Purpose and Organization of Internal Audit

Internal audit is mainly to assist the Board of Directors and management in inspecting and re-reviewing the deficiencies of the internal control system as well as weighing the effectiveness and efficiency of operations, and to provide timely improvement recommendations so as to ensure the continuous and effective implementation of the internal control system and to promote the sound operation of VIS.

VIS' internal audit unit is directly subordinate to the Board of Directors, and is currently staffed with an audit supervisor and three full-time internal auditors. VIS' Corporate Governance Practice Principles stipulate that the appointment, removal, evaluation, and compensation of VIS' internal auditors shall be submitted to the Board of Directors or signed and submitted by the audit supervisor to the Chairman for approval; The appointment, removal and performance evaluation of the internal audit supervisor shall be approved by the Audit Committee and submitted to the Board of Directors for a resolution, and the remuneration shall be approved by the Compensation Committee and submitted to the Board of Directors for a resolution; and the appointment, removal, evaluation, and compensation of internal auditors shall be signed and submitted by the audit supervisor to the Chairman for approval. The performance evaluation is conducted at least once a year.

Operation of Internal Audit

The internal auditors uphold the spirit of impartiality and independence, and perform their duties from an objective and fair standpoint. In addition to making a report regularly at the Board of Directors meeting, they also make a report to the Chairman and the Audit Committee quarterly or when necessary.

The audit work is mainly carried out in accordance with the annual audit plan approved by the Board of Directors. The annual audit plan is drawn up based on the results of the risk assessment, and project audits are carried out as needed. The deficiencies and abnormalities in the internal control system found in the audit are all tracked and regularly made in the report to ensure that units have taken appropriate improvement measures immediately.

The internal audit supervises and guides each unit and subsidiary to evaluate the implementation of the internal control system on a regular basis, and re-reviews the self-evaluation report. The self-evaluation report, together with the improvement status of the internal control deficiencies and abnormalities found by the audit unit, serves as the main basis for the Board of Directors and the President to evaluate the effectiveness of the overall internal control system as well as the issuance of the statement of the internal control system.

3.1.4 Regulations and Recusal due to Conflicts of Interest

VIS has formulated the Ethics and Business Conduct, the Code of Ethics for Directors and the VIS Ethical Corporate Management Best Practice Principles in order to promote the self-discipline of the Board of Directors and all employees of VIS and compliance with the business ethics norms.

The recusal clause relating to directors' conflicts of interest is incorporated in the Rules of Procedure of Board of Directors Meetings, the Audit Committee Charter, and the Organizational Regulations of the Compensation Committee of VIS, and multiple procedures are used to avoid conflicts of interest. For matters to be deliberated at the meeting, the director him/herself (including the director's spouse, blood relatives within the second degree, or the company with which the director has a controlling or subordinate relationship) or the legal person he/she represents involving the conflict of interest that may harm to the interests of VIS shall not participate in the discussion and vote and must recuse him/herself. In addition, when the directors or managers engage in the conduct within the business scope of VIS for themselves or others, they shall obtain the approval of the shareholders' meeting or the Board of Directors in advance; any related party transactions must be disclosed.

In addition, VIS has independent directors with professionalism and impartiality in place. Independent directors uphold a position of objectivity and fairness, and use their professionalism and experience to put forward recommendations when VIS decides strategies, which are also recorded in the meeting minutes, taking into

account the principle of recusal due to conflicts of interest, so as to effectively protect the interests of VIS.

VIS discloses in the annual report the situation where the director concurrently holds positions in other companies including but not limited to serving as directors or independent directors of other companies, the list of major shareholders holding 5% or more of VIS' outstanding shares or the top 10 thereof, and the cross shareholding among the top 10 shareholders, and no member of the Board of Directors has cross shareholding with major suppliers. For the detail, please refer to [VIS' 2022 annual report](#).

In order to improve corporate governance and prevent insider trading, VIS has added the provision "The share trading control measures for insiders of VIS from the day they become aware of VIS' financial report or content of related performance include (but not limited to) that directors shall not trade their shares during the closed period that is within 30 days prior to the announcement of the annual financial report and within 15 days prior to the announcement of the quarterly financial report" to the Corporate Governance Practice Principles and the Procedures for Handling Material Inside Information. VIS also reminds directors, managers and shareholders that hold more than 10% of the total shares by email 15 days before the 1st, 2nd, and 3rd quarter financial reports are announced and 30 days before the annual financial report is announced, so as to avoid violating the aforementioned regulations.

3.1.5 Shareholder Equity

VIS values the rights and interests of every shareholder and treats all shareholders equally. All shareholders have the power of one vote per share in accordance with the law and may exercise voting rights at the shareholders' meeting to participate in VIS' decision making. In addition, the election of directors adopts a cumulative voting system that is favorable to minority shareholders in accordance with Company Act. All ratification, discussion and election motions at the shareholders' meeting are put to the vote on a case-by-case basis; electronic voting is listed as one of the means of exercising voting rights, and the voting results are publicly disclosed at the shareholders' meeting in real time. In addition, VIS has the Investor Relations Department in place to be in charge of communicating with shareholders and responding to various recommendations, and has commissioned the professional stock affairs agency to provide shareholder services. The contact information is disclosed on VIS' website for shareholders to look it up.

3.2 Risk Management



Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Risk identification and adjustment			
Achieved the following targets in risk control <ul style="list-style-type: none"> The number of days of production interruption caused by natural disasters (flooding/ water shortage): 0 days Refined the risk control measures, including: energy-saving product technology development, low-carbon transformation, hazard prevention (natural disasters/ fires), information security protection, power quality, and product quality 	Continued to promote risk control <ul style="list-style-type: none"> The number of days of production interruption caused by natural disasters (flooding/ water shortage): 0 days Refined the risk control measures, including: energy-saving product technology development, low-carbon transformation, hazard prevention (natural disasters/ fires), information security protection, power quality, and product quality 	Continued to promote risk control <ul style="list-style-type: none"> The number of days of production interruption caused by natural disasters (flooding/ water shortage): 0 days Refined the risk control measures for the following risk categories, including: <ul style="list-style-type: none"> Strategic risk (for example: the risk of economic/ policy/ technological/ industry/ market changes) Operational risk (for example: the risk of systems/ personnel/ production/ R&D/ quality control/ information security/ talent recruitment/ excessive concentration of sales or purchases) Financial risk (the risk of insufficient protection of financial assets or transactions/ improper presentation of financial statements/ failure to respond to changes in interest rates and exchange rates in a timely manner/ improper financing or investment activities/ failure of customers or suppliers to perform the contract) Hazard risk (the risk of natural disasters/ infectious diseases/ climate change/ interruption of water or electricity supply/ fire/ chemical leakage/ others due to insufficient preventive or response measures) Regulatory and compliance risk (the risk of failure to comply with laws or regulations/ failure to respond to regulatory changes in a timely manner/ signing of legal documents/ improper implementation) Other risks (risks other than those listed above, risks identified by the Risk Management Committee) 	Continued to promote risk control <ul style="list-style-type: none"> The number of days of production interruption caused by natural disasters (flooding/ water shortage): 0 days Refined the risk control measures for the following risk categories, including: <ul style="list-style-type: none"> Strategic risk (for example: the risk of economic/ policy/ technological/ industry/ market changes) Operational risk (for example: the risk of systems/ personnel/ production/ R&D/ quality control/ information security/ talent recruitment/ excessive concentration of sales or purchases) Financial risk (the risk of insufficient protection of financial assets or transactions/ improper presentation of financial statements/ failure to respond to changes in interest rates and exchange rates in a timely manner/ improper financing or investment activities/ failure of customers or suppliers to perform the contract) Hazard risk (the risk of natural disasters/ infectious diseases/ climate change/ interruption of water or electricity supply/ fire/ chemical leakage/ others due to insufficient preventive or response measures) Regulatory and compliance risk (the risk of failure to comply with laws or regulations/ failure to respond to regulatory changes in a timely manner/ signing of legal documents/ improper implementation) Other risks (risks other than those listed above, risks identified by the Risk Management Committee)
Achieved the following operational targets under the operation of the Risk Management Committee <ul style="list-style-type: none"> 2021 company-wide annual risk review: The company-wide annual risk review meeting was completed in January 2022. 2021 risk control results reported to the board: report on the risk implementation outcomes to the Audit Committee and the Board of Directors; The Board of Directors in May 2022 passed the determination on the 18 company-wide risk controls for 2022 <small>Note</small> Mid-year review: The head of each unit (fab, division or area department directly thereunder) reports to the Area Committee Member: A total of 45 units made the risk review reports, and the risk review reports were 100% completed in the third quarter of 2022 Annual area risks review: reviewed by the Area Committee Member: 7 areas conducted the area risks review report, and the area risks review reports were 100% completed in the fourth quarter of 2022 	Achieved the following operational targets under the operation of the Risk Management Committee <ul style="list-style-type: none"> 2022 company-wide annual risk review: completed in the first quarter of 2023 Approval of company-wide risk item factors: completed in the first quarter of 2023 2022 risk control results reported to the board: report on the risk implementation outcomes to the Audit Committee and the Board of Directors: completed in the second quarter of 2023 2023 mid-year risk factors review: The head of each unit (fab, division or area department directly thereunder) reports to the Area Committee Member: completed in the third quarter of 2023 2023 annual area risks review: reviewed by the Area Committee Member: completed in the fourth quarter of 2023 	Achieved the following operational targets periodically under the operation of the Risk Management Committee <ul style="list-style-type: none"> Annual company-wide risk review (once/year) Approval of annual risk factors (once/year) Annual report on risk control results to the board: report on the risk implementation outcomes to the Audit Committee and the Board of Directors (once/year) Mid-year risk factors review: The head of each unit (fab, division or area department directly thereunder) reports to the Area Committee Member (once/year) Annual area risks review: reviewed by the Area Committee Member (once/year) 	Achieved the following operational targets periodically under the operation of the Risk Management Committee <ul style="list-style-type: none"> Annual company-wide risk review (once/year) Approval of annual risk factors (once/year) Annual report on risk control results to the board: report on the risk implementation outcomes to the Audit Committee and the Board of Directors (once/year) Mid-year risk factors review: The head of each unit (fab, division or area department directly thereunder) reports to the Area Committee Member (once/year) Annual area risks review: reviewed by the Area Committee Member (once/year)

Note: In 2021, there were 284 factory/division level risk items, and 18 company wide risk items; in 2022, there were 18 company wide risk items

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
Risk assessment				
	<ul style="list-style-type: none"> Carry out risk assessments in the 6 major categories every year (risk controls: 18 factors) 	<ul style="list-style-type: none"> Carry out risk assessments in the 6 major categories every year (risk controls: 18 factors) 	<ul style="list-style-type: none"> Carry out risk assessments in the 6 major categories every year (risk controls: 18 factors) 	<ul style="list-style-type: none"> Carry out risk assessments in the 6 major categories every year (risk controls: 18 factors)
Risk management stress testing				
	<ul style="list-style-type: none"> Conduct BCP drills and implement stress tests every year 	<ul style="list-style-type: none"> Conduct BCP drills and implement stress tests every year 	<ul style="list-style-type: none"> Conduct BCP drills and implement stress tests every year 	<ul style="list-style-type: none"> Conduct BCP drills and implement stress tests every year
Risk management education and training				
	<ul style="list-style-type: none"> Carry out risk management emergency response ERT commander & team leader training and evacuation drill for all employees every year 	<ul style="list-style-type: none"> Carry out risk management emergency response ERT commander & team leader training and evacuation drill for all employees every year 	<ul style="list-style-type: none"> Carry out risk management emergency response ERT commander & team leader training and evacuation drill for all employees every year 	<ul style="list-style-type: none"> Carry out risk management emergency response ERT commander & team leader training and evacuation drill for all employees every year

3.2.1 Risk Management System

The highest risk management organization of VIS is the Risk Management Committee, which has established a sound risk management system, actively implements risk identification, loss (impact) prevention and control, and integrates risk management measures into daily internal control operations. Each unit needs to conduct regular self-examination and participate in education and training, the effectiveness of which will then be evaluated by the Board of Directors and senior management, so that risks can be effectively controlled within an acceptable range. In order to implement risk management policies, the Risk Management Committee reports to the Audit Committee and the Board of Directors on matters regarding risk management policies and procedures.

Risk Management Organizational Structure



1. Committee Chairman: served by the President, who may also appoint a secretary to assist him in the operation.
2. Area Committee Member: composed of the top executives of all areas and presidents of subsidiaries, and the Committee Chairman appoints an Area Committee Member to serve as the general coordinator.
3. Fab/ division executive representatives: composed of the top executive of each fab/ division.
4. Risk management task force project: composed of area representatives, who are appointed by the Area Committee Member from among the executives at or above the division level, and the general coordinator appoints an executive at or above the division level to serve as the secretary-general.

Duties and Responsibilities

1. Formulate risk management policies and procedures to be submitted to the Board of Directors for approval and implementation.
2. Report regularly the operational status of risk management to the Audit Committee and Board of Directors every year.
3. Formulate the risk management guidelines.
4. Identify and approve risk control priorities.
5. Plan, review, and implement risk identification results as well as control measures.
6. Supervise and guide the improvement of risk management.

(The operation of the Risk Management Committee is subject to the supervision, guidance and recommendation of the Board of Directors and the Audit Committee. The Internal Audit Division incorporates risk management factors into the audit process for the effectiveness of the internal control system to conduct audits on organizational operations and risk management.)

Risk Management Committee Operations

Procedure	Content
Risk Factor Formulation and Control Measures Planning	<ul style="list-style-type: none"> • Carry out risk identification and risk measurement to confirm risk factors • Formulate risk control measures so to effectively monitor and respond to risk factors
First Annual Risk Factors Review (Mid-year Review)	<p>The mid-year risk control review of the subordinate units is conducted by the Area Committee Member:</p> <ul style="list-style-type: none"> • Implementation effectiveness of risk factor control measures, risk monitoring and response mechanism • Adjust risk factors or control measures according to operational changes • Review results and revisions of risk factors as well as control measures
Second Annual Risk Factors Review (Annual Area Risks Review)	<p>The Area Committee Member conducts the annual area risks review of the subordinate units:</p> <ul style="list-style-type: none"> • Risk management implementation outcomes and continuous improvement measures of each unit in the current year • Risk factors as well as control measures to be continued or newly added in the upcoming year

Procedure	Content
Company-wide Annual Risk Review Meeting	<p>The Risk Management Committee meeting is held to</p> <ul style="list-style-type: none"> • Review each area's annual implementation outcomes of risk factor control • Review each area's risk factors and control measures for the upcoming year • Review and formulate the company-wide risk factors for the upcoming year
Audit Committee, Board of Directors	<p>The Risk Management Committee regularly conducts a report on the implementation outcomes of risk management once a year</p>

Operational status

First quarter: On January 24, 2022, the President convened all the area heads to complete the review on the 2021 implementation outcome of the company-wide risk factors and the formulation of the 2022 factors and control measures.

Second quarter: On May 5, 2022, the general coordinator of the Risk Management Committee reported the implementation outcome of risk management, as well as the risk control measures adopted by VIS and the operational status of risk management in terms of the risk environment faced by VIS, risk management priorities, risk assessment and response measures to the Audit Committee and the Board of Directors at the meeting. The Board of Directors also approved the 18 company-wide risk factors of 2022.

Third quarter: The executive representative of the fab (division) or the department head of the area directly thereunder reports to the Area Committee Member the implementation progress of the mid-year risk control measures. The risk review report was 100% completed in Q3 of 2022, including:

- (1) Implementation effectiveness of risk factor control measures, risk monitoring and response mechanism.
- (2) Adjust risk factors or control measures based on operational changes and security risk operations.
- (3) Review results and revisions of risk factors and control measures.

Fourth quarter: The Area Committee Member completed the annual area risks review and completed 100% area risks review report, including:

- (1) The implementation outcome of risk management and continuous improvement measures of the area unit directly thereunder of the current year.
- (2) The risk factors and control measures to be continued or newly added for the upcoming year.

3.2.2 Risk Identification

The risk identification of VIS includes risk management categories and risk management procedures.

Risk Management Categories

Strategic risk: refers including but not limited to the risk that has a significant impact on VIS due to domestic and foreign economic, social or policy factors, technological and industrial changes, market demand and competition, and geopolitical risks.

Operational risk: refers including but not limited to the risk that causes VIS to incur losses due to internal operations, systems or personnel, such as improper production, research and development, quality control, information security and talent recruitment, or excessive concentration of sales and purchases.

Financial risk: refers including but not limited to the risk that has a significant impact on VIS due to insufficient protection of financial assets and transactions, improper presentation of financial statements, failure to respond to changes in interest rates and exchange rates in a timely manner, improper financing or investment activities, and failure of customers and suppliers to perform the contract.

Hazard risk: refers including but not limited to the risk that causes VIS to incur significant losses due to the environment, natural disasters, infectious diseases, climate change, war, interruption of water and electricity supply, fire or chemical leakage, and other insufficient preventive and response measures. (In addition, in response to the low-carbon transformation risks of climate change, the VIS climate change governance and management structure has been established, with the Board of Directors, the Management Team and the Executive Committee as a three-tier top-down management mechanism. The Executive Committee includes the existing Corporate Sustainability Committee and Risk Management Committee to control climate change issues. The Climate Change Governance and Risk Response Strategies and Objectives are reported once a year to the audit committee and the Board of Directors, who provide supervision and advice.)

Regulatory and compliance risk: refers including but not limited to the risk that causes damage to VIS' goodwill or causes VIS to incur significant losses due to failure to comply with laws and regulations, failure to respond to changes in laws and regulations in a timely manner, and improper signing and execution of legal documents.

Other risks: refer to risks that do not belong to the aforementioned categories and will cause VIS to incur significant losses as recognized by the Risk Management Committee.

Risk Management Procedures

Procedure	Description
Risk Identification	<p>Risk identification is the first step of risk management. All units shall identify and classify the risks according to the risk management categories, based on the scope of business and cross-organizational operations process, through discussion, analysis, compilation of past experience, and prediction of possible future risks as a reference for further measurement, monitoring and management of risks. When identifying risks, the following shall be considered:</p> <ol style="list-style-type: none">1. Each unit's own business scope and changes, historical experience, as well as internal and external resource requirements.2. The business impact and changes of future trends in response to VIS' medium and long-term business plan.3. Internal control, regulatory amendments and compliance.4. Peer industry experience and risk case studies.
Risk Measurement	<p>Risk measurement is to judge the possibility and impact of risks under the existing control measures. During the analysis process, the risk matrix (Risk Map) may be used to quantify the frequency of the risk factor occurrence and the severity of the impact on VIS' operations. Different types of risks can be measured by formulating other feasible quantification methods.</p>
Risk Response	<p>Draw up the control priority and risk management mechanism according to the risk assessment results and based on the risk tolerance and cost-effectiveness, so that VIS' risks can be effectively controlled within the acceptable range. The control measures include: avoidance (elimination of occurrence conditions: replacement or no implementation), reduction (lower the probability and loss of occurrence), sharing (risk transfer: insurance, contract signing), and tolerance (tolerate the remaining risks after lowering and transferring part of the risk).</p>
Risk Monitoring	<p>Various monitoring and control activities carried out in response to the development and changes of risks.</p>
Risk Report	<p>VIS shall complete the risk report on a regular basis to be submitted to the appropriate management level and filed for future reference.</p>

3.2.3 Risk Items and Response Measures

The Risk Management Committee meeting review found that VIS has 18 corporate risk factors. They include: Markets (1 factor); hazards (1 factor); information security (1 factor); finances (1 factor); strategy (2 factors); research and development (3 factors); operations (3 factors); management (3 factors); and compliance (3 factors). Control measures for these listed risks have been established to effectively monitor and mitigate the impact of risks. In addition, for the listed risk factors, the summary discloses emerging risks and two types of risks (operations and compliance) out of the 18 risk factors. It explains the results of risk analysis, risk mitigation measures, risk appetite, and sensitivity analysis results. The results are as follows:

1

Emerging Risks

1. Impact of Ukrainian-Russian War and Increases in Prices of Raw Materials Leading to Increased Electricity Prices, in Turn Increasing Operating Costs and Risk of Reduced Corporate Profits

Owing to the impact of the Ukrainian-Russian War and increases in raw material prices, the cost of power generation in Taiwan and Singapore has increased. At present, electricity prices are also gradually rising in Taiwan and Singapore. After inflation, we estimate that the annual electricity cost will increase by about NT\$900 million (an increase of NT\$560 million in operating costs for our Taiwan fabs, at electricity consumption of 770 million kWh, and an increase of NT\$340 million in operating costs for our Singapore fab, at electricity consumption of 180 million kWh). We continue to implement energy-saving projects to improve the efficiency of power use, reduce power waste, and reduce electricity costs. In 2022, VIS invested a total of NT\$447.12 million to save 22.03 million kWh. Our main energy-saving measures were in four categories: Public utilities; air-conditioning facilities; manufacturing process parameter adjustments; and updating to energy-saving auxiliary equipment. A total of 44 energy-saving improvements were proposed, and 35 energy-saving measures were adopted.

2. New Technology Development and Mass Production Risks: Demand for Wide-Bandgap (Gan) Semiconductor Manufacturing Technology Continues to Expand; If Technologies cannot be Quickly Introduced to Meet Market Demand, VIS' Competitiveness and Revenue May Decline

In response to the rapid growth of global electric vehicle sales, the demand for related integrated circuit (IC) products continues to expand, and the demand for wide-bandgap (gallium nitride, GaN) semiconductor manufacturing technology also continues to increase. If technologies cannot be quickly introduced to meet market demands, VIS' competitiveness and revenue may decline.

Electric vehicles (pure electric vehicles + gasoline-electric hybrid vehicles) accounted for about 25% of new car shipments in 2022 – and this number is expected to increase to 51% in 2026. The demand for electric vehicle semiconductor components as a proportion of the overall automotive semiconductor market is estimated to climb from about 10% in 2020, to 30% by 2025.

This information shows that market demand is growing rapidly. Within this trend, power management ICs, power semiconductors, and emerging wide-bandgap semiconductors will play an important role in electric vehicle systems. Therefore, for GaN semiconductor products, it is necessary to introduce new semiconductor manufacturing technologies and accelerate mass production plans. Only then can we meet market demand and enhance VIS' competitiveness.

2

Operation Risk: Earthquake

Earthquake (Scenario: Simulate level-5 earthquake, Earthquake acceleration: 130 gal)

	Item	Content	Cost (NT\$)	Total Cost (NT\$)
Earthquake Loss Risk Assessment	Tool recovery of damage	Tool clean/PM	150 million	190 million
	Power generator diesel	Power generator diesel	10 million	
	IT/Auto system	IT/Auto system re-installation	30 million	
	Product (wafer) scrapped: reference to 1999, Taiwan 921 earthquake scrapped ratio, total scrap wafer: > 10 K pcs.			
Prioritization of Identified Risks	According to the following descriptions of the possibility of occurrence and severity, the risk level is estimated to be moderate risk (the product of the probability of occurrence and the severity of the loss, scoring 5 points, and 4 to 12 points are considered moderate risk) <ul style="list-style-type: none"> Possibility of occurrence: no occurrence in the past 10 years, score: 1 point Loss amount on severity (recovery cost + product loss + business interruption loss) was greater than NT\$300 million, score: 5 points 			

Mitigating action: Worst case FAB total loss (Earthquake damage)

(1) Production transfer plan: VIS has a total of 5 FABs (4 in Taiwan and 1 in Singapore). According to the product production re-certification procedure, the production line transfer and resume production time is expected to be 3 months (for common tool).

(2) FAB reconstruction part: VIS has insured earthquake insurance. When FAB is damaged by earthquake, insurance claims can be initiated to reduce finance impact.

(3) VIS recovery plan is carried out in accordance with the Business Continue Plan

Risk Appetite for Operational Interruption	Risk appetite for operational interruption: 3 months (single fab, general production machines), scale of loss 6.2% of annual revenue (NT\$3.19 billion) To maintain continuous wafer product production, in the worst case scenario, VIS has already established a production line transfer plan; within 3 months (general production machines), we can transfer production to a fab that is operating normally.
Business Interruption Sensitivity Analysis Result	Operational interruption sensitivity analysis result: The calculation is based on VIS' annual revenue of NT\$51.694 billion in 2022. In 2022, a total of 4 fabs were in production; the newly-purchased 5 th fab was not included in the calculations. The calculation is based on 365 days and 4 fabs. Production interruption in one fab for one day will result in a loss of about 0.07% of annual revenue (NT\$35 million). In different scenarios, the results of business interruption sensitivity analysis are as follows (operational interruption sensitivity analysis result): <ol style="list-style-type: none"> When a single fab's production is interrupted for 30 days (1 month), annual revenue loss is 2.1% (NT\$1.06 billion) When a single fab's production is interrupted for 60 days (2 months), annual revenue loss is 4.1% (NT\$2.12 billion) When a single fab's production is interrupted for 90 days (3 months), annual revenue loss is 6.2% (NT\$3.19 billion)

3

Regulatory and Compliance Risk: Risk of Changes in Environmental Regulations

Item	Loss Scenario Description	Total Cost (NT\$)
Compliance Risk Failure to comply with relevant laws and regulations that have a significant impact on the company's operations, business or finances, resulting in the company being punished, liable for compensation, or criminal liability for personnel.	Severe loss scenario description: Such as: Waste water is illegally discharged into river and the environmental protection authority request that the factory production interruption.	More than NT\$35,000,000 (1 day factory production interruption lost about : 35,000,000 NT\$/day)
Prioritization of Identified Risks	According to the following descriptions of the possibility of occurrence and severity, the risk level is estimated to be moderate risk (the product of the possibility of occurrence and the severity of the loss, scoring 3 points, and 1 to 3 points are considered low risk) <ul style="list-style-type: none"> • Possibility of occurrence: no occurrence in the past 10 years, score: 1 point • Scale affected by the severity: between NT\$30 million and NT\$150 million, score: 3 points 	

Risk control measures: Establish internal policies, procedures, and implementation plans, carry out EHS system tracking, education, training, providing reporting channels to avoid or reduce the risks of non-compliance risks.

Compliance Risk Appetite	Risk Appetite for Compliance Risk: Less than 1 day VIS is committed to operating and producing in compliance with the requirements of laws and regulations, so we do not allow for suspension of production owing to punishment by the competent authority for legal violations.
Compliance Risk Sensitivity Analysis Result	Compliance Risk Sensitivity Analysis Result is as Follows: The calculation is based on the annual revenue of NT\$51.694 billion for VIS in 2022. Operational interruption sensitivity analysis results for different scenarios are as follows: (1) Due to non-compliance with laws and regulations (such as illegal discharge of waste water), customers transferring orders, thus impacting orders received: 0.5%, a loss of about 0.5% of annual revenue (NT\$260 million) (2) Due to non-compliance with laws and regulations (such as illegal discharge of waste water), impact on orders received: 1%, a loss of about 1% loss of annual revenue (NT\$520 million) (3) Due to non-compliance with laws and regulations (such as illegal discharge of waste water), impact on orders received: 2%, a loss of about 2% of annual revenue (NT\$1.03 billion)

Building a Risk Management Culture

VIS Hierarchy of Risk Management

Operational Level

Implement the production zero defect policy, confidential information protection policy, information security policy, manufacturing process parameter real-time monitoring system, anti-pandemic measures, and establish a grassroots reporting and proposal system to ensure that the risk of personnel errors is reduced at the operational level, and abnormalities can be found and reported at the earliest possible time so as to prevent the expansion of abnormalities.

First-Line Management Level

Establish a sound Plan-Do-Check-Act (PDCA) cycle for the quality management system in each area/field, introduce international standards at the same time, and pass third-party audit and certification to confirm the effectiveness of the management system.

Senior Executive Level

The sound enterprise risk management system, as well as corporate governance and internal audit procedures to ensure the effectiveness of corporate governance.

Board Level

Regularly review the results of risk management in accordance with the ERM management system, corporate governance, and internal audit procedures.

Through hierarchical management, supplemented by a complete quality management system established by ISO 9001, IATF 16949, ISO 27001, ISO 14001, ISO 45001, ISO 50001, QC 080000 and other certifications, VIS has established the risk management culture of upholding the principle of integrity and the business philosophy of high professional ethics to focus on the production and manufacturing of wafer foundries, not engaging in high-risk and high-financial-leverage investments to devote itself to enhancing VIS' overall competitiveness and pursuing VIS' sustainable operation.

Crisis Handling Procedures

VIS has a complete business continuity plan (BCP) operating process to judge the impact and loss of crisis events, and has a dedicated communication unit in charge of communicating with stakeholders so as to reduce the risk of damage caused by incorrect information.

Education and Training

Implementation Outcomes of Risk Related Education and Training in 2022

Risk Category	Implementation Content	Session	Number of Trainees
Quality Abnormality Risk Control Procedure	Introduction to Quality	E-learning	Target: All staff Frequency: Once a year Number of trainees: 6,607
	Zero Defect Concept and Automotive Quality Awareness	E-learning	Target: All staff Frequency: Once a year Number of trainees: 5,996
Confidential Information Leaks Risk Control	PIP Policy Advocacy - Proprietary Information Protection Notice	E-learning	Target: All staff Frequency: Once a year Number of trainees: 7,601
Regulatory and Compliance Risk Control	Advocacy of Ethics and Business Conduct as well as the Ethical Corporate Management Best Practice Principles	E-learning	Target: All staff Frequency: Refresher training every two years Number of trainees: 6,061
Supply Chain Risk Control Procedure	Introduction to the Authorized Economic Operator (AEO) Supply Chain Security (Risk Management to Prevent Supply Chain Threats)	E-learning	Target: All staff Frequency: Once a year Number of trainees: 6,437

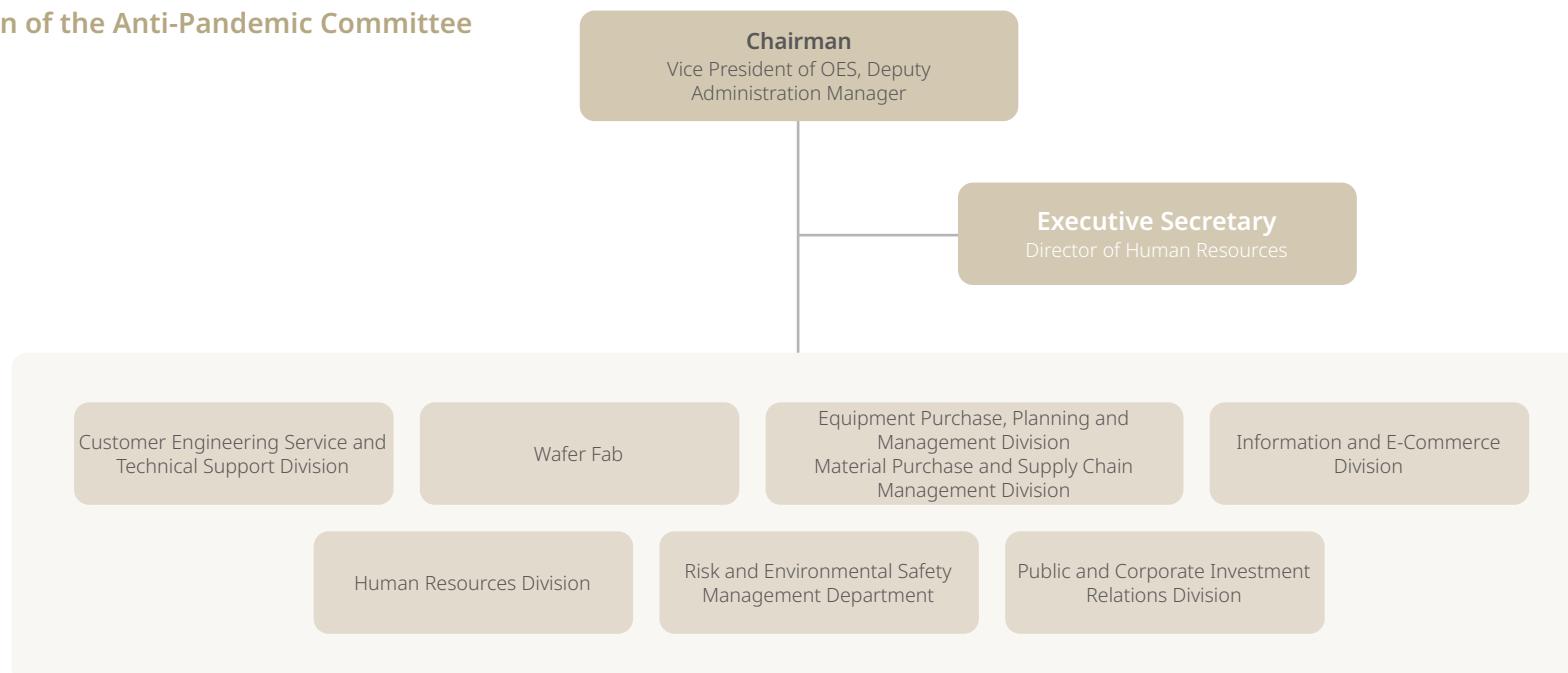
Risk Category	Implementation Content	Session	Number of Trainees
Environmental, Health and Safety (EHS) Risk Management Control Procedure	Introduction to ISO 14000 series standards for Environmental Management Systems	E-learning	Target: New engineers Frequency: Once Number of trainees: 853
	Occupational Safety and Health Management System: Introduction to Occupational Safety and Health Management System (ISO 45001)	E-learning	Target: New engineers Frequency: Once Number of trainees: 859
	In-plant fire training (Practical training on firefighting)	6 sessions	Target: indirect personnel Frequency: Once a year Number of trainees: 3248
	Organic solvent operation supervisor on-the-job education and training (recurrent training)	1 session	Target: One person per shift needs to be trained Frequency: Once every three years Number of trainees: 24
	On-the-job education and training for specific chemical substance operation supervisors (recurrent training)	1 session	Target: One person per shift needs to be trained Frequency: Once every three years Number of trainees: 13
	Commander and ERT Training	6 sessions	Target: Supervisors in the fab Frequency: Once a year Number of trainees: 283
	ERT Basic Training	4 hours	Target: New engineers Frequency: Once Number of trainees: 234
	Evacuation drill for production direct operators	1 hour	Target: production direct operators Frequency: Once every six months Number of trainees: 4154
	ERT drills for each unit	0.5 hours (52 sessions)	Target: All drill personnel in the fab area Frequency: Once a year Number of trainees: 547
	Post-earthquake building assessment drill	1 hour (3 sessions)	Target: Fab affairs and equipment personnel Frequency: Once a year Number of trainees: 91
	Assembly drills without early warning	0.5 hours (12 sessions)	Target: Fab affairs and equipment personnel Frequency: No early warning Number of trainees: 400

3.2.4 Response Mechanisms of Infectious Diseases

VIS established the Anti-Pandemic Committee immediately after the outbreak of the new crown pneumonia (COVID-19), through which the committee organized and integrated company resources, swiftly implemented and promoted anti-pandemic measures, so as to reduce the risk of infection within VIS, provide employees with a safe working environment, and maintain the normal operation and production of VIS.

In the first half of 2022, we continued to pay attention to the development of the pandemic situation at home and abroad, held anti-pandemic meetings, and conducted pandemic tracking and work reports. From the second half of the year, we gradually relaxed VIS' internal anti-pandemic measures on a rolling basis, in order to be in line with government policies. We gradually canceled the work mode of taking turns coming to the office in groups and by district, work from home mechanisms, employee body temperature measurements, personnel entry and exit controls, and other anti-pandemic regulations. We also continued to track VIS' pandemic situation for risk management while co-existing with the virus.

Organization of the Anti-Pandemic Committee



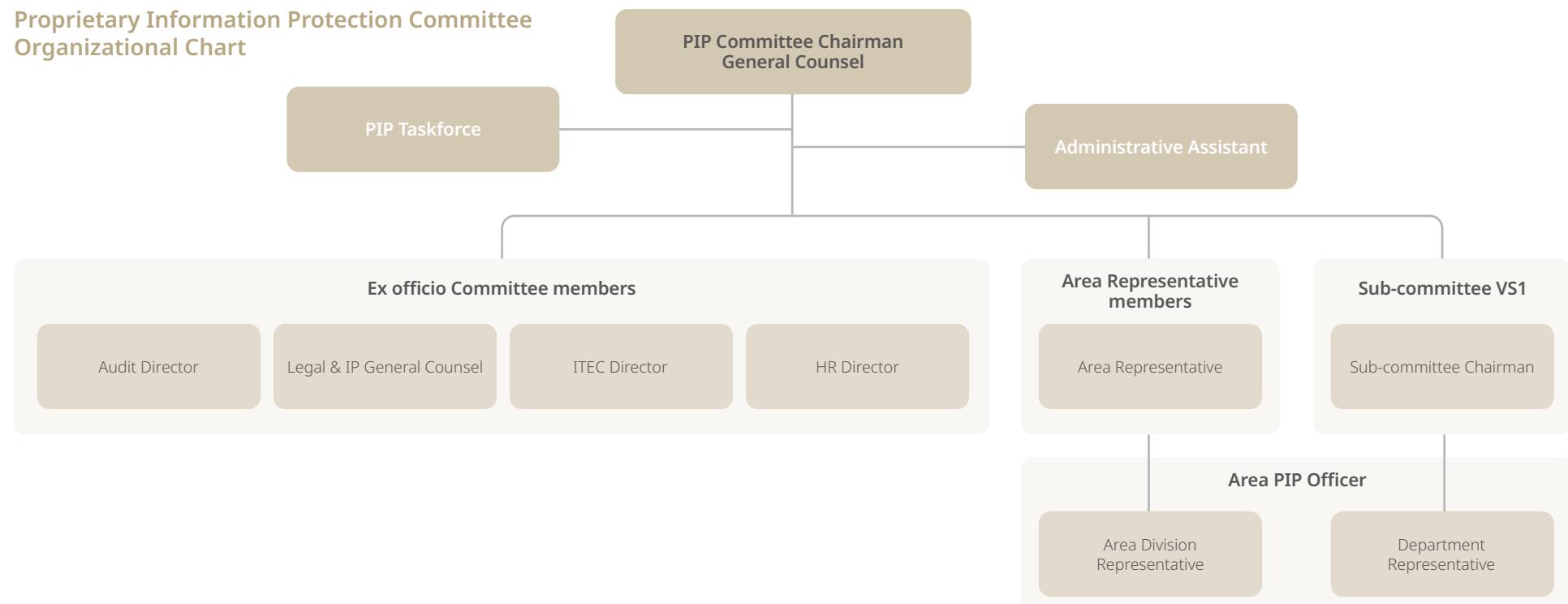
3.2.5 Information Security

Information Security Governance System, Objectives and Strategies

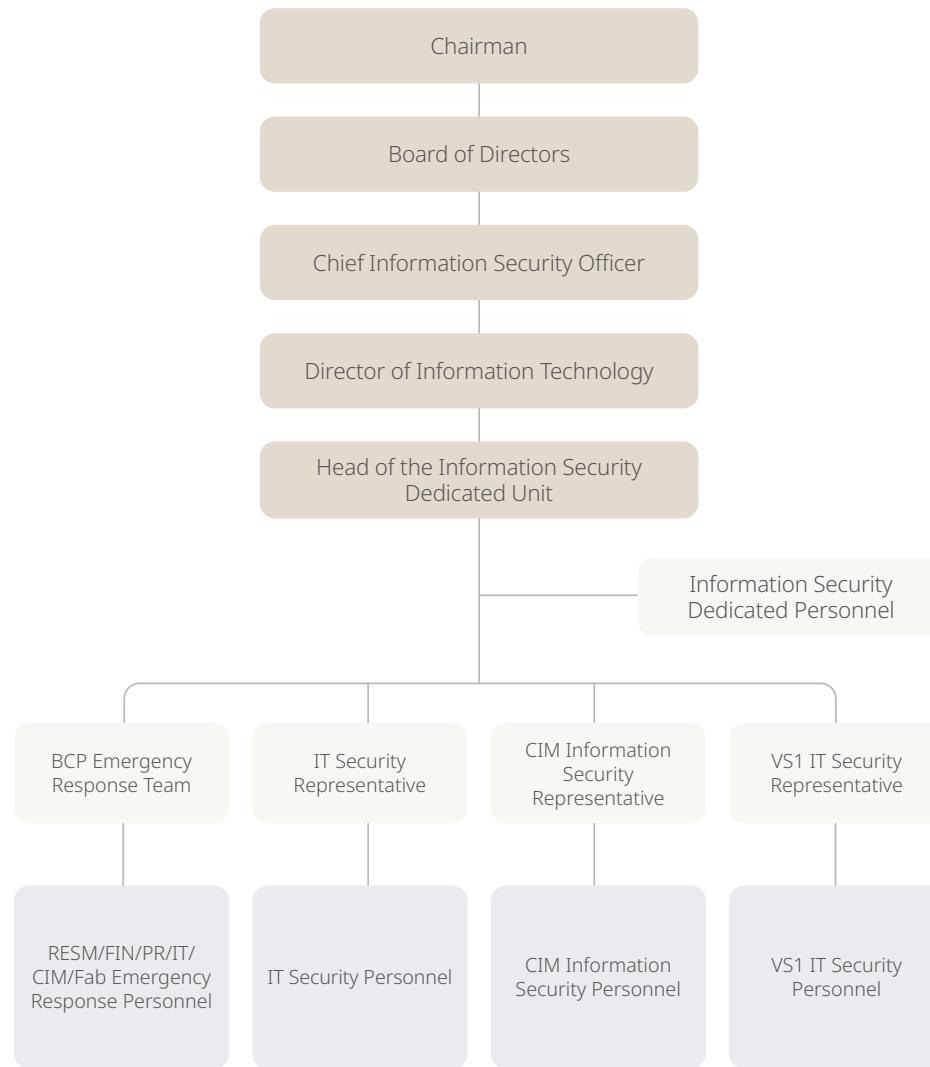
VIS has always been committed to maintaining the security of the information environment. In 2003, the Proprietary Information Protection Committee was established and the Proprietary Information Protection Policy was formulated; in 2013, the VIS Information Security Policy was further issued to properly implement the information security protection operation. The Proprietary Information Protection Committee reviews VIS' information security and information protection status on a quarterly basis, is in charge of reviewing information security and information protection related issues and countermeasures, clearly declaring and implementing information security and information protection, and requiring all employees to abide by the rules so as to maintain VIS' competitive advantage.

In order to implement information security governance, the Board of Directors approved the establishment of the post of Chief Information Security Officer in early 2022, which was held by the current assistant vice president of the Business Operation Planning.

**Proprietary Information Protection Committee
Organizational Chart**



Cyber Security Organizational Structure Chart



Information Security Management Mechanism

VIS had obtained the information security management system (ISMS) ISO/IEC 27001:2013 certification in December 2015, and completed the certificate renewal review in November 2021. In 2022, the scope of certification was expanded to include the Singapore subsidiary and Fab 5, and the certificate coverage rate was 100%. Meanwhile, VIS started to take out the information security risk management insurance from 2019 to reduce the risk of business interruption. The insurance coverage extends to the whole world to ensure the best protection for customers in the use of information services and customer data.

Information Services Continuity of Operation Plan

VIS has formulated the business continuity planning (BCP) measures to ensure that when the information service is hit by a major disaster, it can take correct contingency measures to resume continuous operation in the shortest possible time so as to reduce the impact; it conducts information system disaster recovery drills every year, including at least two recovery drills specifically aimed at information security attacks, to improve resilience through regular drills. The drill results in 2022 all met the requirements.

Information Security Protection and Detection

In response to changing external attack channels, VIS has adopted a corresponding multi-layer defense architecture for distributed denial of service (DDoS), advanced persistent attack (APT) and social engineering attacks, and regularly conducts vulnerability scanning, social engineering drills, commissioning external third-party assessment units to conduct website penetration testing, system effectiveness checks, and other related detection to ensure the effectiveness of information security management and control.

In 2021, based on anti-pandemic considerations, VIS adopted anti-pandemic measures such as remote office and home office to protect the health of employees. Meanwhile, considering that many domestic and foreign companies have been hacked in recent years, VIS requires employees who work from home connecting to VIS' system remotely, in addition to entering the existing account and password, to

enter an additional dynamic password so as to achieve two-factor authentication and strengthen the remote connection information security protection capability.

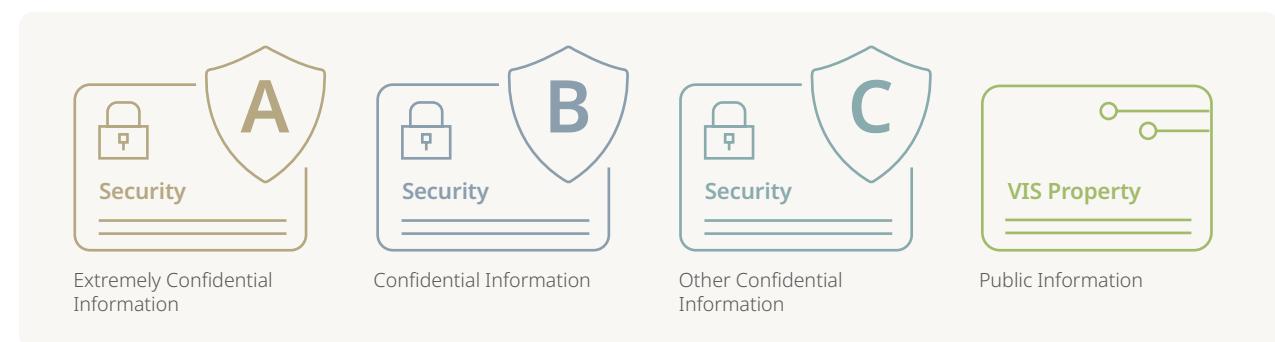
In 2022, in order to understand the information security status of upstream and downstream suppliers, VIS started to adopt third-party information security risk management platforms. This type of platform calculates the company's information security score according to the information risk factors of each company in different aspects, and each company can complete the repair and improve the score to achieve the upgrading of the overall information security level of the supply chain.

Information Security Advocacy, Education and Training

In order to make employees agree with the actions relating to the confidential information protection policy, VIS conducts monthly advocacy and sends PIP prize-winning questionnaires to all employees. In 2022, more than 3,430 copies of questionnaires were returned with the correct answer rate exceeding 91%. In terms of personnel training, all employees of VIS were required to complete the education and training courses and pass the test, and the training completion rate was 100%. In addition, internal and external information security professional courses were attended by employees from the information unit. The total amount of training in 2022 was 180.5 hours.

Information Grading System

VIS' information is classified and controlled according to sensitivity and value. The controls include the means of information transmission, reception, use and storage. The disclosure of information adheres to the Need-to-Know principle. The information is classified as follows:



Notification and Handling of Information Security Incidents

VIS has clearly formulated information security reporting and processing procedures. Once an information security incident occurs, it will be notified according to the scope of impact of the isolation. Meanwhile, a command center was also established, and the commander assigned tasks and grouping to perform system recovery operations. After the incident has been taken care of, the analysis using the Eight Disciplines Problem Solving approach was conducted to take corrective measures and preserve records so as to avoid recurrence of the incident.

In 2022, there was no significant information security incidents in VIS.

Information Security Notification and Processing Flowchart



3.3 Integrity and Transparency

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Regulatory compliance	<ul style="list-style-type: none"> The Legal Department announced information on new/amended laws and regulations once a month, so that relevant units could regularly review and take corresponding measures All relevant units completed the education and training courses designated by the Legal Department according to business needs No litigation related to anti-competitive practices, anti-trust and monopoly regulations in 2022 No Significant Violations in 2022 ^{Note} 	<ul style="list-style-type: none"> Regularly announce information on new/amended regulations Relevant units regularly review the laws and regulations related to the identified business, respond to changes and make compliance reports Complete education training and advocacy according to business needs No Significant Violations ^{Note} Complete self-inspection, audit and track improvement 	<ul style="list-style-type: none"> Regularly announce information on new/amended regulations Relevant units regularly review the laws and regulations related to the identified business, respond to changes and make compliance reports Complete education training and advocacy according to business needs No Significant Violations ^{Note} Complete self-inspection, audit and track improvement 	<ul style="list-style-type: none"> Grasp regulatory information and complete regular inspections and respond to changes, while implementing education, training and advocacy according to business needs Complete self-inspection, audit and track improvement No Significant Violations ^{Note}
Coverage rate of employees' annual education and training on the Ethics and Business Conduct as well as the Ethical Corporate Management Best Practice Principles	<ul style="list-style-type: none"> The overall coverage rate of digital course education and training for employees on the Ethics and Business Conduct as well as the Ethical Corporate Management Best Practice Principles maintained at 100% 	<ul style="list-style-type: none"> The overall coverage rate of digital course education and training for employees on the Ethics and Business Conduct as well as the Ethical Corporate Management Best Practice Principles maintains at 100% 	<ul style="list-style-type: none"> The overall coverage rate of digital course education and training for employees on the Ethics and Business Conduct as well as the Ethical Corporate Management Best Practice Principles maintains at 100% 	<ul style="list-style-type: none"> The overall coverage rate of digital course education and training for employees on the Ethics and Business Conduct as well as the Ethical Corporate Management Best Practice Principles maintains at 100%
Customer privacy	<ul style="list-style-type: none"> Passed the ISO 27001 information security management system certification No instances of invasion of privacy occurred 	<ul style="list-style-type: none"> Pass the ISO 27001 information security management system certification No instances of invasion of privacy will occur 	<ul style="list-style-type: none"> Pass the ISO 27001 information security management system certification No instances of invasion of privacy will occur 	<ul style="list-style-type: none"> Pass the ISO 27001 information security management system certification No instances of invasion of privacy will occur

Note: "Significant Violation" refers to a situation where the accumulative amount of administrative fines for a single incident reaches NT\$1 million or more.

Ethical Corporate Management Best Practice Principles

The enterprise core values of VIS are: integrity, customer orientation, value orientation, and commitment; and the very first rule of VIS' business philosophy is "Upholding Ethical Business Practices", which indicates that VIS attaches great importance to integrity.

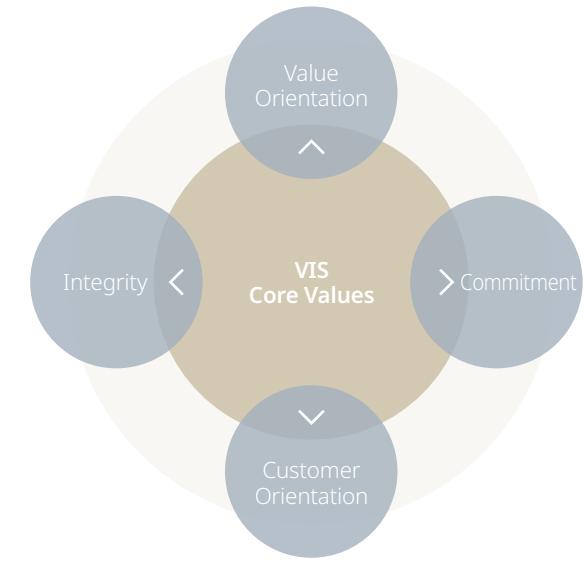
Based on this, in order to establish a corporate culture of ethical corporate management and a sound business operation model, VIS has formulated the VIS Ethical Corporate Management Best Practice Principles, which is available on VIS' website as well as in the internal employee training materials, electronic bulletins, bulletin boards, advocacy videos, and other channels for advocacy so as to actively create an honest, frank, pragmatic and cooperative working environment.

3.3.1 Ethics and Business Conduct and Ethical Corporate Management Best Practice Principles

The very first rule of VIS' business philosophy is "Upholding Ethical Business Practices", which spells out the practice in the Ethics and Business Conduct, requiring all employees to clearly understand and abide by the Ethics and Business Conduct and personal integrity. Meanwhile, the Code of Ethics for Directors also stipulates that directors shall uphold the principle of good faith and abide by professional standards of conduct when performing their duties. In order to establish a corporate culture of ethical corporate management and a good business operation model, the VIS Ethical Corporate Management Best Practice Principles have been formulated in accordance with the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and have been properly implemented in accordance with regulations.

VIS has also formulated plans to prevent unethical conduct in the Ethics and Business Conduct, and clearly stipulated the operating procedures, code of conduct, disciplinary action for violations and complaint systems in each plan; since 2020, all directors and managers have signed the statement to follow the Ethical Corporate Management Best Practice Principles; In addition, when declaring conflicts of interest every year, employees are given education and training in this regard to properly implement various norms.

VIS conducted a Business Philosophy Recognition Survey in 2020, and the results showed that the very first rule of VIS' business philosophy "Upholding Ethical Business Practices" gained the level of employee recognition at 4.54 points (out of 5 points). Compared with 4.52 points in 2018, it has increased by 0.02 points, indicating that employees highly agree with VIS' ethical corporate management. The implementation status of ethical corporate management is also reported to the Board of Directors at least once a year.



Ten Articles of VIS Business Philosophy

1. Upholding Ethical Business Practices
2. Focus on Core business
3. Internationalized Operation with View on Global Market
4. Focusing on Long-term Business Strategies, Striving to Be a Perpetual Enterprise
5. Treating Customers as Partners
6. Building Quality into All Aspects of Our Business Compliance
7. Constant Innovation and Entrepreneurial Vitality
8. Creating a Dynamic and Enjoyable Working Environment
9. Establish an Open Management Style
10. Being a Good Corporate Citizen by Contributing and Caring for both Shareholders and Employees

In order to implement the management of VIS' ethical corporate management, the human resources division is in charge of formulating and implementing the policies, requiring directors, managers, employees, appointees and substantial controllers to abide by laws and regulations when performing business, conduct business activities based on the principle of ethical corporate management in a fair and transparent manner, prohibit taking bribery and accepting bribery, prohibit offering illegal political contributions, prohibit improper charitable donations or sponsorships, prohibit unreasonable gifts, entertainment or other improper benefits, prohibit infringement of intellectual property rights, prohibit engaging in unfair competition, prevent misconduct such as product or service causing damage to stakeholders or others, and regularly evaluate the compliance status of business processes to be submitted to the Audit Committee, and reported to the Board of Directors in the third quarter of each year. Meanwhile, VIS also conducts regular education, training and advocacy for directors, managers, employees, appointees and substantial controllers, combines the ethical corporate management policy with employee performance appraisal and human resource policies, and establishes a clear and effective reporting as well as reward and punishment system. The content of the system includes:

- Establish and announce an internal independent reporting mailbox for use by internal and external personnel.
 - Audit Committee Mailbox (audit_committee@vis.com.tw)
 - Chairman mailbox (vis_chairman@vis.com.tw)
 - President Mailbox (vis_president@vis.com.tw)
- Assign the dedicated personnel or unit to accept reports.
- After the investigation of the report is completed, report it to the competent authority or transfer the report to the judicial authority for investigation if necessary.
- Keep records of and preserve the acceptance, investigation process, investigation results and related document production regarding the report.
- Keep the identity of the whistleblower and the content of the report confidential.
- Measures to protect whistleblowers from being improperly dealt with due to whistleblowing.
- If the whistleblowing report is verified to be true and the handling of the report will bring good benefits to VIS, the whistleblower can be rewarded appropriately.

When the Audit Committee receives a reported, suspected violation of the VIS Ethical Corporate Management Best Practice Principles, it may entrust appropriate internal or external personnel to form an investigation team, upholding the principles of impartiality and non-disclosure, and make a concluding report after understanding the facts to be submitted to the Audit Committee.

In 2022, the number of reports received in the Audit Committee Mailbox, Chairman Mailbox, and President Mailbox was 3, of which 1 report was relating to Ethics and Business Conduct (0 reports relating to corruption or bribery, 0 reports relating to discrimination or harassment, 0 reports relating to customer privacy, 1 report relating to violation of conflicts of interest, and 0 reports relating to money laundering or insider trading), which has been properly handled according to the investigation results with strengthened advocacy.

Ethics and Business Conduct

The VIS Ethics and Business Conduct clearly stipulates that employees shall avoid any conflict between personal interests and company interests or possible effect therefrom. If employees are in the following circumstances, they shall take the initiative to declare: employees themselves or their close relatives have an employment relationship with any supplier, customer, or competitor company; employees use company resources to engage in their own activities outside VIS; employees' close relatives work in VIS, etc. After VIS receives the reporting, the human resources division will discuss with senior executives to jointly work out the handling principles and report the matter to the President for approval.

Education, Training and Advocacy of Ethics and Business Conduct and Ethical Corporate Management Best Practice Principles

VIS advocates the Ethics and Business Conduct and Ethical Corporate Management Best Practice Principles to employees through multiple advocacy channels and forms, and offers an online course on Ethics and Business Conduct as well as Ethical Corporate Management Best Practice Principles, which has been included in the annual compulsory courses for all employees in Taiwan and Singapore, so as to ensure that employees have agreed and clearly understood the regulations; in 2022, the digital course training coverage rate of Ethics and Business Conduct as well as Ethical Corporate Management Best Practice Principles was 100%, and the goal of training coverage rate in 2023 is 100%.

3.3.2 Regulatory Compliance

VIS firmly believes that in order to achieve sustainable development, an enterprise not only needs to maintain good economic performance, but also has to pay attention to customer opinions, meeting customer needs, and protecting customer privacy so as to obtain customer affirmation and long-term support. Therefore, integrity is the primary corporate core value of VIS. In addition to setting up the dedicated Legal and Intellectual Property Division, VIS' various departments also continue to pay close attention to changes in policies, laws and regulations that may have a significant

impact on VIS' operations, business or finance, and actively implement the compliance with the principles of corporate governance, attaching importance to business ethics and adhering to the rule of law by formulating policies and guidelines, education and training, tracking and advocacy of laws and regulations, providing reporting channels, self-inspection and auditing, and other means.

Regulatory Compliance Implementation and Execution

VIS has formulated policies and guidelines for policies, laws and regulations in the fields of various business, and requires employees to perform their duties in accordance with these policies and guidelines, including: supply chain security, information security, ESG, anti-sexual harassment, environmental protection, internal control, financial report preparation, document control and destruction, procurement of conflict-free minerals, Ethics and Business Conduct, personal data protection, Proprietary Information Protection Policy (PIP Policy), etc.

In order to strengthen the implementation of regulatory compliance and ensure that VIS can comply with policies and regulatory requirements, VIS has also gradually embodied other internal work principles of VIS into company policies and guidelines.

Regulatory Compliance, Education and Training

Education and training are an indispensable part of the regulatory compliance plan. In order to facilitate employees to carry out education and training on regulatory compliance at any time, VIS provides an introduction to the Authorized Economic Operator (AEO) supply chain security management system, sexual harassment prevention, anti-trust laws, Personal Data Protection Act, employees' intellectual property concept and trade secret protection, insider trading and short-swing trading, and other related online and advocacy courses, sets different training completion requirements according to the duties and responsibilities of employees, and at the same time uses the test after the course to detect and correct employees' understanding and implementation of laws, regulations, policies and guidelines.

Regulatory Tracking and Policy Advocacy

In order to ensure the legality of the implementation of VIS' main business as well as to track the actual implementation of laws and regulations, Legal Department of VIS regularly reviews the changes in laws and regulations and announces the latest regulatory amendments on VIS' internal website for each department to evaluate the

possible risks and impacts of such regulatory changes on VIS, and to revise or add new corresponding internal norms accordingly. In addition, VIS also conducts regular self-inspection management of regulatory compliance, accepts the audit by the internal audit department, thereby reducing the impact and risks on VIS' business, and posts advocacy announcements and posters regarding VIS' policies and regulations on the internal website and physical bulletin boards.

Reporting Violations

In order to prevent violations from harming the rights and interests of customers, VIS and employees, VIS provides internal and external reporting channels for employees and outsiders to report possible illegal acts to VIS. VIS keeps the identities of employees and outsiders as well as the content of the report confidential in accordance with regulations to ensure that VIS' conduct complies with domestic and foreign policies and regulatory requirements.

VIS has no Significant Violation in 2022^{Note}.

In 2023, VIS will also take this as its goal and continue to deeply root in the culture of regulatory compliance.

Note: "Significant Violation" refers to a situation where the accumulative amount of administrative fines for a single incident reaches NT\$1 million or more.

3.3.3 Implement the Protection of Confidential Information

Important information such as confidential information and business secrets are important assets of VIS and customers and are closely related to VIS' competitiveness. If VIS' manufacturing process formula, manufacturing process flow, machine parameters, product yield rate, information relating to customer products, financial information, etc. are leaked or used improperly, it will have a severe impact on VIS or its customers.

In order to prevent important information such as confidential information and business secrets from being leaked or used improperly, to prevent employees from violating the law and harming VIS' interests, and to maintain the competitive advantages of VIS and customers as well as to become a trusted partner of customers, VIS formulated the Proprietary Information Protection Policy (PIP Policy) in 2013, which clearly stipulates the classification of important information and the reception,

transmission, storage and use of important information. VIS has also established an enterprise information security management system, and obtained the ISO 27001 Information Security Management System (ISMS) certification in 2015 so as to properly implement information security policies and management procedures, striving to improve the protection mechanism.

In order to strengthen compliance with the protection of important information, VIS has set up the Proprietary Information Protection Zone on the internal website to provide employees with timely access to relevant norms, advocacy, and training materials, so that employees can conduct self-education at any time, and to enhance employees' awareness and compliance with VIS' trade secrets and confidential information protection through compulsory online courses for each employee each year, various advocacy and activities (such as electronic posters on the homepage of the internal website, poster selection, prize-giving event) and physical courses so as to strengthen the protection of trade secrets and confidential information. In 2022, all employees completed the PIP –(Proprietary Information Protection) Notice Advocacy online course.

In terms of dynamic implementation, in order to ensure the normal operation of the Proprietary Information Protection mechanism and correct violations in a timely manner, an inter-organizational PIP committee was also established, consisting of representatives of all units of legal affairs, human resources, information, internal audit, research and development, quality assurance, financial accounting, business and operation, and regular meetings are held every quarter to review the violations and system gaps in the past quarter so as to continuously review and improve the mechanism of Proprietary Information Protection. When necessary, ad hoc meetings will be held to discuss time-sensitive matters and issues in time in order to continue to improve the effect of protection. If an abnormal event occurs, the investigation team (composed of Legal, HR, IT and Internal Audit units) will immediately investigate the cause of the matter and deal with it, and then review and improve the deficiencies or missing parts of the policy and mechanism and strengthen them.

When transmitting data relating to customer design, B2B secure encrypted connections are used to protect them. Customer technical documents are all encrypted and stored in the technical information system, and the document management system performs authority management and keeps access records. VIS does not use personal data for secondary purposes.

In 2022, there were no incidents of violations or violations of privacy, and no complaints of violations of customer privacy.



3.4 Innovation Management

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
R&D and Innovation				
	<ul style="list-style-type: none"> The proportion of revenue from advanced manufacturing processes of 0.18 micron or below was about 46% Allocated 5% of the revenue as research and development funds 	<ul style="list-style-type: none"> The proportion of revenue from advanced manufacturing processes of 0.18 micron or below is expected to reach 52% Allocate 6% of the revenue as research and development funds 	<ul style="list-style-type: none"> The proportion of revenue from advanced manufacturing processes of 0.18 micron or below is expected to reach 57% Allocate 6% of the revenue as research and development funds 	<ul style="list-style-type: none"> The proportion of revenue from advanced manufacturing processes of 0.18 micron or below continues to increase It is expected to allocate 6% of revenue as research and development funds
Number of patent applications				
	<ul style="list-style-type: none"> The cumulative number of global patent applications >3,200 applications 	<ul style="list-style-type: none"> The cumulative number of global patent applications >3,300 applications 	<ul style="list-style-type: none"> The cumulative number of global patent applications >3,700 applications 	<ul style="list-style-type: none"> The cumulative number of global patent applications >4,000 applications
Number of trade secret registrations				
	<ul style="list-style-type: none"> The cumulative number of trade secret registrations >2,000 applications 	<ul style="list-style-type: none"> The cumulative number of trade secret registrations >3,500 applications 	<ul style="list-style-type: none"> The cumulative number of trade secret registrations >8,000 applications 	<ul style="list-style-type: none"> The cumulative number of trade secret registrations >10,000 applications

3.4.1 Green Innovation

As climate change and energy shortages become more and more serious, various countries have introduced energy-saving policies one after another to achieve the goal of zero-carbon emissions and low-carbon sustainable homes. Consumers are also paying more attention to the power-saving functions of end products. VIS are committed to green manufacturing and environmental sustainability, and the research and development of manufacturing process technology continues to move towards low power consumption and high performance, so that customers' terminal application products, such as computers, communications, consumer, industrial and automotive products, can all meet the specifications of high energy efficiency and power saving; meanwhile, we continuously innovate and develop the next generation of low power consumption and high performance components. VIS' manufacturing process technologies include: high voltage process, ultra-high voltage process, BCD (Bipolar CMOS DMOS) process, SOI (Silicon on Insulator), discrete power component process, logic process,

mixed signal process, analog signal process, HPA (High Precision Analog) process, embedded memory process technology, MEMS & Sensor technology, and gallium nitride process (GaN). All these manufacturing process platforms can effectively help customer products enhance their competitiveness in global green innovation.

2022 Results:

- **In the Field of Power Management ICs:** In order to make end products more efficient, energy-saving and lightweight, the current 0.15um 1.8V BCD manufacturing process of VIS provides customers for the design of high-efficiency power management ICs by reducing switch resistance and parasitic capacitance.
- **In the Field of 1.2 Microcontroller ICs:** The current 0.18um 1.8V embedded memory manufacturing process (e-Flash) of VIS can provide customers with microcontrollers with low system power consumption, and customers can design microcontrollers with low system power consumption in the future so as to reduce the energy consumption of system end products.
- **In the Field of Display Driver ICs:** The current 0.15um 1.8V/13.5V driver IC manufacturing process of VIS has assisted customers in developing various types of notebook display driver ICs, meanwhile the 0.11um 1.5/6/32V has also been developed, having assisted customers in developing more power-saving notebook display driver ICs so as to meet the market demand for energy saving and carbon reduction.
- **In the Field of Discrete Power Components:** The current 0.35um–0.15um MOSFET process technology of VIS has helped customers develop more power-saving products such as data centers, cloud computing, 5G communications, DC motor drives and other applications.
- **In the Field of Sensors and Micro-electromechanical Manufacturing Process Technology:** The trend in energy saving has also developed into smart home and IoT. In this field, the power consumption of electronic devices can be adjusted according to the environmental light source, temperature, infrared

rays, and the motion status of electronic devices, which can contribute to energy saving and carbon reduction of system equipment.

- **The Third Type of Compound Gallium Nitride (GaN) High-voltage Semiconductor:**

In addition, with the rise of the green energy electric vehicle market, VIS has developed a 650V low-loss, high-temperature-resistant and high-voltage-resistant third-type compound gallium nitride (GaN) high-voltage semiconductor, and a small volume of production has been applied to energy-saving power supply.

Future Development Plan:

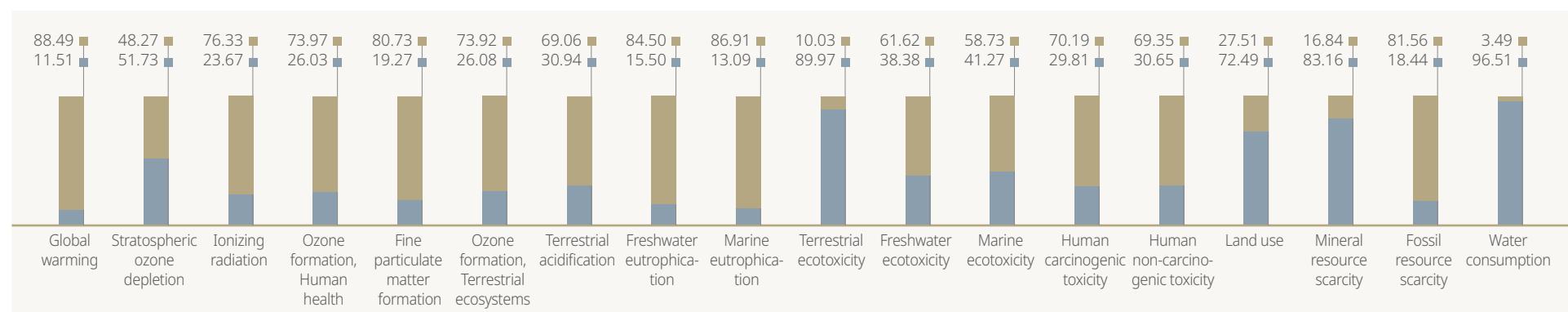
- **In the Field of Power Management ICs:** 0.11um 1.5V BCD is currently under development, and we can provide customers with more efficient technical solutions in the future.
- **In the Field of Microcontroller ICs:** Currently, the research and development of ultra-low power consumption (ULP) embedded flash memory (eFlash Memory) 0.11um 1.5V e-Flash manufacturing process technology is in progress. Through the ultra-low power eFlash manufacturing process technology, customers can design microcontrollers with ultra-low system power consumption in the future, thereby extending the battery life of the system and reducing the charging time.
- **In the Field of Display Driver ICs:** 0.11um 1.2/18V technology platform is currently being developed, which will save an additional 12% in energy, and assist customers in developing more power-saving display driver ICs.
- **In the Field of Discrete Power Components:** At present, the MOSFET manufacturing process technology of 0.13um–0.11um has been certified or is still under development. Customers will be able to design more energy-saving power components in the future.
- **The Third Type of Compound Gallium Nitride (GaN) High-voltage Semiconductor:** Currently, high-frequency and high-power compound gallium nitride GaN 1200V components are being developed, and the application development presence is aimed at the electric vehicle and charging pile market.

Product Life Cycle and Management Action

Adhering to the concept of sustainable management, VIS is committed to the development of environmentally friendly products, and has formulated supporting measures for the stages of procurement, production and manufacturing, transportation and logistics, and disposal and recycling, with the goal of reducing resource consumption, energy saving and carbon reduction, and continuously improving the environment benefit. VIS conducts a comprehensive Full Life Cycle Assessment every two years, completing a thorough product inventory from 2021 to 2022 across all categories.

Environmental Considerations	Life Cycle Stage					Implementation Direction	2022 Implementation Practices	
	Procurement Stage	Product Manufacturing	Transportation Logistics	Use of Products	Disposal and Recycling			
Hazardous Substance	V					Work with suppliers to jointly cooperate in environmental laws and regulations, so as to maintain and reduce the impact on the ecological environment and system	Established the IECQ QC080000 product hazardous substance management system to continuously ensure that the produced wafers and outsourced back-end manufacturing process products comply with the requirements of international regulations and EU REACH	
Energy Efficiency	V	V				Promote energy-saving solutions to improve product energy efficiency	Electricity consumption per unit wafer area decreased by 21% compared with that in 2015	
Material Reduction	V					Adjust machine operating conditions	Saved 1184.08 metric tons of chemical consumption per year	
Recycled Material Texture	V		V			Recycle and reuse materials such as exhaust pipes, gas pipes, and chemical pipes	Reduced waste by about 9 metric tons/ year	
Saving Water Resources	V	V				Manufacturing process water is fully reused to reduce wastewater discharge, and to reduce tap water replenishment and save water resources simultaneously	Water consumption per unit wafer area decreased by 9.38% compared with that in 2015	
Reduce Carbon Emissions	V	V				Transportation Logistics	Plan shared distribution routes to replace frequent and small-scale transportation modes based on trade terms, delivery date, volume of goods, and delivery location	Optimized delivery routes, increased transportation capacity, promoted low-carbon transportation and supported green transportation networks
						Disposal and Recycling	Reuse raw packaging materials and some used product packaging materials to reduce the volume of packaging materials and waste generation	Used 7,732 kg of recycled packaging materials
							Recycle the empty wafer boxes after the raw materials are put into wafers and the semi-finished product packaging boxes sent to outsourcing companies to reuse them for the packaging of (finished) products for shipment	The recovery rate reached 93.9%

Environmental footprints of 18 products in Raw Materials and Manufacturing Stages



3.4.2 Innovation Management Structure

The continuous innovation of integrated circuit manufacturing technology is an important key to enhance VIS' core competitiveness. VIS has been providing efficient semiconductor manufacturing management and high-satisfaction customer integration services with Industry 3.0 capabilities. To achieve excellent performance, VIS has actively promoted advanced VIM²-VIS Intelligent Manufacturing & Intelligent Management with Industry 4.0 as the core since 2019, penetrating from aspects of quality, cost, cycle time, people productivity, OEE (Overall Equipment Effectiveness), customer satisfaction, etc. On the data-driven and system-centric basis, to achieve innovative, highly "Auto-Decision"-based production, operations, and management, and thus drive VIS toward smarter operations.



VIS coordinates and operates various innovative technologies through integrating automated production technology, Robotic Process Automation (RPA), big data analysis, artificial intelligence, etc. To achieve the intelligent production goal of automatic decision-making. To accelerate the achievement of this goal, we continue education and training as well as internal sharing and competitions to enhance the skills of the personnel in intelligent manufacturing and management in the future; meanwhile, through the synergy out of the combination of industry, government and academia, as well as integrated use of research and development capacity, we achieve the win-win benefits from mutual cooperation.

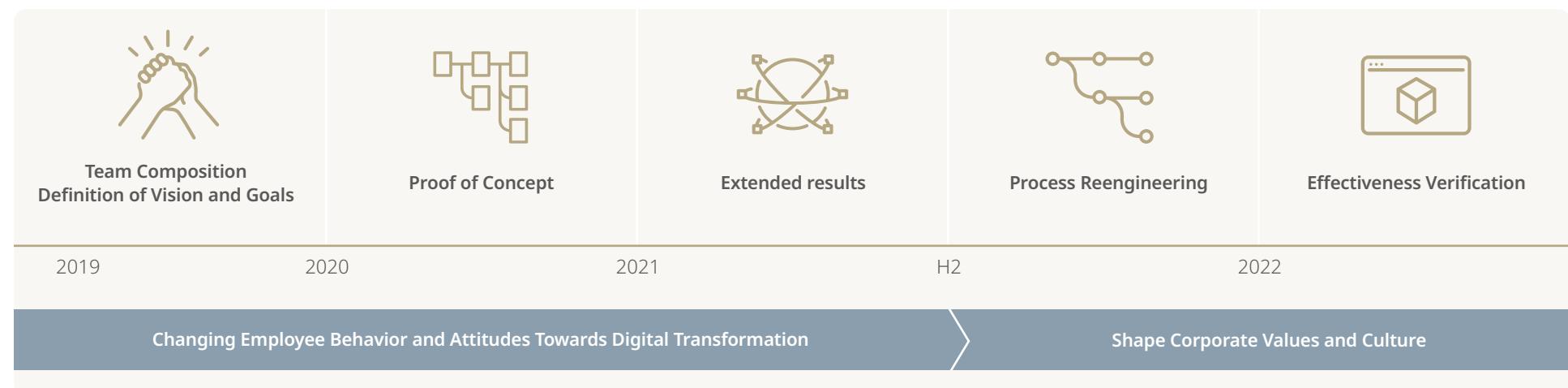
In 2019, VIS actively promoted the digital transformation of each unit of VIS. Promoted by the dedicated VIM² organization starting from a small proof of concept (POC) project, we then extended the successful experience to each fab. In 2021, VIS established the Business Process Management & Reengineering (BPMR), starting from the rationalization of the source process of digital transformation. From 2022, the focus has been placed on effectiveness verification.

VIM² has been expanded horizontally from top to bottom within the organization since it was launched in 2019, introducing suitable solutions to accelerate digital transformation; outside the organization, we refer to external practices and leverage the research capacity of the academic community to solve VIS' pain points. We also introduce RPA, BI, No/Low code AI and other tools to actively build up the digital transformation culture that everyone is responsible for.

VIM² believes that the focus of transformation relies on people, and thus it attaches great importance to the cultivation of employees' capabilities, providing various learning channels to cultivate employees' digital transformation skills, including: creating an information column to distribute information and knowledge to employees every quarter; and co-organizing with VIS' Learning and Development Committee education and training also encouraging employees to participate in external training to obtain certificates. In addition, starting from 2020, we have given awards to reward employees for their achievements in digital transformation. In 2020, the first VIM² Awards encouraged teams to make intelligent attempts to promote

the realization of the VIM² concept attracting a total of 17 groups of employees to sign up for the contest; in 2021, the second VIM² Awards emphasized digital popularization encouraging organizations to take the initiative to use tools to carry out digital transformation, attracting a total of 31 teams signing up for the award; in 2022, the third VIM² Awards emphasized digital implementation, encouraging teams to effectively apply digital tools and to integrate them into daily operations and work so as to improve operational performance.

Digital Transformation Planning and Milestones



The VIM² Awards are regularly held to reward employees for their digital transformation achievements

2019-2022 Outcomes Including:

Smart manufacturing

- From 2020 to 2022, AI technology was applied to machine predictive maintenance – pumps, which reduced pump maintenance costs by about NT\$9.6 million; in addition, there were other 7 instances where scrapping was successfully prevented.
- From 2020 to 2022, robotic process automation (RPA) was used to take over repetitive data collection and sorting actions. Each unit developed a total of more than 522 RPA processes, saving about 60.34 manpower a year.
- Through innovative production procedures, the cost reduction in 2020-2021 was in the approximate amount of NT\$234 million, of which the savings in electricity/ raw materials/ maintenance costs accounted for approximately 0.36%, 0.56%, and 0.70% of the sales cost respectively.
- The closed-circuit television (CCTV) AI image detection system was set up and used in industrial safety and auditing to reduce industrial safety accidents as well as reduce product quality abnormalities caused by human error.
- During the pandemic period, the Taiwan headquarters used smart glasses to assist employees in the Singapore fab in solving machine abnormalities.
- Big data technology was used to quickly find out the differences in machine bottlenecks, which improved equipment productivity and effectively increased production capacity.
- The remaining maximum production capacity was calculated with a new algorithm to increase VIS' business performance.
- We integrated AI wafer defect detection into the machine production process to reduce defective products and shorten reaction time.
- Shortlisted for the 2022 Harvard Business Review Digital Transformation Innovation Award _ Single Event: Smart Manufacturing (Large Enterprise ESG).
- The optimization algorithm was used to calculate the optimal production arrangement and combination of production line dispatching, so as to improve the on-time delivery rate and fab output.
- The purpose of rapid response and improvement of personnel productivity was achieved through the integration of smart watches and fab information.

Smart management

- Established Intelligent Manufacturing and Management Lab in cooperation with National Yangming Chiao Tung University.
- From 2020 to 2022, the Business Intelligence (BI) tool was used to create the Vanguard Intelligence Dashboard with semiconductor performance management as the core, unifying VIS' definition and management method of performance indicators, and used data-driven analysis and management of each unit to be constructed to this virtual expert system. A total of 1,488 BIs have been developed, saving 58.95 manpower a year.
- Cooperated with National Yangming Chiao Tung University from 2020 to 2022 in using mathematical programming and heuristic algorithms to improve the efficiency and accuracy of short-term production planning and master production scheduling.
- In response to the pandemic situation in 2021, a work-at-home platform was built in combination with technologies such as VPNs, net meetings, and instant messaging to improve the efficiency and quality of communication among employees and ensure that operational performance was not affected.
- From 2021 to 2022, the Taiwan headquarters introduced a cloud-based human resource management system to establish a global talent integration platform that could efficiently respond to changes in labor laws and regulations in various countries.
- During the pandemic period, in order to meet both anti-pandemic and accountant audit needs, through VIS' internal personnel wearing smart glasses, the screen seen on the spot was transmitted to the computer screen of the remote accountant in real time to achieve the purpose of remote real-time audit.



3.4.3 Enhancing Patent Portfolio

VIS continues to invest in innovative R&D and patent portfolio, strengthen its intellectual property strength, and cooperate in R&D strategies to carry out global patent portfolio so as to ensure that R&D results are fully protected. Since its establishment, VIS has obtained more than 2,000 patents from various countries. In recent years, the number of patent certifications has grown steadily. In addition to obtaining a leading position in unique technologies to strengthen its competitive advantage, it can provide better protection for the rights and interests of VIS itself and customers.

In view of the fact that the protection of patents and trade secrets is an important link in the business strategy of modern enterprises, VIS provide employees with intellectual property concepts and online courses on trade secret protection for employees to study, in order to strengthen employees' awareness of patents and trade secrets. In 2022, a total of more than 300 employees participated in the trade secret registration system and online lectures. We continued to assist employees in establishing specific concepts of patent and trade secret protection and improved their cognizance and awareness, so as to effectively reduce operational risks and enhance market competitiveness.

VIS also passed the Taiwan Intellectual Property Management System (TIPS) Level A certification by the Industrial Development Bureau of the Ministry of Economic Affairs in 2022. It has continued to improve its intellectual property management mechanism, enhance its competitive advantage, and demonstrate its corporate governance performance.

Looking forward to the future, VIS will focus on its major business, continue to innovate, provide power management, energy saving and power saving, green energy and environmental protection and other related manufacturing process technologies and services, transform innovation achievements into intellectual property rights, and simultaneously avoid the threat of intellectual property rights risks. We continue to endeavor to implement corporate sustainable operations and Corporate Social Responsibility.

3.4.4 Innovation Cases

VIS has invested in the development of high-voltage, power analog BCD (Bipolar-CMOS-DMOS), ultra-high voltage and gallium nitride technology platforms with energy efficiency and innovative energy-saving technologies for many years. The driver chips and power management chips and gallium nitride high-power components produced through the aforementioned technology platforms have continued to move towards the technology development direction with lower energy consumption and higher efficiency. The revenue of high-voltage and power management chips is also gradually occupying an important proportion in the product categories of VIS. For example, the proportion of revenue related to power management chips has grown from 49% in 2017 to 66% in 2022.

Taking the power management chip as an example, the ultra-high voltage process platform has a more obvious energy-saving effect in the field of light-emitting diode (LED) lighting. Calculated based on the energy saving of about 5 watts (W) when a product is used, according to the conversion of the number of 8-inch wafers produced by VIS, it can save about 5.2 billion kilowatt-hours of electricity a year. In the process of continuous production of UHV by VIS, it also contributes to energy saving and carbon reduction in the lighting industry. In addition, 50% of the global end-use electricity is used for motor equipment, and motor electricity also accounts for 70% of domestic industrial electricity consumption. Through the improvement of motor design, energy loss can be effectively improved. VIS has also continued to provide more solutions in UHV.

Taking display driver chips as an example, VIS provides a variety of high-voltage display driver chip manufacturing process technologies to meet the needs of various low-power display products. In the research and development of TV display driver chips, the line width of the microprocess can be reduced, with the system input voltage reduced from 1.8V to 1.2V, it can optimize the customer's system energy-saving design. In addition, in terms of the display driver chip of the notebook computer panel, with the change in the voltage of the driving component through the microprocess line width, as well as the system voltage reduced from 1.8V to 1.5V, it is estimated that the panel display module of each notebook computer can save about 0.2 watts (W). Calculated according to the number of 8-inch wafers produced by VIS, it can reduce global carbon emissions about 2,000 tons per year.

Taking discrete power components as an example, VIS and its customers jointly invested in the development of high-efficiency field-effect transistor products to provide high-efficiency DC power conversion for major processor chips (such as CPU, GPU). With the improvement of the quality factor, it is expected that every 1% improvement in conversion efficiency will save about 2.5 watts (W) of energy consumption per processor in the server. According to the conversion of the related products produced by VIS on 8-inch wafers, it can save about 2.3 billion kilowatt-hours of electricity. In addition to high-performance computing products, the power device products of VIS are also used in home appliances, automobiles, industrial control, communications and other fields, contributing to energy conservation, carbon reduction and sustainable development.

In the field of sensors, customers use VIS' micro-electromechanical manufacturing process to produce inertial sensors, and apply them to various portable electronic devices such as mobile phones, tablets, and wireless earphones. If the electronic device is detected to be standing for a period of time, then the product will automatically enter power saving mode. In addition, VIS also cooperates with customers to produce proximity light sensors and apply them to mobile phone products. Overall speaking, the sensors produced by VIS are estimated to save 200,000 kilowatt-hours of electricity each year.

Under the international trend in energy saving and carbon reduction, various countries have launched initiatives and policies to support electric vehicles in recent years. Among them, gallium nitride (GaN) semiconductors play a key role in the electric vehicle industry. GaN semiconductors have extremely low internal resistance. Compared with similar silicon components, not only the performance can be increased by 70%, but the volume and weight of the components can also be reduced by 60%. In the process of electric vehicle engine power conversion, in addition to improving endurance, it also greatly reduces the volume and weight of the battery management system, so that the development of electric vehicle performance can gradually replace traditional fuel vehicles. VIS has currently completed with the development of the 650V GaN manufacturing process and component technology, which has been mass-produced and applied to energy-saving power supplies. In the future, VIS will continue to develop the 1,200V high-frequency and high-power GaN manufacturing process and component technology to provide customers with design the high-frequency and high-power components required for the application of electric vehicles and charging piles, so as to implement the goal of energy saving and carbon reduction.

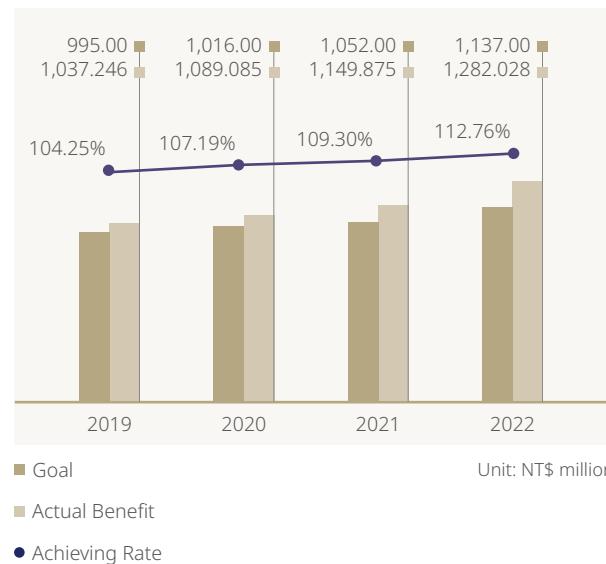
3.5 Quality and Customer Service

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
Quality management	<ul style="list-style-type: none">Passed the third-party audit of quality management system ISO 9001/IATF 16949 and hazardous substance process management system IECQ QC 080000The annual benefit of continuous improvement activities reached the amount of NT\$1.282 billionThe product was 100% in compliance with the laws and regulations for no harmful substances and customer specifications	<ul style="list-style-type: none">Passed the third-party audit of quality management system ISO 9001/IATF 16949 and hazardous substance process management system IECQ QC 080000The annual benefit of continuous improvement activities reached the amount of NT\$1.119 billionThe product is 100% in compliance with the laws and regulations for no harmful substances and customer specifications	<ul style="list-style-type: none">Passed the third-party audit of quality management system ISO 9001/IATF 16949 and hazardous substance process management system IECQ QC 080000The annual benefit of continuous improvement activities reached the amount of NT\$1.3 billionThe product is 100% in compliance with the laws and regulations for no harmful substances and customer specifications	<ul style="list-style-type: none">Passed the third-party audit of quality management system ISO 9001/IATF 16949 and hazardous substance process management system IECQ QC 080000The annual benefit of continuous improvement activities reached the amount of NT\$1.3 billionThe product is 100% in compliance with the laws and regulations for no harmful substances and customer specifications
Level of customer satisfaction	<ul style="list-style-type: none">The overall customer satisfaction rate was 95.7%	<ul style="list-style-type: none">The customer satisfaction rate maintains at 90% or more	<ul style="list-style-type: none">The customer satisfaction rate maintains at 90% or more	<ul style="list-style-type: none">The customer satisfaction rate maintains at 90% or more

3.5.1 Strengthening Quality Culture

VIS is committed to becoming the preferred choice of wafer manufacturing for global customers with excellent service quality, and employees also strive to continuously improve quality that exceeds customer needs.

Continuous Improvement Activity Team Improvement Efficiency Targets and Achievement Rate



For the sustainable development of the enterprise, VIS continues to implement improvement activities and promote them to the supply chain to help improve the operating quality of suppliers. Meanwhile, various innovative methods are also introduced to improve quality capabilities to ensure that the quality and application of various products are safe.

Quality is the responsibility of every employee of VIS, which is also the principle of work and service. Its benefits can not only improve product quality, but also further enhance customer satisfaction.

In order to strengthen VIS' quality culture, VIS fully implemented the Recommendation System (SS)^{Note 1} and the Continual Improvement Team (CIT)^{Note 2} activities in each fab, and held the company-wide improvement presentation meeting VIS Annual CIT Conference, in the hope of encouraging employees to strive for excellence through incentive measures such as bonuses and public praise, driving cross-departmental observation and learning, and improving employees' ability to solve problems and innovate in order to maintain VIS competitive advantage and achieve the win-win goal of customer satisfaction.

In 2022, a total of 2,012 grassroots improvement proposals and 619 continuous improvement team activities were put forward and implemented, and the benefits derived from the two exceeded the amount of NT\$1.282 billion (Including CIT registered in 2008~2022 and closed in 2022); 30% (106 instances) out of the 355 closed proposals in the continuous improvement team activities were related to the refinement measures of product quality. VIS has also given the best innovation award, teamwork award and best presentation award of the continuous improvement team from 2018. In 2022, the best newcomer award of the continuous improvement team was further given to encourage employees to continuously improve quality and propose innovative improvement ideas.

Improving Quality Skills

VIS has continued to optimize manufacturing capabilities, reduced product defects, and improved manufacturing process control. The quality and reliability organization cooperates with the operations organization to apply advanced statistical methods and quality tools to build a real-time defense system so as to detect abnormalities early and avoid quality incidents that have impact on customers.

Note 1: Colleagues explore improvement opportunities in the daily business, actively propose countermeasures or ideas to the supervisor, and implement them so as to achieve improvement or solve problems. The scope of proposed improvement includes quality, cost, delivery date, production process, internal/external customer service, industrial safety and environmental protection, fab affairs, equipment and other businesses.

Note 2: A Continuous Improvement Team is generally composed of three to ten or more members. The team members are usually composed of people from different units who need to solve common problems. The improvement goals cover quality and cost, delivery date, service, productivity, production technology, workplace safety and environmental protection, and safety and health.

In addition to meeting customer needs, pursuing customer satisfaction and creating customer value, product quality also needs to take into account environmental sustainability to ensure environmental ecological stability and sustainable development. In order to comply with EU regulations and customers' green product requirements, VIS has introduced the IECQ QC 080000 hazardous substance process management system developed by the International Electrotechnical Commission's electronic component quality certification system, and integrated it with the quality management system ISO 9001 to build up the management requirements of hazardous substances in the manufacturing process design and development operations, raw material procurement operations, supply chain management operations, and manufacturing process control operations, and passed third-party audit certification so to ensure that the hazardous substance process management system and quality management system continue to be in line with IECQ QC 080000 and

ISO 9001 requirements. On the other hand, the products produced by VIS have also been sampled and tested by third-party external laboratories, and continue to comply with EU regulations and customer requirements.

Product Hazardous Substance Management

VIS has established the IECQ QC 080000 product hazardous substance management system in accordance with international regulations on hazardous substances in products, and continues to ensure that the wafers produced by VIS and outsourced post-process products are both in line with international regulations and customers' requirements on hazardous substances, including:

- European Union and China's Restriction of Hazardous Substances Directive (EU & China RoHS): All products of VIS can meet the requirements of these regulations.
- Perfluorooctane sulfonic acid (PFOS) control: VIS has completely abolished the use of raw materials containing PFOS in the manufacturing process in 2010, and all products do not contain this substance either.
- Control of perfluorooctanoic acid (PFOA) and its related substances: VIS has completed 100% replacement of perfluorooctanoic acid (PFOA) and its related substances in 2021.
- Product halogen-free requirements: All products of VIS meet the halogen-free requirements.
- European Union Registration and Control of Chemical Substances (EU REACH): For the hazardous substances announced by EU REACH and the substances of very high concern (SVHC) announced successively, all the products of VIS can meet the requirements of these regulations.
- IEC 62474 Declarable Substances List: The proportion of IEC 62474 substances contained in VIS' product revenue is 0%, and VIS' products fully conform with the requirements of international regulations listed in the IEC 62474 Declarable Substances List.

Reduction Progress of Harmful Substances in Products Over the Years:

Product Hazardous Substances	Year of Completion of Reduction	Description
Perfluorooctane Sulfonate (PFOS)	2010	VIS completely abolished the use of raw materials containing PFOS in the manufacturing process in 2010
Perfluorooctanoic Acid (PFOA) and its Related Substances	2021	VIS completed 100% replacement of perfluorooctanoic acid (PFOA) and related substances in 2021
N-Methylpyrrolidone (NMP)	Expected in 2023	VIS expects to complete 100% N-methylpyrrolidone (NMP) replacement in November 2023



ISO 9001 Quality Management System Certification



IECQ QC 080000 Hazardous Substance Process Management Certification

In addition to the current international laws and customer requirements, VIS has also continued to pay attention to the possible new regulatory requirements in the future and prepare for them.

VIS Products Hazardous Substance Management Process



Achieving quality applications

In order to provide excellent and reliable product quality, assist customers in obtaining market opportunities, ensure the safety of consumers and product applications, and avoid a large number of product recalls after mass production, the quality and reliability organization assisted customers in introducing product reliability requirements into product design at the stage of technology development and product design, and implemented automotive quality improvement projects in order to meet automotive product customers' low Defect Parts Per Million (DPPM) requirements.

3.5.2 Customer Service

Customer Satisfaction and Complaint Mechanism

VIS regularly organizes the Annual Customer Satisfaction Survey, carried out by a neutral third-party consulting company, to understand customers' degree of satisfaction with VIS' technology, quality, delivery, and services. VIS makes sure that we understand our customers' opinions, and properly answer their needs, to provide our customers with the best products and services. The customer coverage rate from the 2022 customer satisfaction survey was 100%, and the overall customer satisfaction rate is 95.7%, achieving our goal of a 90%+ satisfaction rate.

In addition to the annual customer satisfaction survey, VIS also conducts Quarterly Business Reviews for important customers. Through face-to-face communication between customers and VIS' senior executives, we can further understand customers' needs and level of satisfaction. Our sales and service teams also maintain in-depth interaction with customers, to closely meet customers' needs and improve service quality.

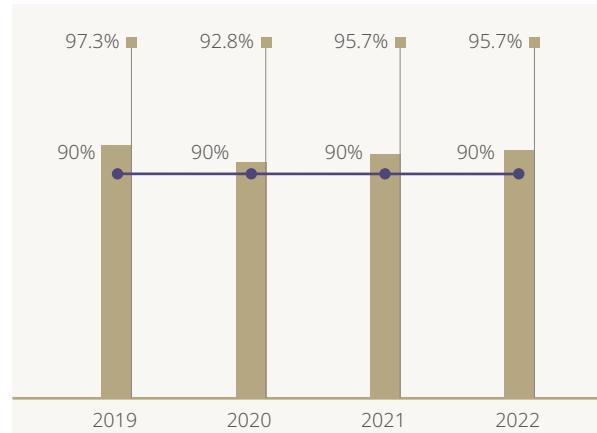
VIS has established our Customer Complaint Handling Measures to provide customers with transparent, effective channels for complaints about VIS products and services. These channels help ensure we can handle customer complaints fairly and quickly, thus ensuring customers' rights and interests. In 2022, all customers' complaints were handled in accordance with Customer Complaint Handling Measures. Corrective and preventive measures were proposed in accordance with the required schedules, and we replied with the results to customers.

We have also established a sales recall management mechanism to notify customers of recalled products that have been proven to have abnormal reliability. This is to ensure end customers do not receive defective products produced by VIS. Sales recalls are also handled in accordance with the correction and prevention mechanisms. Improvement measures are tracked and confirmed to make sure they are complete and effective. Continuous improvement through our quality system, daily monitoring, detection, and preventive measures means that we can detect abnormalities early and reduce customer impacts from quality abnormalities. There were no sales recall incidents in 2022.

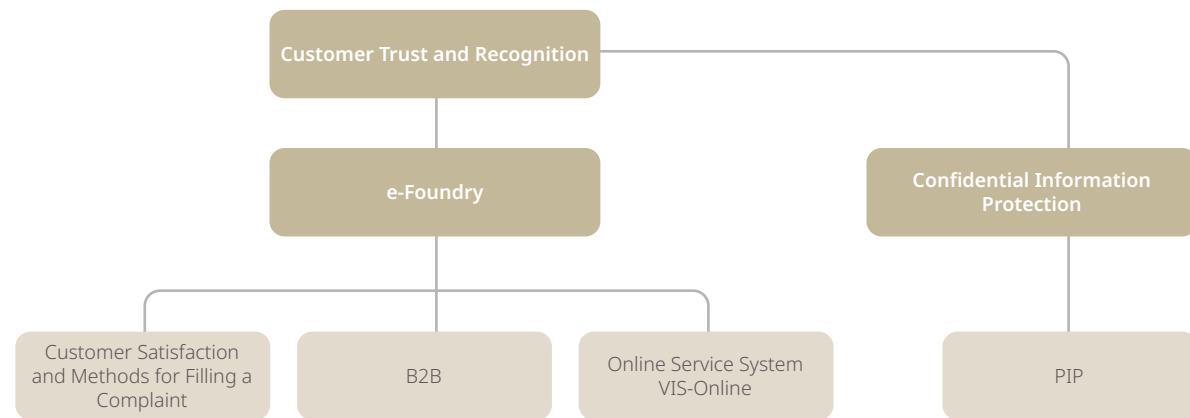
Customer Service

VIS strives to establish comprehensive customer service to meet customer needs, and win customer trust and recognition, achieving its goal of sustainable operation. Based on such belief, the customer service team has always done its best as a window of communication and coordination, and protected customers' confidential information adhering to the highest standards, supporting customers' needs in design, mask production, and wafer manufacturing; at the same time, VIS helps customers with backend packaging and testing, so they can successfully achieve their product certification.

Customer Satisfaction by Year

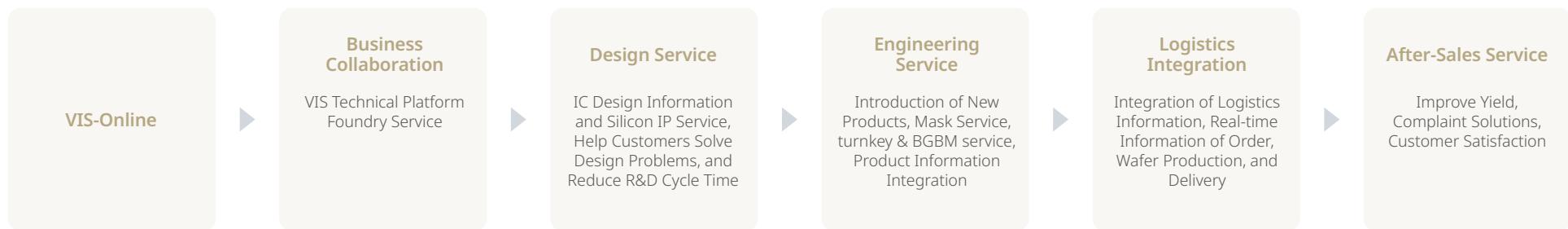


Note: Covers Taiwan fabs and subsidiaries.



e-Foundry

VIS establishes the VIS-Online service platform, which provides customers comprehensive and real-time supply chain information, including design support, engineering integration, and logistics service integration. Through VIS-Online, customers can check their production order status, delivery schedule, and product quality data and status at all times; customers can also generate customized report based on their own management needs, so they can immediately learn and get their production information from VIS. In 2014, VIS built a vertically integrated online tape out system to help customers compile tape out information more easily, thus to reduce tape out cycle time. To timely learn customer satisfaction, VIS has developed the Customer Service Satisfaction (CSS) online system, where customers can propose their needs, opinions and suggestions for products or services any time they want; later, VIS will have designated personnel be responsible for dispatching and handling, and responding to customers, and customers can inquire progress online anytime. To VIS, this helps us to understand customer needs, and convert into real actions, constantly enhancing service quality and competitiveness for better customer satisfaction. In 2022, all customers are satisfied with VIS' support to their requirement.



Green Manufacturing

VIS pursues maximization of efficiencies of energy and all resources, and proactively reduces wastes and prevents pollutions, while also continually investing in R&D of eco-friendly technologies.

22.03 GWh

Saved 22.03 GWh of electricity

70 million tons

Accumulated process water recycling volume exceeds 70 million tons

100%

Joined RE100 and pledged to use 100% renewable energy in our global operations by 2040



4.1 Climate Change and Energy Management

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
Climate change				
	<ul style="list-style-type: none"> Review of climate change risk management measures: Completed 4 times, with climate change risk management measures reported to management team on a quarterly basis Regular annual reporting to the Board of Directors on the climate change risk control measures and governance implementation results: The implementation results were reported during the Board Meeting in May 2022 Carbon reduction KPI in 2022: Reduced carbon emissions by 37,000 tons (CO₂e) (approximately 4.2% of the total Scope 1 and Scope 2 carbon emissions in 2020), and completed 86 carbon reduction improvement projects in actual, reducing approximately 55,000 tons (CO₂e), approximately 6.14% of the total Scope 1 and Scope 2 carbon emissions in 2020. In particular, the conversion of GHGs and reduction improvement projects reduce carbon emissions by about 46,000 tons (CO₂e), and electricity saving projects reduce carbon emissions by about 9,000 tons (CO₂e) Completed the self-installed solar photovoltaic system, for power generation capacity of 270kW 	<ul style="list-style-type: none"> Review of climate change risk management measures: Regular report to management team on climate change risk management measures Regular annual reporting to the Board of Directors on the climate change risk control measures and governance execution results: one time Carbon reduction KPI in 2023: Reduce carbon emissions by 57,000 tons (CO₂e), approximately 6% of the total Scope 1 and Scope 2 carbon emissions in 2021 Continuous procurement of renewable energy and renewable energy generation equipment is expected to result in 8,437kW of renewable energy capacity by 2023 	<ul style="list-style-type: none"> Review of climate change risk management measures: Regular report to management team on climate change risk management measures Regular annual reporting to the Board of Directors on the climate change risk control measures and governance implementation results: one time Continue to study carbon reduction/energy saving project technologies, including: <ul style="list-style-type: none"> Scope 1 Direct GHG Emissions (e.g., production processes): Greenhouse gas usage reduction (source reduction: conversion of Greenhouse gases, usage reduction, etc.), GHG emission reductions (Installation local Greenhouse gases treatment equipment to reduce emissions) Scope 2 Indirect GHG Emissions (e.g., electricity use): Introduction of electricity saving technologies and energy-efficient equipment Assessing carbon negative and natural carbon sinks: offsetting the remaining carbon emissions Continuously evaluate opportunities and possibilities for acquiring renewable energy and renewable energy generation equipment in accordance with the conditions of energy supply market, and enhance the construction and procurement of renewable energy capacity 	<ul style="list-style-type: none"> Review of climate change risk management measures: Regular report to management team on climate change risk management measures Regular annual reporting to the Board of Directors on the climate change risk control measures and governance implementation results: one time Carbon emission reduction target: <ul style="list-style-type: none"> In 2040, carbon emissions will be reduced by 70% compared to 2021 (8-inch fab) 2050: Achieve net zero emissions, Strategy: <ul style="list-style-type: none"> Plan to reduce carbon emissions by approximately 89% (2021 as the base year) with autonomous energy efficiency and carbon reduction improvements, supply chain carbon reduction and green power use Offset the remaining 11% of carbon emissions with carbon negative technologies Joined RE100 in December 2022 and is committed to 100% renewable energy by 2040
Climate resilience strengthening				
	<ul style="list-style-type: none"> 0 days of production interruptions due to weather disasters 	<ul style="list-style-type: none"> 0 days of production interruptions due to weather disasters 	<ul style="list-style-type: none"> 0 days of production interruptions due to weather disasters 	<ul style="list-style-type: none"> 0 days of production interruptions due to weather disasters

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
GHG emission reductions	<ul style="list-style-type: none"> GHG emissions per wafer area reduced by 23% compared to 2015 	<ul style="list-style-type: none"> 24% reduction in GHG emissions per wafer area, as compared to 2015 	<ul style="list-style-type: none"> 30% reduction in GHG emissions per wafer area, as compared to 2015 	<ul style="list-style-type: none"> 30% reduction in GHG emissions per wafer area, as compared to 2015
Fluorinated gas emission reductions	<ul style="list-style-type: none"> Fluorinated gas emissions per wafer area reduced by 33%, as compared to 2015 	<ul style="list-style-type: none"> A 24% reduction in fluorinated gas emissions per wafer area, as compared to 2015 	<ul style="list-style-type: none"> A 30% reduction in fluorinated gas emissions per wafer area, as compared to 2015 	<ul style="list-style-type: none"> A 30% reduction in fluorinated gas emissions per wafer area, as compared to 2015
Renewable energy adoption	<ul style="list-style-type: none"> Generated 70,573 kWh of solar power in 2022 	<ul style="list-style-type: none"> Installed renewable energy generation equipment with capacity of 294,290 kWh Purchased 11,000,000 kWh in renewable energy 	<ul style="list-style-type: none"> Install renewable energy generation equipment with capacity of 500 kW Continuous procurement of renewable energy, to at least 10% of contracted capacity 	<ul style="list-style-type: none"> Continuous procurement of renewable energy
Electricity consumption reduction	<ul style="list-style-type: none"> Electricity consumption per wafer area decreased from 1.01 kWh/cm² in 2015 to 0.8 kWh/cm², a reduction of about 21% 	<ul style="list-style-type: none"> A 30% reduction in electricity consumption per wafer area in 2023, as compared to 2015 	<ul style="list-style-type: none"> A 40% reduction in electricity consumption per wafer area, as compared to 2015 	<ul style="list-style-type: none"> Continuously propose energy-saving projects to reduce electricity consumption per wafer area, and adopt energy-saving measures to save altogether 200 GWh of energy by 2030
No violation of environmental regulations	<ul style="list-style-type: none"> 0 violations of environmental protection regulations 	<ul style="list-style-type: none"> 0 violations of environmental protection regulations 	<ul style="list-style-type: none"> 0 violations of environmental protection regulations 	<ul style="list-style-type: none"> 0 violations of environmental protection regulations
Awards	<ul style="list-style-type: none"> Silver Award and Honorary Award in the Environmental Protection Administration's Environmental Protection Award 	<ul style="list-style-type: none"> Receive 1 national environmental protection award Receive 2 county/city environmental protection awards 	<ul style="list-style-type: none"> Receive 1 national environmental protection award Receive 2 county/city environmental protection awards 	<ul style="list-style-type: none"> Receive 1 national environmental protection award Receive 2 county/city environmental protection awards

4.1.1 Climate Change

Climate change is currently one of the most important environmental issues for the United Nations, governments, society in general, and the business sector in specific. Since 2019, VIS has adopted the Task Force on Climate-related Financial Disclosure (TCFD)'s Recommendations to disclose information and to identify climate change risks and opportunities. Based on the identified results, we establish measurement indicators and targets, and implement countermeasures for risk management to effectively reduce the financial impact of climate risks on our operations.

Board of Directors

- Oversee VIS' overall climate change management practices
- Review connection between management team remuneration and ESG performance

Management Team

(Composed of the chairman, president, area head and the head of unit which under president office.)

VIS highest-level decision-making unit for climate change management

- Monitor climate change risks and opportunities; explain organization tasks/strategies/R&D direction and financial planning.
- Formulate mid- to long-term targets and development strategies for climate change and renewable energy.
- Review VIS' ESG-related strategies and targets on a quarterly basis.

Energy Saving and Carbon Reduction Committee

Chair: Associate Vice President for Operation & Environment Safety

Manage actions for risks and opportunities in regard to physical climate change transition

Corporate Sustainability Committee

Chair: Chairman

Deputy chair: Vice President & CFO

- Interdepartmental communication platform for climate change issues. Participated by representatives from functional committees for economic, environmental, social and governance performance.
- Cover topics such as carbon asset management, supply chain management, energy saving and carbon reduction

Enterprise Risk Management Committee

Chair: President

Identify and execute climate change risk control plans

TCFD Disclosure Framework and Management Practices

The VIS climate change governance and management framework is established on a 3-tier top-down management structure, consisting of the Board of Directors, the management team, and the Executive Committee. The Executive Committee, which includes the existing Corporate Sustainability Committee and Enterprise Risk Management Committee, and a new Energy Saving and Carbon Reduction Committee, is chaired by the regional head of Operation & Environment Safety. In particular, the Energy Saving and Carbon Reduction Committee is responsible for promoting energy saving and carbon reduction improvement projects, and holds regular monthly and quarterly management meetings to track and review improvement plans and targets. Subsequently, the Corporate Sustainability Committee discloses VIS' energy saving and carbon reduction performance to the public, and every year, they report to the Audit Committee and the Board of Directors on the Climate Change Governance and Risk Response Strategies and Objectives; these operations are subject to supervision and advisement by the Audit Committee and the Board of Directors. Related risks are incorporated by the Enterprise Risk Management Committee for risk identification and risk control measure formulation to reduce operational risks and enhance corporate competitiveness.

In order to enhance effective communication on climate change, the Corporate Sustainability Committee acts as an interdepartmental communication platform, covering three major topics: Carbon asset management; energy savings and carbon reduction; supply chain management. The factory/division directors or supervisors are appointed the general coordinator for each topic.

Interdepartmental Communication Platform for Climate Change Issues

Corporate Sustainability Committee

Carbon Asset Management

- Carbon offsetting
- Carbon capture and storage
- Financially aid for the development of carbon negative technology
- External purchase of carbon rights

Energy Saving and Carbon Reduction

- GHG emission reductions in the manufacturing process
- Improvement of energy efficiency
- Use of renewable energy

Low-carbon Supply Chain

- Saving and carbon reduction promotion and management
- Low-carbon energy
- Zero Waste Center: waste reprocessing and low carbon management



Governance

- Risk identification is conducted by the Enterprise Risk Management Committee and reported to the Board of Directors on a regular basis. The Board of Directors and senior management review the effectiveness of risk control execution, based on which they make decisions and provide guidance
- The management team then formulates policies and improvement targets based on the results of the board of directors' discussions and sends them to each executive committee for operational adjustments



Strategy

- **Physical Risks:** Floods, droughts, etc. caused by extreme weather
- **Counter Strategies:** Conduct simulation drills and education training on climate change-derived physical risks to VIS' assets, establish extensive and rigorous preventive measures and emergency response plans, and immediately propose the most appropriate response actions and recovery plans in the event of a crisis or disaster, to minimize the uncertainty and possible impact of the crisis/disaster
- **Transition Risks:** Climate change – risks arising from low-carbon transition
- **Counter Strategies:** In response to transition risks, in line with the trend of energy-saving technologies and energy diversification, departments have started to plan for GHG emission reductions/ GHG emissions removal/introduction of electricity saving technologies and energy-efficient equipment/ assessment on carbon negative technologies (carbon capture)/low-carbon supply chain and environmental sustainability transition to gradually reduce the carbon emissions of VIS



Risk Management

- Screen the climate risk issues through reports from international organizations, industry analysis data, and research on related regulations, based on the TCFD framework
- Determine the risk value based on the total value of financial or strategic impact level and frequency of occurrence, and rank the importance of risk issues

Incorporate climate change risk into the operational risk management systems; the Enterprise Risk Management Committee regularly conducts risk control in accordance with the following risk management procedures, including risk identification (based on the risk management scope, each department shall discuss, study, analyze, and compile past experiences and predict future risk conditions in accordance with its business scope and cross-organizational operational processes, and identify and categorize them as a reference for further measurement and monitoring of risk management); risk measurement (determine the probability of risk occurrence and its impacts, given the existing control measures; during the analysis, the frequency of risk occurrence, and the resulting level of impact on VIS' operations, must be quantified using a risk matrix; other feasible quantification methods should be established to measure different risk types); risk response (based on the risk assessment results, the priority of control and risk control mechanism are formulated in accordance with the risk tolerance and cost effectiveness, with an aim to effectively control VIS' risks within an acceptable range. The control measures include: hedging (eliminating the occurrence condition: replacing or not performing), mitigation (reducing the chance of occurrence and loss), sharing (risk transfer: insurance, contract signing), and bearing (bearing the remaining risk after reducing and transferring part of the risk); risk control (monitoring and control activities for the development and change of the risk situation); and risk reporting (VIS must complete a risk report on a regular basis, submit it to the appropriate management, and archive it for future reference; the Enterprise Risk Management Committee must report on the risk management performance report at the Audit Committee and the Board of Directors meeting once a year).

In response to climate change low-carbon transition risks (e.g., topics such as carbon taxes, carbon fees, renewable energy procurement, and green energy-saving product development) and other natural or anthropogenic disasters, such as typhoons, earthquakes, floods, water shortages, power outages, Taiwan Power Company voltage drops, fires, and gas/chemical leaks, VIS not only conducts regular simulation drills and educational training, but also establishes extensive and complete preventive measures and response plans. These practices allow VIS to promptly propose the most appropriate response actions and reconstruction plans in the event of a crisis or disaster, so as to minimize the uncertainties in business operations and the possible impact of disasters. All of these measures help maintain the normal operation of VIS and, in doing so, fully protect the overall rights and interests of shareholders, customers, and employees. VIS was not involved in any crisis events in 2022.



Indicators and Targets

- Climate-related risk and opportunity assessment management targets such as GHG emission reductions and fluorinated gas emission reductions have been established
- Climate-related risk review is conducted twice a year, with the implementation results of risk control measures reported to the Board of Directors on a regular basis once a year
- Carbon reduction target: A 70% reduction in carbon emissions by 2040 compared to 2021, and achieve net zero emissions by 2050
- Renewable energy use: Joined RE100 in December 2022; committed to 100% renewable energy by 2040
- Emissions information takes reference to the requirements specified in ISO/CNS14064-1, the GHG Inspection Guidance and the GHG Emissions Inventory Registration Practice Guidance released by the Environmental Protection Administration, and the GHG Protocol released by the WBCSD/WRI; based on this information, the inventories are conducted and verified by SGS, a third party external verification firm

Climate Change Risk and Opportunity Identification

In 2021, VIS held the Climate Change Risks and Opportunities Workshop, with VIS departments invited to conduct assessments on climate change risks and opportunities based on their different scopes of business, and to develop adaptation and mitigation measures.

VIS' TCFD Analysis Procedures



Financial Impact Analysis on Climate Change Risks and Opportunities and Counter

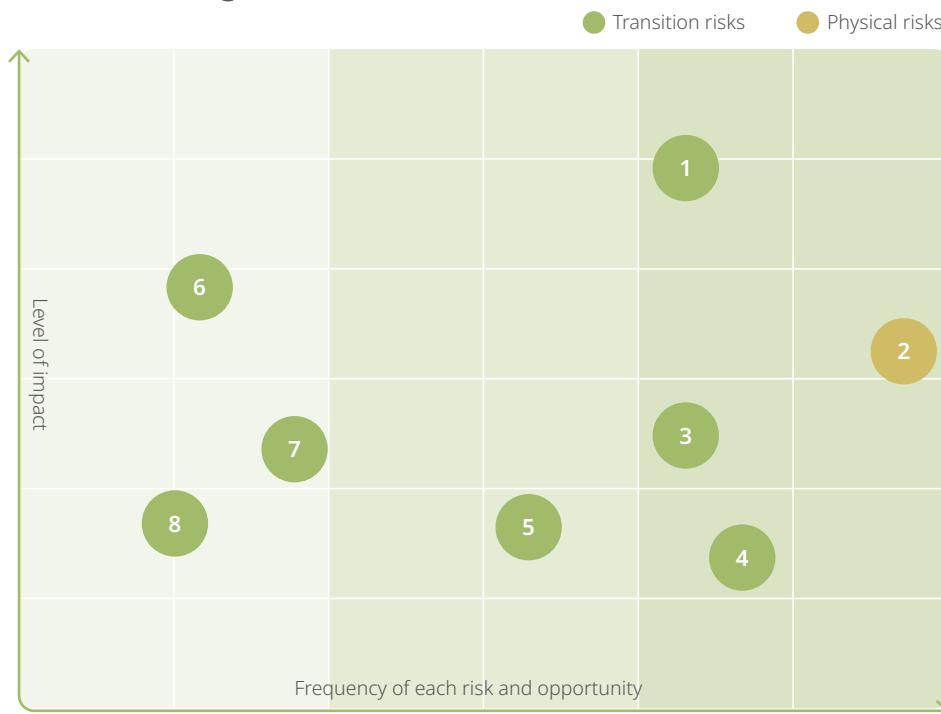
VIS finally listed eight risk issues. The impacts and financial impacts caused by each risk are explained, and the measures and actions taken to address the opportunities arising from each risk are disclosed.

Rank	Climate Risk	Impact Description	Financial Impact	Opportunities Arising from Each Risk and the Countermeasures	Corresponding Chapter
1	Supply Chain Disruption	Sudden climatic disasters cause disruptions or shortages of raw materials supply and delays in product delivery	Payment of damages to customers, resulting in increased operating expenses	Enhance supply chain stability <ul style="list-style-type: none"> Implement a supplier assessment mechanism to strengthen supplier quality and environmental management capabilities Require suppliers to propose post-disaster impact and recovery plans to reduce the risk of supply disruption 	5. Responsible Supply Chain
2	Increased Extreme Weather Events	Long-term physical risks, such as drought and sea level rise, may lead to factory shutdowns	Water shortages are becoming more severe due to climate change. VIS has completed analysis of the impact of plant operations and financial impact under different water restriction levels.	Improve resilience to natural disasters <ul style="list-style-type: none"> To reduce water scarcity, VIS is committed to implementing water conservation measures and improving the efficiency of water use Implement in-plant water recycling to reduce VIS' dependence on water resources Formulate the VIS Water Shortage Water Truck Response Plan to activate the response mechanism in accordance with the water shortage situation to reduce the impact of drought and water shortages on production capacity Continuously study and discuss the possibility of water resources from Seawater Desalination Plant/Reclaimed Water 	4.2 Water Management
3	Changes in Consumer Behavior	Short-term physical risks, such as heavy rainfall, floods, may affect fab equipment and operations	Changes in precipitation patterns and long-term changes in climate patterns. A flooding event caused by heavy rainfall may result in production disruptions and further reduce revenue	Improve resilience to natural disasters <ul style="list-style-type: none"> An analysis on flooding potential has been conducted based on 500-year return period of rainfall at the production site, and based on simulation results, water proof gates have been installed in the fabs. Alongside the Flood Control and Disaster Relief Plan Implementation Regulations, these help to manage the risk of flooding in fabs Crisis management procedures are established and disaster prevention and response systems are built, including flood prevention drills for employees, anti-typhoon measures, river water level monitoring systems, and water proof gate installation 	3.4 Innovation Management
		Brand customers demand low-carbon processes and products, and consumers' preference and interest in green low-carbon products have increased	Consumers are less willing to spend, resulting in reduced revenue	Promote low-carbon green products <ul style="list-style-type: none"> Develop special wafer fabrication technology and design low-carbon products to improve product efficiency in order to respond to market demands 	

Rank	Climate Risk	Impact Description	Financial Impact	Opportunities Arising from Each Risk and the Countermeasures	Corresponding Chapter
4	Impact on Corporate Image	Negative response or poor performance on issues such as climate change, energy saving and carbon reduction leads to failure in meeting stakeholders' expectations, resulting in damage to reputation and image	Stakeholders' willingness to invest is reduced	<p>Enhance corporate reputation</p> <ul style="list-style-type: none"> Satisfy stakeholders' demand for energy-saving products and invest in green product design Strengthen the green management of production processes, proactively obtain certifications of ISO 50001 Energy Management System, ISO 14001 Environmental Management, ISO 14064-1 GHG Inventory, and ISO 46001 Water Efficiency Management System 	Awards and Honors 4.1 Climate Change and Energy Management
5	Increased Concern of Stakeholders on Low-carbon Products and Services	Stakeholders demand disclosure of environmental data such as emissions and pollution during production processes, and demand that companies declare reductions in these aspects	Increased costs due to the development of low-carbon products and services	<p>Promote low-carbon technologies and production processes</p> <ul style="list-style-type: none"> Develop special wafer fabrication technology to enhance product efficiency and design low-carbon products to respond to market demand. Invest a total of NT\$2.15 billion in R&D in power control related platforms such as BCD, SOI, UHV, MOSFET, and GaN in 2021 with a workforce of over 300 people, accumulated over 200 power related patents to date Mainly engaged in the field of DC-AC and AC-DC power converters currently, which are widely used in computers, cell phones, TVs, home appliances and lighting equipment 	3.4 Innovation Management
6	Increased Global Fuel Prices	Global fuel price increases lead to higher production and transportation costs	Increase in production and operating costs due to higher fuel prices	<p>Participate in renewable energy programs</p> <ul style="list-style-type: none"> Introduce renewable energy, plan the installation of renewable energy generation equipment, such as solar power systems, and purchase Renewable Energy Certificates From 2021 to 2022, VIS installed solar photovoltaic systems with a capacity of 270kW and continued to purchase renewable energy and renewable energy generation equipment, with a projected renewable energy capacity of 8,437kW in 2023, generating approximately 11.3 GWh of electricity annually Joined RE100 in December 2022 and is committed to 100% renewable energy by 2040 	4.1 Climate Change and Energy Management
7	Costs of Production of Innovative Technologies	Cost increase due to new technology development, equipment introduction and process innovation	Increased cost of production of innovative technologies	<p>Technology innovation opportunities</p> <ul style="list-style-type: none"> Continue to increase investment in product and process development, R&D of power control related BCD process, ultra-high voltage manufacturing and other technologies. 	3.4 Innovation Management
8	Policy and Regulatory Requirements	With the tightening of regulations such as the Greenhouse Gas Reduction and Management Act and the Renewable Energy Development Act, related fees and taxes may increase, and failure to comply with the requirements will lead to increased sanction events and litigations	If "total emissions control and carbon penalty" or "carbon tax" mechanism is implemented in Taiwan, financial expenses may increase Higher operating costs due to the installation of renewable energy generation equipment	<p>Participate in renewable energy projects and carbon trading market</p> <ul style="list-style-type: none"> Adopt ISO 50001 Energy Management System, review in-plant energy saving and implement different GHG emissions management measures. Achieved more than 21% reduction of GHG emissions per wafer area in 2021 Introduce renewable energy and plan for the construction of renewable energy generation facilities 	4.1 Climate Change and Energy Management

Climate Change Risk and Opportunity Matrix

Climate Change Risk Matrix

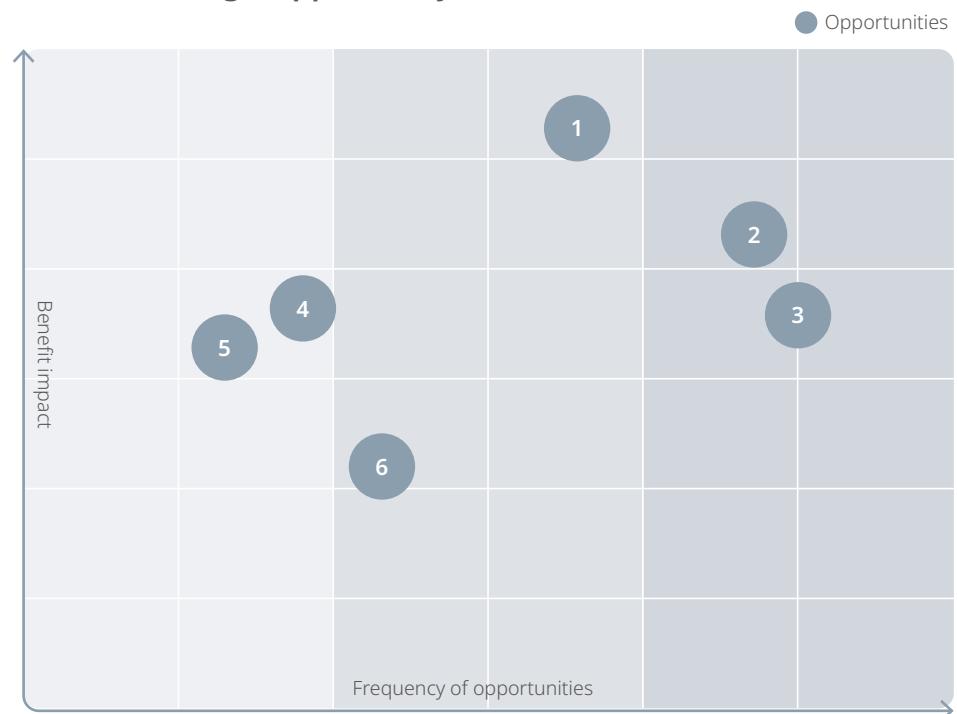


- 1 Supply chain disruption
- 2 Increased extreme weather events
- 3 Changes in consumer behavior

- 4 Impact on corporate image
- 5 Increased concern of stakeholders on low-carbon products and services
- 6 Increased global fuel prices

- 7 Costs of production of innovative technologies
- 8 Policy and regulatory requirements

Climate Change Opportunity Matrix



- 1 Improve resilience to natural disasters
- 2 Enhance corporate reputation

- 3 Participate in renewable energy projects and carbon trading market
- 4 Technology innovation opportunities

- 5 Enhance supply chain stability
- 6 Promote low-carbon green production

Scenario Analysis of Physical Risks and Financial Impact

Taiwan is prone to seasonal and regional water shortages due to high topography and steep slopes and uneven rainfall distribution. In recent years, heavy rainfalls, floods and droughts have become increasingly severe due to climate change. In response to the impact of floodings and water shortages, VIS has completed the identification of risk factors and planned response mechanisms and related measures in advance to reduce operational risks.



Risk

Risk of Flooding Due to Heavy Rainfalls

Risk Description	Short-term	The Global Warming Mitigation Scenario (RCP2.6) An analysis of flooding potential based on 500-year return period of rainfall.
	Medium-term	The Worst Case Scenario (SSP5-8.5): About 15% increase in storm intensity in 2035. A 15% increase in flooding height compared to the analysis of flooding potential based on 500-year return period of rainfall.
	Long-term	The Worst Case Scenario (SSP5-8.5): About 20% increase in storm intensity in 2050. A 20% increase in flooding height compared to the analysis of flooding potential based on 500-year return period of rainfall.
Opportunities		Establish a flood prevention management & response mechanism and install hardware to improve the ability of fabs to prevent flooding and reduce the risk of production disruption due to flooding.
Organization Impact	Businesses	The production disruption due to flooding may result in about NT\$35 million/day loss per fab.
	Strategy	Based on the results of the flooding potential analysis, the installation of anti-flooding gates is planned to prevent flooding. In addition, the remaining risks are also planned for risk transfer through insurance. The anti-flooding gates are designed to be higher than the result of the flooding potential analysis to prevent fab flooding in the worst case scenario.
	Financial Planning	Risk Control Cost Planning: The results of the financial impact analysis: Risk control cost: NT\$20 million to NT\$30 million (the assessment area includes all manufacturing fabs), include: (1) hardware investment for the installation of anti-flooding gates; (2) annual monitoring system software and hardware maintenance costs for flood prevention & personnel response training, flood and typhoon preparedness, and retaining wall collapse prevention; and (3) flood and typhoon insurance premium payment.
Worst Case Scenario	Response Strategy	Worst case scenario: Under the worst case scenario (SSP5-8.5), the mean annual maximum 1-day rainfall intensity in Taiwan increases by about 41.3% by the 21 st century. Early occurrence. A 42% increase in flooding height compared to the analysis of flooding potential based on 500-year return period of rainfall.
	Response Strategy	The height of anti-flooding gates has been increased by over 42%, i.e., the height of anti-flooding gates in fab 3 is increased to 120cm from the 53cm, an increase of 126%.



Risk

Drought/Water Shortages due to Climate Change

Risks Description	Short-term	Global Warming Mitigation Scenario (RCP2.6) Water restriction < 20% of supply
	Medium-term	Under the Worst Case Scenario (SSP5-8.5) The maximum number of days without rainfall in 2035 tends to increase everywhere, with an average increase of about 4%. Simulation of water restriction by 20%.
	Long-term	Under the Worst Case Scenario (SSP5-8.5) The maximum number of days without rainfall in 2050 tends to increase everywhere, with an average increase of about 5.5%. Simulation of water restriction by 30%.
Opportunities		An emergency water supply mechanism is established to maintain production during droughts and increase the competitiveness of VIS.
Organization Impact	Businesses	The production disruption due to flooding may result in about NT\$35 million/day loss per fab.
	Strategy	Water shortages are becoming more severe due to climate change. VIS has completed analysis of the impact of fab operations and financial impact under different water restriction levels. Overall, VIS' response strategies for water restriction and shortage crisis include: (1) implementing water conservation measures to improve water efficiency during normal times; and (2) using water trucks to make up for the shortage of water for production during severe water restrictions.
Worst Case Scenario	Financial Planning	Financial planning: When water is restricted by 10%, the cost will increase by approximately NT\$500,000 per day; for 20%, the cost will increase by approximately NT\$1 million per day; and for 30%, the cost will increase by approximately NT\$2 million per day.
	Response Strategy	Under the worst case scenario (SSP5-8.5), the maximum number of days without rainfall in 2100 is with an average increase of about 12.4%. Early occurrence. The water supply is estimated to be restricted by 100% (water supply is stopped). Response Strategy In order to maintain production, 520 water trucks are planned to supply water for each fab daily production at a cost of about NT\$10 million/day.

VIS analysis on the transition risks and financial impacts due to climate change is mainly made with reference to the Net Zero by 2050: A Roadmap for the Global Energy Sector (IEA NZE 2050) and with the Sustainable Development Scenario (SDS; fossil fuels to renewable energy and 100% renewable energy by 2040) released by the International Energy Agency (IEA); the Net Zero Scenario (NZS) of Bloomberg New Energy Finance (BNEF), which includes three major net-zero energy technologies of clean power, hydrogenic energy and carbon negative technologies (carbon capture and storage); and Taiwan 2050 Net-Zero Transition Stated Policies Scenario (STEPS).

Scenario Analysis and Financial Impact of Transition Risks due to Climate Change



Risk

Scope-1 Direct GHG Emissions - Low-carbon Transition Risks

Risks Description	Short-term (within 3 years)	The introduction of carbon fee and carbon tax increase the risk to operating cost. Carbon fee/tax payment rate: NT\$100-NT\$500/ton in Taiwan; NT\$105-NT\$525/ton in Singapore. Based on 2021 (Scope 1) emissions, the total payment for annual carbon fee (Taiwan)/carbon tax (Singapore) is estimated at NT\$37 million-NT\$185 million.
	Medium-term (within 10 years)	The introduction of carbon fee and carbon tax increase the risk to operating cost. Carbon fee/tax payment rate: NT\$500-NT\$1,000/ton in Taiwan; NT\$525-NT\$1,050/ton in Singapore. Based on 2021 (Scope 1) emissions, the total payment for annual carbon fee (Taiwan)/carbon tax (Singapore) is estimated at NT\$185 million-NT\$371 million.
	Long-term (> 10 years)	The introduction of carbon fee and carbon tax increase the risk to operating cost. Carbon fee/tax payment rate: NT\$1,000-NT\$1,600/ton in Taiwan; NT\$1,050-NT\$1,680/ton in Singapore. Based on 2021 (Scope 1) emissions, the total payment for annual carbon fee (Taiwan)/carbon tax (Singapore) is estimated at NT\$371 million-NT\$594 million.
Opportunities		Implementing (Scope 1) carbon emission reduction improvement project to reduce carbon tax and carbon fee in order to enhance VIS competitiveness.
Organization Impact	Businesses	1. If we do not implement the Carbon Emission Reduction & Improvement Project, the introduction of carbon fee and carbon tax increase the risk to operating cost. 2. Implementation of the carbon emission reduction improvement project (Scope 1) will result in the impacts as follows: (1) Installation of processing equipment: new equipment maintenance, fab space adjustment, and new equipment installation construction management. (2) Conversion of gases: certification of gases to replace the assessment.
	Strategy	The implementation (Scope 1) of carbon emission reduction improvement project includes: (1) Replacement of GHG with high emission factor: opt for GHG with low emission factor. (2) Installation of GHG emission processing equipment: complete GHG emission removal before emission. (3) Carbon negative technology will be planned to offset the GHG emissions that cannot be removed. With the above (1) + (2) improvement measures taken, the carbon fee and carbon tax payment is expected to be reduced by 75%. The remaining portion will be offset by carbon negative technologies (carbon capture and storage).
	Financial Planning	1. Investment cost planning: Installation of GHG emission processing equipment, with an installation rate of 100%. Total cost: NT\$1.649 billion. 2. There are approximately 111,911 tons of CO ₂ e, the GHG emissions that cannot be removed. If it is offset at NT\$2,000 per ton, NT\$224 million in costs will be planned per year.
Worst Case Scenario	Response Strategy	VIS Risk description (worst case) within 10 years: carbon fee in Taiwan/carbon tax in Singapore are rapidly increasing. Taiwan: NT\$3,000/ton; Singapore: NT\$3,100/ton Based on 2021 (Scope 1) emissions, the total payment for annual carbon fee (Taiwan)/carbon tax (Singapore) is estimated at NT\$1.109 billion.
Response Strategy:		Accelerate the carbon emission reduction improvement project: conversion of GHGs/installation of GHG processing equipment



Risk

Scope-2 Indirect GHG Emissions - Low-carbon Transition Risks

Risks Description	Short-term (within 3 years)	The introduction of carbon fee in Taiwan increases the risk to operating cost. In 2024, the carbon fee payment rate in Taiwan is NT\$300/ton (a simulation scenario). Based on 2021 (Scope 2) emissions and the growth of production capacity, the total payment for annual carbon fee is estimated at NT\$159 million (carbon emissions of about 530,000 tons of CO ₂ e).
	Medium-term (within 10 years)	The introduction of carbon fee and carbon tax increase the risk to operating cost. In 2030, the carbon fee payment rate in Taiwan is NT\$1,000/ton (a simulation scenario). Based on the production capacity and the changes in carbon emission factor of electricity consumption, it is estimated that the electricity saving improvement project and renewable energy use plan will be implemented gradually. In this situation, the total payment for annual carbon fee is NT\$410 million (carbon emissions of about 410,000 tons of CO ₂ e).
	Long-term (> 10 years)	The introduction of carbon fee and carbon tax increase the risk to operating cost. Hypothetically, in 2050, the carbon fee and carbon tax payment rate total NT\$1,500/ton. Based on the production capacity and the changes in carbon emission factor of electricity consumption, it is estimated that the electricity saving improvement project and renewable energy use plan will be implemented gradually. In this situation, the total payment for annual carbon fee is NT\$420 million (carbon emissions of about 280,000 tons of CO ₂ e).
Opportunities	Implementing (Area 2) electricity saving improvement project and green power procurement to reduce carbon emissions, lower carbon fee payment, reduce operating costs in order to enhance VIS competitiveness.	
Organization Impact	Businesses	1. In line with the international initiative of net zero emissions, we need to conduct green power procurement to bring the Scope 2 carbon emissions to zero. If we do not implement the Power Saving Improvement and Renewable Energy Use Project, the introduction of carbon fees in Taiwan increases the risk to operating costs. 2. The implementation of (Scope 2) electricity saving improvement project will result in the impacts as follows: (1) The control measures for the construction safety risk of power saving improvement project: execute hazardous operations and high-risk operation controls as required by construction type. (2) Installation of renewable energy equipment: Install such equipment in low-risk areas and establish new fire protection systems for monitoring and protection works.
Strategy	The implementation of (Scope 2) electricity saving and renewable energy use improvement project includes: (1) A target of saving 40% of electricity by 2050, the project content is as follows: LED lighting, introduction of energy-efficient air conditioning and chilled water equipment for fabs, installation of energy management system with smart meters, introduction of energy-efficient rotating equipment and uninterruptible power supply (UPS) systems. (2) Achieve 100% use of renewable energy by 2040: Joined RE100 in December 2022 and is committed to 100% renewable energy by 2040.	
Financial Planning	(Scope 2) The financial planning of the electricity saving and renewable energy use improvement plan is as follows: (1) A target of saving 40% of electricity by 2050, and the total cost is estimated at NT\$12 billion. (2) Achieve 100% use of renewable energy by 2040: It is expected to purchase 770 GWh of green energy per year at a cost of NT\$3.911 billion per year. Taiwan: It is expected to purchase 629 GWh of green energy per year, with a price (simulated) of NT\$4.2/kWh, totaling NT\$2.642 billion per year. Singapore: It is expected to purchase 141 GWh of green energy per year, with a Green Power Certificate unit price (simulated) of NT\$9/kWh, totaling NT\$1.269 billion.	
Worst Case Scenario	Response Strategy	VIS risk description (worst case) within 10 years: Carbon fee rate in Taiwan will rise rapidly, with the unit price reaching NT\$3,000/ton of CO ₂ e by 2030. Based on the production capacity and the changes in carbon emission factor of electricity consumption, it is estimated that, without the implementation of the electricity saving improvement project and renewable energy use plan, the total payment for annual carbon fee is NT\$1.23 billion (carbon emissions of about 410,000 tons of CO ₂ e). Response Strategy: Accelerate the progress of electricity saving improvement project and renewable energy procurement to reduce carbon emissions and lower operation costs.

**Risk****Opportunities and Risks Arising from the Changes in Product Trends for Customers
(Increasing Proportion of Green Products and Energy-saving Products)**

Risks Description	Short-term (within 3 years)	Increase and upgrade high-frequency and low-impedance components in newly developed or existing BCD, Discrete, DDIC, e-Flash, MEMS, and GaN technology platforms to increase green product revenue by 3%, otherwise VIS will gradually lose market competitiveness.
	Medium-term (within 10 years)	Increase and upgrade high-frequency and low-impedance components in newly developed or existing BCD, Discrete, DDIC, e-Flash, MEMS, and GaN technology platforms to increase green product revenue by 10%, otherwise VIS will gradually lose market competitiveness.
	Long-term (> 10 years)	Increase and upgrade high-frequency and low-impedance components in newly developed or existing BCD, Discrete, DDIC, e-Flash, MEMS, and GaN technology platforms to increase green product revenue by 15%, otherwise VIS will gradually lose market competitiveness.
Opportunities		Increase and upgrade high-frequency and low-impedance components in newly developed or existing BCD, Discrete, DDIC, e-Flash, MEMS, and GaN technology platforms to increase green product revenue.
Organization Impact	Businesses	The failure to increase or improve the process technology of green energy products will cause downstream customers to lose market competitiveness.
	Strategy	Increase education and training as well as marketing and promotion of green products and technologies.
	Financial Planning	It is required to allocate capital expenditure on equipment is required in order to support the development of green energy process technology.
Worst Case Scenario	Response Strategy	Allocate funds to obtain external licenses for the use of high-frequency & low-impedance process technologies.

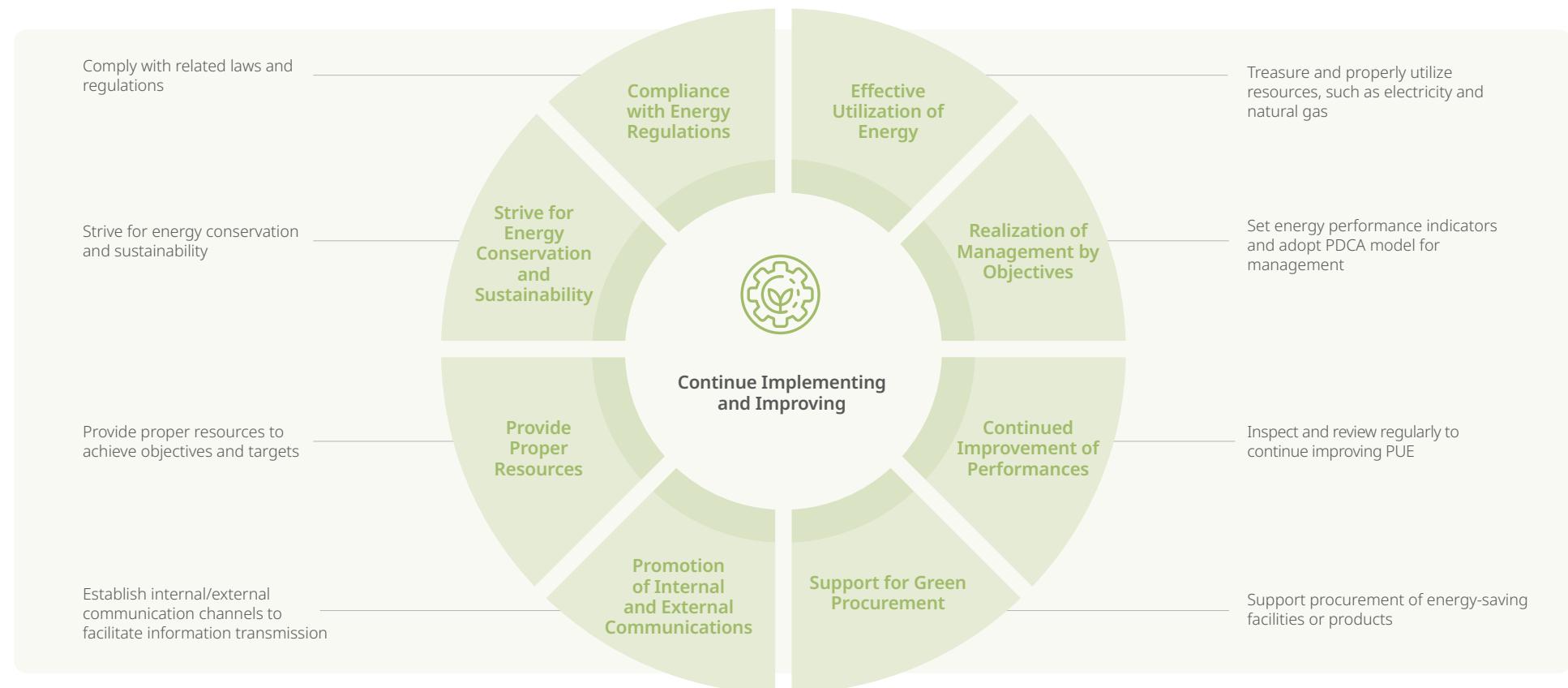
With the current policies and strategies on addressing climate change, as well as current operating conditions as the basis scenario, VIS evaluated the financial impact of two transition risk factors: the rising costs of carbon tax and grey energy and the declining costs of renewable energy. The analysis shows that, if no improvement is made, operating costs resulting from the carbon tax and rising electricity costs will increase annually; electricity and carbon tax costs for 2050 are estimated to be 3.8 times what they were in 2020. However, if our usage reduction, emission reduction, and electricity saving projects are implemented, along with renewable energy procurement, then electricity and carbon tax costs may be reduced by 40.3% by 2050. This would, rather than a 3.79 times increase, represent only a 2.26 times increase in electricity and carbon tax costs.

VIS further evaluated the expected cost of Renewable Energy Certificates under both the extremely-low radiative forcing mitigation scenario (RCP 2.6) and the National Determined Contribution (NDC) scenario to meet the science-based target (SBT) in response to renewable energy use trends. From the historical growth rate of electricity consumption from 2008 to 2016, it can be assumed that the price of Renewable Energy Certificates will be calculated at NT\$1,500 per 1,000 kilowatt hours (kWh). The evaluation results reveal that under the RCP 2.6 scenario, with 2015 as the base year, the annual cost of procuring energy-efficient equipment and Renewable Energy Certificates will gradually increase to NT\$53 million by 2050 from NT\$14 million by 2030. While under the NDC scenario, the annual cost will gradually increase to NT\$36 million by 2050 from NT\$12 million by 2030.

4.1.2 Energy Management

Energy policy

As a professional manufacturer of design, R&D, manufacturing and sales on integrated circuit (IC), VIS is committed to maintaining sustainable business operations and fulfilling our obligation as a good corporate citizen. Based on the considerations of risk management, green production and energy impact, we are fully involved in the operation of energy management system to achieve the target of complying with laws and regulations, customer requirements and improving energy efficiency. To achieve such target, VIS pledges to continuously carry out and improve the following tasks:



VIS continues its efforts to promote low-carbon emissions. Comparing 2015 results with those in 2022 shows that electricity consumption per wafer area decreased from 1.01 kWh/cm² to 0.8 kWh/cm², a decrease of approximately 21%. In 2022, the annual revenue was NT\$51.69 billion, the total energy consumption was 972,760 MWh, and the total energy intensity was 0.019 kWh/NT dollar. In 2022, in line with the government's energy saving policy, VIS invested NT\$447.12 million in the replacement of energy-saving equipment and saved 22.03 GWh of electricity. The energy saving project focused on four major categories: shared equipment, AC equipment, process parameter adjustment, and the renewal of auxiliary equipment of energy-saving equipment. A total of 44 energy saving improvement proposals were made, with 35 energy saving improvements achieved eventually.

In addition, the ISO 50001:2011 Certification was introduced to Wafer Fab 1, Wafer Fab 2 and Wafer Fab 3 in 2017, and was converted to ISO 50001:2018 Certification in 2020 and was certified. The certificate verification process is conducted every year by SGS, a third-party external company for verification. The energy efficiency within different fabs is compared using the systematic management process of ISO 50001:2018 to identify undiscovered energy saving opportunities so as to improve energy saving performance.

Furthermore, VIS also responded to the national energy conservation target. In compliance with the "energy conservation reduction target of 1% for energy users" declared in Ministry of Economic Affairs Official Letter Ching-Neng-Tzu No. 10304603580, dated August 1, 2014, VIS achieved an electricity saving rate of 1% or better over the past five years.

Year	Annual Electricity Consumption (kWh) (A)	Amount of Electricity Saved ^{Note 1} (kWh) (B)	Electricity Saving Rate % ^{Note 2} (C)
2018	676,454,309	21,135,294	3.0%
2019	663,726,306	18,603,787	2.7%
2020	855,037,203	18,171,696	2.1%
2021	879,488,668	18,492,319	2.1%
2022	946,215,380	22,026,410	2.3%

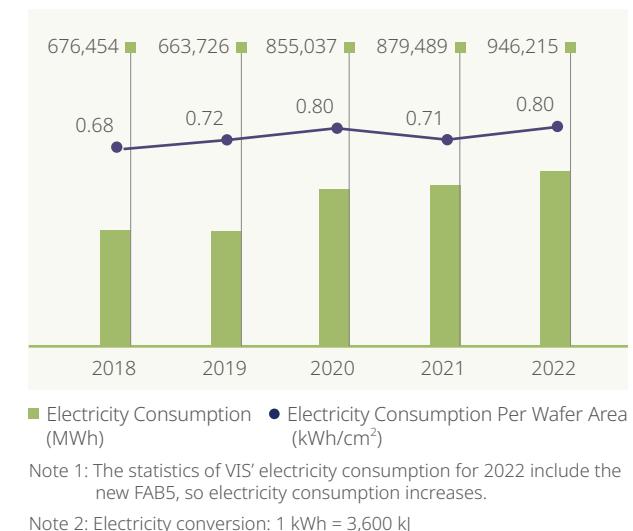
Note 1: Electricity saved is the sum of the energy-saving performance under the energy-saving measures implemented in the current year.

Note 2: Electricity saving rate $C = B/(A+B) \times 100\%$

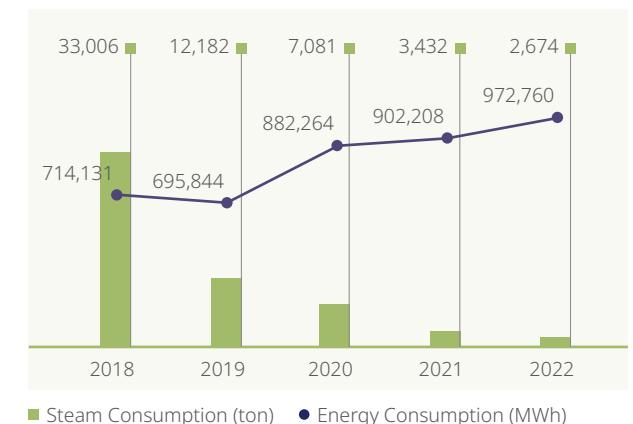
Note 3: The statistics of energy saving performance in 2022 includes the performance of Fab 5.

Note 4: Electricity conversion: 1 kWh = 3,600 kJ

Statistics on the Total Electricity Consumption



Overall Energy Consumption



4.1.3 Renewable Energy Development Act

In line with the government's Renewable Energy Development Act, VIS supports the diversification of energy sources and improvement of energy structure, and is committed to utilizing clean and non-polluting green energy with the concept of environmental sustainability. In 2022, VIS announced its status as joining the RE100, a global renewable energy advocacy organization, and committed to 100% renewable energy in its global operations by 2040. VIS also demonstrated the spirit of self-generation & self-use by installing solar photovoltaic systems with a capacity of 270kW from 2021 to 2022, and generating 70.573 MWh of solar power in 2022.

In addition, VIS has received approval from the Taipei Exchange, R.O.C. to issue NT\$7 billion in corporate bonds, including NT\$1 billion in green bonds, for the development of renewable energy and other projects. In the future, VIS will continue to purchase renewable energy and renewable energy generation equipment.

4.1.4 Greenhouse Gas (GHG)

GHG Inventory, Validation, and Verification

GHG reduction is an important key to mitigate climate change and global warming, and GHG inventories provide a basis for reduction. Reduction targets and priorities for them should then be formulated based on the GHG inventory results. This effectively facilitates the subsequent GHG reduction process. Additionally, the results can also help us ascertain our reduction results.

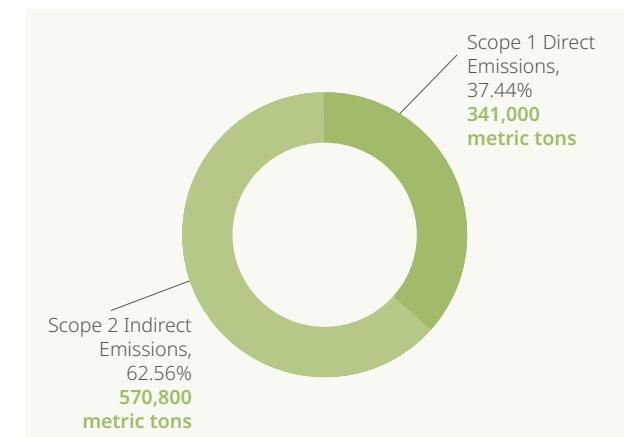
Scope 1 GHG emissions (emissions include carbon dioxide, methane, nitrous oxide, hydrofluorocarbon, perfluorocarbon, sulfur hexafluoride, and nitrogen trifluoride) refers to direct emission sources of VIS fabs, including stationary emission sources, such as diesel and natural gas fuels for generators; and mobile emission sources, such as gasoline and diesel (including biodiesel) for official vehicles. In addition, there are also fugitive emission sources, such as organic emissions, fire equipment, firefighting equipment, and fumes. In addition, there are also other emission sources, such as organic waste gas, fire-fighting equipment, septic tanks, refrigerants and process emission sources of fluorinated gases. Scope 2 is mainly the indirect sources of emission from the purchased electricity.

The GHG validation and verification operation of VIS is based on the requirements specified in the ISO/CNS 14064-1 and the greenhouse gas verification guidelines of the GHG Inspection Guidance^{Note} and the GHG Emissions Inventory Registration Practice Guidance released by the Environmental Protection Administration, as well as the GHG Protocol released by the WBCSD/WRI. The organizational boundary is set in a 100% operational control manner.

The past results of the GHG emission inventory of VIS Taiwan are as follows, in which the wafer area shows the statistics validated and verified by the GHG inventory.

Note: The GHG inventory for 2022 adopts the ISO 14064-1 2018 version along with the Assessment Report 5 (AR5) for GHG emissions calculation; the AR4 is adopted for GHG emissions calculation until 2020 (inclusive).

The Composition of the VIS GHG Emissions in 2022



VIS Scope 1 GHG Emissions■ VIS Scope 1 GHG Emissions (× 10,000 MtCO₂e)● VIS GHG emissions per wafer area (kg CO₂e/cm² wafer area)**VIS Scope 2 GHG Emissions**■ VIS Scope 2 GHG Emissions Volume (× 10,000 MtCO₂e)● VIS GHG emissions per wafer area (kg CO₂e/cm² wafer area)

	2020	2021	2022	Target for 2022	
Direct GHG Emissions (Scope 1)					
Direct GHG (Scope 1) (MtCO ₂ e)	Total volume of direct GHG emissions	337,466.3252	424,442.5351	341,018.57	286,608
Direct GHG Emissions (Scope 2)					
IGHG Scope 2 (MtCO ₂ e)	Indirect GHG emissions from purchased and consumed energy	506,591.23	521,171.67	570,769.49	591,416
Perfluorocarbon (PFC) Emissions					
Direct FPC Emissions (kg PFC/metric tons of products)	Direct FPC Emissions	1,010.2	680.1	550.5	660

VIS calculates Scope 3 GHG emissions in accordance with ISO 14064-1 2018, and identifies indirect GHG emissions not included in Scope 1 and 2 emissions through the validation and verification by SGS, a third-party company.

2022 Scope 3 GHG Emissions Inventory Results

Scope 3 Emission Sources	Scope 3 Emission Sources Descriptions	Scope 3 Emission Sources Volume in 2022 (tCO ₂ e)
Purchased Goods and Services	Carbon emissions generated from the purchased primary raw materials for the production of 8-inch wafers and auxiliary raw materials used in the manufacturing process, but excluding outsourced services.	152,585.94
Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	The fuel and energy used in the fabs are calculated using the life cycle cost (LCC) method, and deducting the results of Scope 1 and 2 emissions.	118,145.85
Upstream Transportation and Distribution	Carbon emissions generated from the ton-kms of transport and distribution (including air, land, and sea transport) of goods (the purchased primary raw materials and auxiliary raw materials required for the production of 8-inch wafers) from the suppliers to the fabs.	1,045.79
Waste Generated in Operations	Carbon emissions generated from waste in the production process, including waste transportation and disposal.	2,680.41
Business Travel	Carbon emissions generated from employees' domestic and overseas business trips, with the distance of each return trip calculated by setting each fab as the departure point and the destination of land or air transportation as the end point.	42.69
Employee Commuting	Calculated based on passenger-kms between the district office where the employees' households are registered and each fab.	11,860.91
Downstream Transportation and Distribution	Calculated based on the one-level channel of 8-inch wafer products.	902.46
Total		287,264.03

GHG Reduction Target

VIS has spared no effort in reducing GHG emissions. In 2005, VIS participated in the Memorandum of Understanding on PFCs (Perfluorocarbons) Emission Reduction signed by Taiwan Semiconductor Industry Association (TSIA) and the Environmental

Protection Administration to reduce GHG emissions generated from the production process by reducing internal and back-end emission sources. In the purchased electricity under Scope 2, we continue to promote different energy saving programs (see "Energy Management" for details) to achieve GHG reduction. As for the indirect emission under Scope 3, we target the top 10 suppliers who produce most emissions for GHG reduction, and provide guidance on GHG emissions inventory and energy saving information for other suppliers, enabling them to have access to carbon inventory information and to achieve carbon reduction. In addition, we set up an Energy Saving and Carbon Reduction Committee in 2021. The year (2021) is set as the base year, based on which a target of 4% total carbon reduction per year is established. The target of net zero emissions is expected to be achieved by 2050.

Disclosure of GHG Emissions Information

VIS discloses GHG emissions and reduction information to the public through different channels. Through the process of information disclosure, we further review and obtain external suggestions to continuously reduce GHG emissions. The information disclosure channels are as follows:

- Since 2005, VIS has conducted validations and verifications of GHG emissions information every year by a third-party company and reported to the Taiwan Semiconductor Industry Association (TSIA) and the Environmental Protection Administration.
- Since 2014, VIS has autonomously responded to the Carbon Disclosure Project (CDP; a nonprofit organization) by annually disclosing information related to climate change management, including GHG emissions and reductions; and reviewing risks and opportunities in all aspects of regulations, natural disasters, finance, and operations for improvement. The information is available on the CDP website.
- Since 2014, VIS has published an ESG Report every year on the corporate website to publicly disclose information and provide consultation for customers and investors on related issues.

4.1.5 Energy Saving Measures

Major Energy Saving Measures and Results in 2022

VIS introduced energy saving measures. Through real-time control of management equipment, we were able to achieve optimal operation while reducing electricity consumption under the conditions of maintaining the quantity and quality as well as the normal operation of equipment. Additionally, we adopted high-efficiency equipment such as lighting equipment, transformers, motors, and air compressors, and installed variable-frequency drive on energy-consuming equipment to reduce energy consumption. Also, we implemented management systems and improve equipment efficiency by improving power factor and other methods. With the energy saving measures taken, VIS saved 22.03 GWh of electricity in 2022, with an energy saving rate of 2.3% based on 2022. The economic benefits were internally estimated to be NT\$58.81 million.

Note: Energy saving rate = kWh saved/(annual kWh energy consumption + kWh saved) × 100%

Major Energy Saving Measures and Results In 2022



35 Projects
Energy Saving



22 GWh
GWh Saved



11,212 Metric tons
Carbon Emissions

Utility Equipment Energy Saving



Air Conditioning System Energy Saving

- Chiller AI Energy Saving
- Chilled Water System Optimization

A total of **4** energy saving projects with about **9.4** GWh saved
A reduction of **4,788** metric tons of carbon emissions



Efficiency Improvement

- CDA Appliances Operation Mode Energy Saving
- Replacement of Clean Room Tube Light to LED Energy Saving Project
- HV adopting variable-frequency drive

A total of **8** energy saving projects with about **5.1** GWh saved
A reduction of **2,584** metric tons of carbon emissions

Production Machine Energy Saving



Machine Set Replacement

- Replacement of auxiliary equipment of energy-saving equipment

A total of **18** energy saving projects with about **5.9** GWh saved
A reduction of **3,020** metric tons of carbon emissions



Equipment Energy Efficiency Improvement

- Adjustment of machine parameters

A total of **5** energy saving projects with about **1.6** GWh saved
A reduction of **820** metric tons of carbon emissions

Note 1: CO₂e emission factor is 0.509 kg/kWh

Note 2: Electricity conversion: 1 kWh = 3,600 kJ

Energy Management Solutions

VIS energy management projects are outlined in the table below, with a target set to reduce electricity consumption per wafer area by an additional 40% by 2025 compared to 2015. As of 2022, electricity consumption per wafer area of VIS reduced by 21% compared to 2015. VIS continuously promotes energy saving solutions.

VIS Large-Scale Energy Saving Project in 2023

Energy Saving Project Name	Project Execution Year
F1/F2/F3 Inverter Dry Pump Replacement Project	2023
F1/F2/F3 C/R Fluorescent Lamp to LED Replacement Energy Saving Project	2023
F1/F2/F3 Inverter Dry Pump Replacement Project	2023
F2/F3 Smart Factory-Power Saving - Chiller AI Energy Saving	2023
F1/F3 Smart Factory - Smart Meter + Energy Management System	2023
F1/F2/F3 UPW System Delivery Pump Energy Saving Solution	2023
F2 UPW INV. Installation on Recycling Water Pump Project	2023
F1/F3 CDA Inverter Dry Pump Replacement Project	2023
F1/F2/F3 Cooling Tower Energy-saving Fan Blades Replacement	2023
F3 Chilled Water System Divided into Two Different Temperature Groups	2023
F1/F2/F3 High Efficiency Motor Replacement Project	2023
F1/F3HV Changing of HV Motors to Variable-frequency Drives Energy Saving Project	2023
F1/F2/F3 UPS Replacement with Energy Saving Machine Project-Phase II	2023
F1/F2F/3 Rotating Equipment Motor Replacement with IE3 High Efficiency Energy-saving Motor	2023
F1/F2F/3 Green Dry Pump Replacement-	2023
F1/F2/F3 High Efficiency Chiller Replacement Project	2023

Power-saving Performance Statistics

Unit: NT\$ thousand

	2018	2019	2020	2021	2022
Power-saving performance	46,700	41,110	43,220	45,360	58,808
Data coverage	100%	100%	100%	100%	100%

Non-renewable Energy Consumption Statistics

Unit: MWh

	2018	2019	2020	2021	2022
a) Non-renewable fuel volume (procurement volume or usage volume)	18,871	18,808	21,793	20,085	24,493
b) Non-renewable energy consumption volume (procurement volume)	669,931	667,687	855,037	879,489	946,215
c) Other purchased energy (steam)	25,330	9,349	5,434	2,634	2,052
d) Total renewable energy procurement or production volume	0	0	0	0	70
e) Total sales of renewable energy	0	0	0	0	0
Data coverage	100%	100%	100%	100%	100%

Total Energy Consumption Statistics

Unit: MWh; NT\$ thousand

	2018	2019	2020	2021	2022	Target for 2022
Total energy consumption of non-renewable energy (A + B + C - E)	720,656	691,884	882,264	902,208	972,760	893,186
Total amount for the energy purchased	1,514,022	1,507,383	2,024,625	2,136,607	2,645,907	-
Data coverage	100%	100%	100%	100%	100%	-

Note 1: Electricity conversion: 1 kWh = 3,600 Kj

Note 2: The statistics of VIS' electricity consumption for 2022 include the new FAB5, so electricity consumption increases.

4.2 Water Management

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
Water consumption reduction	<ul style="list-style-type: none">Water consumption per wafer area decreased from 6.70 liters/cm² in 2015 to 6.07 liters/cm², a decrease of approximately 9.38%	<ul style="list-style-type: none">Another 9% reduction in water consumption per wafer area, as compared to 2015	<ul style="list-style-type: none">Another 10% reduction in water consumption per wafer area, as compared to 2015	<ul style="list-style-type: none">Continue to identify water consumption reduction opportunities to reduce water consumption per unit product
Increase in water recovery rate	<ul style="list-style-type: none">LHF-R recycling system began to operate in 2022 for the fab in Singapore and the recovery rate will increase by 6.4%	<ul style="list-style-type: none">The process water recovery rate reaches above 85% for Wafer Fab 1 and Fab 2; above 77% for Wafer Fab 3; and above 70% for the fab in Singapore.	<ul style="list-style-type: none">The process water recovery rate reaches above 85% (above 70% for the fab in Singapore)	<ul style="list-style-type: none">Continue to evaluate the installation of water recovery system
Water pollution prevention	<ul style="list-style-type: none">TMAH<30ppmAmmonia Nitrogen<30ppm	<ul style="list-style-type: none">TMAH<30ppmAmmonia Nitrogen<30ppmReplaced NMP with carbonated water	<ul style="list-style-type: none">TMAH<30ppmAmmonia Nitrogen<30ppm	<ul style="list-style-type: none">Comply with the environmental regulations of the park
Water consumption management	<ul style="list-style-type: none">Production loss due to water restriction: 0 wafer (units)	<ul style="list-style-type: none">Production loss due to water restriction: 0 wafer (units)	<ul style="list-style-type: none">Production loss due to water restriction: 0 wafer (units)	<ul style="list-style-type: none">Production loss due to water restriction: 0 wafer (units)

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
No Violation of Environmental Regulations	<ul style="list-style-type: none">0 violations of environmental protection regulations	<ul style="list-style-type: none">0 violations of environmental protection regulations	<ul style="list-style-type: none">0 violations of environmental protection regulations	<ul style="list-style-type: none">0 violations of environmental protection regulations
Awards	<ul style="list-style-type: none">Silver Award and Honorary Award in the Environmental Protection Administration's Environmental Protection AwardOutstanding Unit Maintaining the Waterfront Land under the Jurisdiction of the Water Resources Agency of the Ministry of Economic Affairs with Greening and Beautification Methods	<ul style="list-style-type: none">Receive 1 national environmental protection awardReceive 2 county/city environmental protection awards	<ul style="list-style-type: none">Receive 1 national environmental protection awardReceive 2 county/city environmental protection awards	<ul style="list-style-type: none">Receive 1 national environmental protection awardReceive 2 county/city environmental protection awards

4.2.1 Water Usage Information

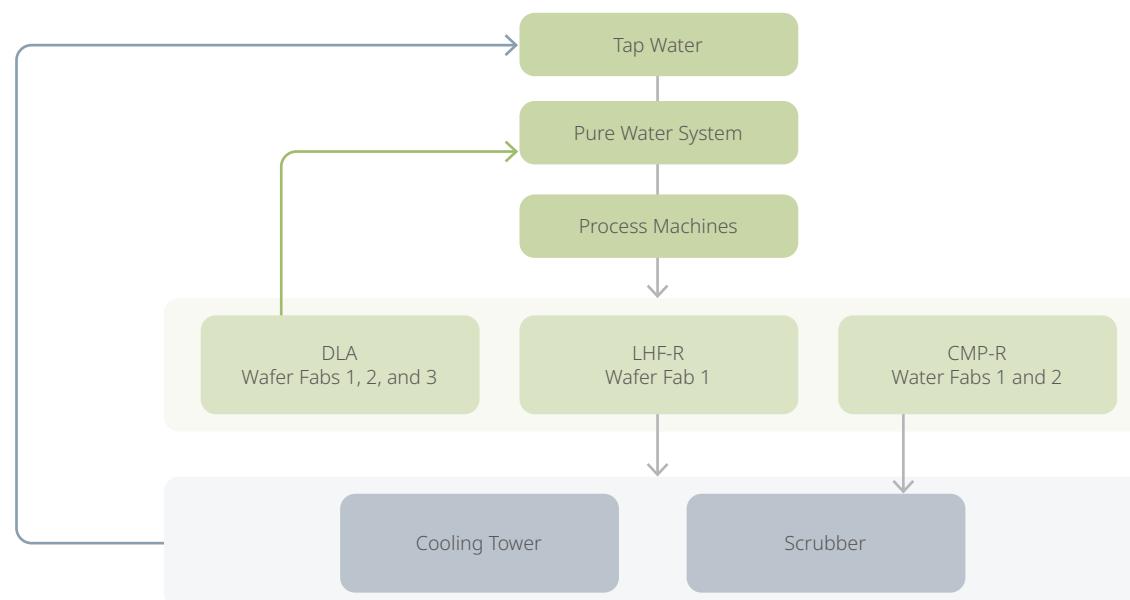
VIS Wafer Fab 1 and Wafer Fab 2, Fab 5 are located in the Hsinchu Science Park and are fed by the Baoshan Reservoir and the Baoshan Second Reservoir. The production wastewater is first treated within the fabs to meet the acceptance criteria and discharged to the Hsinchu Science Park Administration's wastewater treatment plant for a second treatment, and eventually discharged. Wafer Fab 3 is located in Taoyuan City and its water source comes from Shimen Reservoir. The production wastewater is first treated within the fab and discharged into Taoyuan's Dakeng River after meeting the discharge standard. The Singapore fab uses NEWater^{Note} as its water source. Affected by global climate change, droughts and floods in Taiwan have gradually become more extreme in recent years, resulting in a rising risk of water shortage and flooding. Therefore, water management, water recovery and emergency response to water shortages are becoming more prominent.

Note: In order to avoid a water supply crisis, Singapore has proposed the development of four major "National Water Hose" projects, namely rainwater harvesting, freshwater importation, seawater desalination and wastewater reuse, for which the wastewater reuse project is NEWater.

In terms of water management, in response to the impact of reduced tap water supply on production during the dry season, VIS has formulated the VIS Water Shortage Water Truck Response Plan based on the conditions of each fab and the industrial experience. Response plans should be activated in accordance with the water conditions to reduce the impact on production capacity.

VIS reuses the production wastewater and divides it into more than 10 different types of drainage pipes in accordance with the wastewater characteristics. In accordance with the water quality and the needs of the users, the wastewater is treated by the recovery system and then re-used, which not only reduces the discharged volume of wastewater and the burden on the environment, but also reduces the amount of tap water to be replenished and saves water resources.

Process Water Recovery Diagram



Risk Management of Water Resources

In terms of risk management of water resources, VIS adopts the water risk assessment tool of the World Resources Institute (WRI) to identify water stress and water risk in the region where the fabs are located. The results showed a low to moderate risk for the fabs in Taiwan and a low risk for the one in Singapore. None of the VIS sites were classified as high risk, and all sites consumed less than 2% of the water in the region they are located, with no significant impact on water use.

We prepare for the rainy days through participation in public association. Our colleague serves as the representative of the Water Resources Division of the Taiwan Science Park Association of Science and Industry, and we take it as an opportunity to participate in water conservation counseling and technology sharing held by the Hsinchu Science Park Administration or the Water Resources Agency of the Ministry of Economic Affairs. Additionally, we exchange water resources recycling and utilization experiences with our peers, and autonomously formulate plans in response to water shortages. In times of dry season, we cooperate with government agencies to meet the water conservation targets set and coordinate with the Hsinchu Science Park Administration or the Water Resources Agency on the allocation and use of water resources to ensure the water quality and quantity of water supply.

Furthermore, the Water Resources Agency plans to increase the area of sea and freshwater in Hsinchu and to connect them with the Shimen Reservoir and Baoshan Reservoir, with an aim to ensure the water allocation in the region meets the water demand of Hsinchu Science Park in 2025.

Note: Wafer Fab 5 was built in 2022 within the grounds of Hsinchu Science Park. Water usage data was still incomplete; Wafer Fab 5 still had no actual water usage or production. As a result, the water usage statistics for 2022 do not include Wafer Fab 5.

Region	Fab	Water Sources	WRI Water Risk Level via Assessment
Taiwan	Wafer Fab 1		Low to moderate
	Wafer Fab 2	Baoshan Reservoir, Baoshan Second Reservoir, and Yongheshan Reservoir	
	Wafer Fab 5		
	Wafer Fab 3	Shimen Reservoir and Feitsui Reservoir	
Singapore	Singapore Fab	Public wastewater is treated and reused (NEWater)	Low

Type of Water Source and Amount of Water Withdrawn

	2018	2019	2020	2021	2022
Surface Water (Unit: million liters/year)	1,554.17	1,508.71	1,249.23	1,371.78	1,777.83
Groundwater (Unit: million liters/year)	0.00	0.00	0.00	89.91	0.00
Water from a Third-party (Unit: million liters/year)	3,432.70	3,473.86	5,309.42	5,383.05	5,334.36
Total Water Withdrawn (Unit: million liters/year)	4,986.87	4,982.57	6,558.65	6,844.74	7,112.19

Note: The water from a third-party refers to the tap water from the water supply company, the source is surface water, and all is freshwater ($\leq 1,000 \text{ mg/L}$ total dissolved solids).

4.2.2 Water Recovery Management

In addition to the target of 85% process water recovery rate set by the Hsinchu Science Park, VIS Wafer Fab 1 and Wafer Fab 2 have also adopted low-water-consumption production machines, process water drainage diversion, process water recovery systems, and continuous water conservation measures to reduce tap water usage.

In 2022, the average process water recovery rate ^{Note} of VIS Wafer Fab 1 was 86.2%, and that of Wafer Fab 2 was 85.5%, both of which are better than the standards set by the Hsinchu Science Park. Although VIS Wafer Fab 3 is located in Taoyuan, which falls outside of the jurisdiction of Hsinchu Science Park, the average process water recovery

rate for Wafer Fab 3 was still targeted at 75%. In 2022, the Fab 3 reached 77.1% in this aspect. In addition, VIS Singapore Fab was also planning and implementing water conservation measures and equipment to improve the process water recovery rate, which reached 68.3% in 2022.

Note: The water recovery rate for each VIS fab is calculated based on the water balance diagram released by the Hsinchu Park Administration.

In terms of process water recovery volume, in 2022, compared to 2015, Wafer Fab 1 grew by 14.9%, Wafer Fab 2 grew by 3.2%, and Wafer Fab 3 grew exponentially by 187.6%. Singapore Fab is also undertaking process water recovery improvement projects, resulting in a 31.4% growth compared to 2020. VIS' cumulative process water recovery capacity exceeded 70 million tons between 2015 and 2022.

	2018	2019	2020	2021	2022
Fab 1 Average Process Water Recovery Rate (%)	86.4%	86.4%	86.7%	87.1%	86.2%
Fab 1 Average Process Water Recovery Volume (million metric tons)	2.77	2.76	2.87	2.78	2.89
Fab 2 Average Process Water Recovery Rate (%)	85.3%	85.5%	85.3%	85.5%	85.5%
Fab 2 Average Process Water Recovery Volume (million metric tons)	3.66	3.71	3.70	3.66	3.59
Fab 3 Average Process Water Recovery Rate (%)	77.0%	77.0%	77.1%	77.1%	77.1%
Fab 3 Average Process Water Recovery Volume (million metric tons)	2.01	1.97	1.96	2.08	2.47
VS1 Average Process Water Recovery Rate (%)				59.8%	60.9%
VS1 Average Process Water Recovery Volume (million metric tons)				1.30	1.61
Total Process Water Recovery Volume (million tons/year)	8.43	8.45	9.83	10.13	10.66

Note: The water recovery rate is calculated based on the water balance diagram of each VIS fab, so the result is not converted to the total water recovery rate of the entire Company.

VIS has established a water conservation management target of reducing water consumption per wafer area by 9% by 2022 compared to 2015. After the merger of the three VIS wafer fabs in 2015, in addition to the subsequent acquisition and merger of VIS Singapore fab in 2020, VIS has been carrying out process water recovery improvement projects. As a result, VIS water consumption per wafer area decreased from 6.70 liters/cm² in 2015 to 6.07 liters in 2022, representing a water conservation performance of 9.38%.

VIS tap water usage in 2020, 2021 and 2022 varied with the acquisition and merger of the Singapore fab, as well as both the increased production capacity and process water recovery rate of 6.56 million tons (2020), 6.84 million tons (2021) and 7.11 million tons (2022), respectively. The data for 2019 was validated and verified by SGS, which is commissioned by VIS once every two years to conduct product water footprint validation and verification, and was completed in August 2020 and certified again in July 2022.

	2020	2021	2022
Fab 1 Water Consumption Statistics (million tons)	1.55	1.54	1.63
Fab 2 Water Consumption Statistics (million tons)	1.92	1.91	1.92
Fab 3 Water Consumption Statistics (million tons)	1.53	1.65	2.00
VS1 Water Consumption Statistics (million tons)	1.55	1.75	1.55
Total Water Consumption (million tons/year)	6.56	6.84	7.11

The VIS implementation of water conservation and water recovery measures is also reflected in the reduction of wastewater discharge. With respect to wastewater discharge per wafer area, after the merger of the three wafer fabs in 2015 and the Singapore fab in 2020, we plan to carry out process water recovery improvement projects. As a result, the average wastewater discharge per wafer area showed a downward trend from 5.08 liters/cm² in 2015 to 4.19 liters/cm² in 2022, with a 17.43% reduction in wastewater discharge.

4.2.3 Water Resources Management Projects

VIS water resources management projects are shown in the table below, with a water conservation target established to reduce 9% of water consumption per wafer area by 2022 compared to 2015. As of the end of 2022, water consumption per wafer area reduced by 9.38% compared to 2015.

Category	Water Conservation Measures	Project Execution Year
Shared Equipment Water Conservation	Sand filter tower backwashing for wastewater treatment changed to reverse osmosis reject (ROR) to reduce raw water consumption	2020
	West-side air circulation unit (i.e., Makeup Air Handling Unit, MAU) drainage recovery and reuse	2020
	Reverse osmosis reject (ROR) recovery rate adjustment	2021
Production Equipment Water Conservation	Recovery of reverse osmosis reject (ROR) from ultra filtration membrane (UF) in Building B of Wafer Fab 1	2018
	Acid filtration tank machine set in standby mode for water use and to save water consumption	2019
	Recovery and reuse of backwash wastewater discharge from ultra filtration membrane (UF)	2020
	Reverse osmosis recovery rate adjustment	2021

For a wastewater discharge quality that is better or in compliance with government regulations, the prevention and control of water pollution is divided into the reduction in pollutants used in the production process, and water recovery and water pollutant treatment through high-efficiency equipment. In accordance with the effluent standards of the enterprises, sewage systems and building sewage treatment facilities stipulated in the Effluent Standards, VIS continues to reduce the concentration of tetramethylammonium hydroxide (TMAH) and ammonia nitrogen (NH3-N) in the wastewater discharge in order to meet the requirements of the Hsinchu Science Park Administration to reduce the hazards caused by the wastewater discharge.

In addition, VIS has established the hazardous substance management goal of using non-toxic and environmentally friendly green materials. As a result, VIS will build a facility to replace N-methylpyrrolidone (NMP) materials with carbonated water in order to minimize the health and environmental risks associated with NMP. This marks an important milestone for VIS in the promotion of green manufacturing.

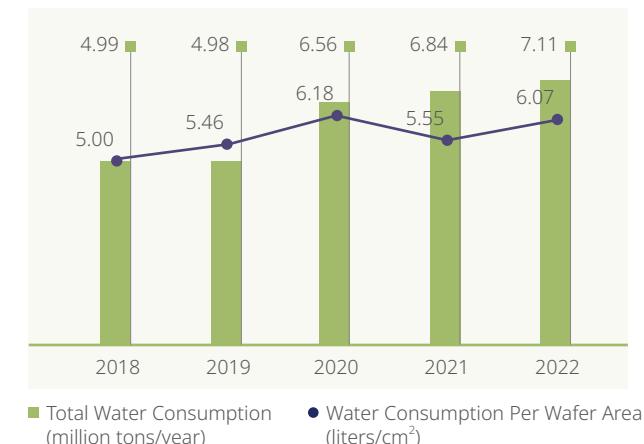
As for the wastewater treatment plants, the discharge point of each VIS fab is equipped with continuous emission monitoring system (CEMS) to monitor and record the changes in water quality and volume. To prevent groundwater contamination from tank rupture at the wastewater treatment plants, groundwater is sampled annually and the soil within the fab area is sampled and monitored every three years to ensure that the wastewater discharge, surrounding groundwater and soil meet the monitoring standards.

The water quality analysis results of the wastewater discharge are shown in the table below, demonstrating that each fab has good stability in their wastewater treatment plants.

Controls	Region Where Wafer Fabs are Located	Control Standards	2018	2019	2020	2021	2022
Concentration of Solids Floating in Wastewater (mg/L)	Within the Park	Fab 1/Fab 2	300	5.9~44.5	5.7~255	1.4~42.5	2.7~47
	Outside the Park	Fab 3	30	12.1~17.0	4.0~29.0	4.5~29	5.7~28.5
Concentration of Chemical Oxygen Demand in Wastewater (mg/L)	Within the Park	Fab 1/Fab 2	500	22.5~202.0	31.2~127	27.3~147.0	30.3~152.0
	Outside the Park	Fab 3	100	35.1~55.0	9.0~54.5	12~63	14.4~63.6
TMAH Concentration in Wastewater	Within the Park	Fab 1/Fab 2	30	10.4~26.4	1.3~26.4	7.57~26.5	9.96~24.5
Ammonia Nitrogen Concentration in Wastewater (mg/L)	Within the Park	Fab 1/Fab 2	50	12.7~37.5	10.9~29.8	14.7~31	15.4~36.1
	Outside the Park	Fab 3	30	16.8~19.8	4.7~29.0	11~25	6.2~29.6

Note: The data source of Wafer Fabs 1 and 2 is the water sampling and testing value conducted by the Hsinchu Science Park Administration twice a month. Wafer Fab 3 is located outside of the park, thus its data source is the self-sampling and third-party testing value conducted twice a month.

Water Consumption Per Wafer Area



Wastewater Discharge Per Wafer Area



Each wastewater treatment plant is equipped with a proper backup system, including emergency power supply, to ensure that the backup system can automatically take over in the event of partial equipment failure during operation. The operation of all the wastewater treatment plants at VIS is under central monitoring and is closely controlled by the staff on duty 24 hours a day. If the water quality is abnormal or exceeds the preset limit, VIS will be alerted instantly and the wastewater discharge will be suspended until the abnormal condition is resolved.

Type of Wastewater Discharge and Volume of Discharge

Unit: million liters/year

	2018	2019	2020	2021	2022
Surface Water	1,130.65	1,078.32	1,125.63	1,245.14	1,526.96
Groundwater	0.00	0.00	0.00	0.00	0.00
Seawater	0.00	0.00	0.00	0.00	0.00
Water from a Third-party	2,204.67	2,211.65	3,306.83	3,531.87	3,384.79
Total Wastewater Discharged	3,335.32	3,289.97	4,432.45	4,777.01	4,911.75
Treatment Level Fab 1/2/VS1	Secondary treatment				

Note 1: Wastewater discharged is freshwater ($\leq 1,000$ mg/liters of total dissolved solids).

Note 2: Secondary treatment is designed to remove components and substances that remain in the water, or are dissolved or float in the water.

Total Water Consumption

Unit: million liters/year

	2018	2019	2020	2021	2022
Total Water Withdrawn	4,986.87	4,982.57	6,558.65	6,844.74	7,112.19
Total Discharge Volume	3,335.32	3,289.97	4,432.45	4,777.01	4,911.75
Total Water Consumption	1,651.55	1,692.60	2,126.20	2,067.73	2,200.44

Water Consumption

Unit: Million tons

	2019	2020	2021	2022	Target for 2022
(A) Water Withdrawn Volume: Tap Water Supply from the Water Supply Company (or from other water supply agencies)	3,474	5,309	5,383	5,334	-
(B) Water Withdrawn Volume: Clean Surface Water (lakes, rivers, etc.)	1,509	1,249	1,372	1,778	-
(C) Water Withdrawn Volume: Clean Groundwater	0	0	0.09	0	-
(D) Water Reused: Reclaimed Water or a Water Source that is of the Same or Better Quality than Tap Water (applicable to B and C only)	0	0	0	0	-
(E) All Water Sources (A+B+C-D)	4,983	6,558	6,845	7,112	6,944
Data Coverage (percentage)	100%	100%	100%	100%	-

Changes in Trend: In 2021, the fabs in Taiwan adjusted the water recovery rate due to the drought, resulting in reduced consumption of pure water; the reduced water consumption of the Singapore fab is due to the reduction of production capacity.

Target Setting: The 2023 target for the fabs in Taiwan is established based on the linear trend line of the actual output (fabs in Taiwan) from 2017 to 2022. The actual discharge volume of the Singapore fab in 2022 is set as the 2022 target for VIS. We have used a linear trend line for actual production from 2017 to 2022 (for the Taiwan fabs), back-calculated for the 2022 Taiwan fab targets, then adding actual 2022 emissions for the Singapore fab, to create the VIS 2022 targets. Discrepancies between the targets and actual figures are due to the impacts on water usage by 2022 production capacity increases and new equipment added at the Taoyuan fab.

How the Target can be Achieved: Continuously plan and construct wastewater recovery system to achieve the target.

Ultrapure Water

Unit: Tons

	2019	2020	2021	2022	Target for 2022
Ultrapure Water Consumption	6,979,430	8,718,083	9,071,904	9,402,321	9,187,903
Data Coverage (percentage)	100%	100%	100%	100%	-

Changes in Trend: In 2021, the water recovery rate was adjusted due to the drought, resulting in reduced consumption of pure water; the reduced water consumption is due to the reduction of production capacity.

Target Setting: The 2022 target for the fabs in Taiwan is established based on the linear trend line of the actual output (fabs in Taiwan) from 2016 to 2022. The actual discharge volume of the Singapore fab in 2022 is set as the 2022 target for VIS. We have used a linear trend line for actual production from 2017 to 2022 (for the Taiwan fabs), back-calculated for the 2022 Taiwan fab targets, then adding actual 2022 emissions for the Singapore fab, to create the VIS 2022 targets. Discrepancies between the targets and actual figures are due to the impacts on water usage by 2022 production capacity increases and new equipment added at the Taoyuan fab.

How the Target can be Achieved: Continuously optimize the operating conditions of our pure water systems to achieve the target.

4.3 Waste Management

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Waste reduction	<ul style="list-style-type: none">• Waste recycling rate reached 93.64%• Waste reduction improvement projects: 35 improvements/year• Waste landfill rate reached 0.08%	<ul style="list-style-type: none">• A waste recycling rate of 92% or above• Waste reduction improvement project \geq 40 improvements/year• A waste landfill rate of below 1%	<ul style="list-style-type: none">• A waste recycling rate of 93% or above• Waste reduction improvement projects \geq 50 improvements/year• A waste landfill rate of below 0.5%	<ul style="list-style-type: none">• A waste recycling rate of 93% or above• Waste reduction improvement projects \geq 50 improvements/year• A waste landfill rate of below 0.5%
Proper treatment of waste	<ul style="list-style-type: none">• Audited and guided 100% of our waste treatment companies• The number of waste treatment companies obtaining ISO 14001 and other international environmental safety and health management certifications reached 53.6%	<ul style="list-style-type: none">• Waste treatment companies audited and guided reaches 100%• The number of waste treatment companies obtaining ISO 14001 and other international environmental safety and health management certifications reaches 50%	<ul style="list-style-type: none">• Waste treatment companies audited and guided reaches 100%• The number of waste treatment companies obtaining ISO 14001 and other international environmental safety and health management certifications reaches 60%	<ul style="list-style-type: none">• Waste treatment companies audited and guided reaches 100%• The number of waste treatment companies obtaining ISO 14001 and other international environmental safety and health management certifications reaches 70%
No violation of environmental regulations	<ul style="list-style-type: none">• 0 violations of environmental protection	<ul style="list-style-type: none">• 0 violations of environmental protection	<ul style="list-style-type: none">• 0 violations of environmental protection	<ul style="list-style-type: none">• 0 violations of environmental protection
Awards	<ul style="list-style-type: none">• Silver Award and Honorary Award in the Environmental Protection Administration's Environmental Protection Award• Special Contribution Award of the Outstanding Green Procurement Unit for Private Enterprises and Organizations in Hsinchu County• Outstanding Green Procurement Unit for Private Enterprises and Organizations in Hsinchu City	<ul style="list-style-type: none">• Receive 1 national environmental protection award• Receive 2 county/city environmental protection awards	<ul style="list-style-type: none">• Receive 1 national environmental protection award• Receive 2 county/city environmental protection awards	<ul style="list-style-type: none">• Receive 1 national environmental protection award• Receive 2 county/city environmental protection awards

Life Cycle of Substances/Resources and Management Practices

The VIS concept on waste management has shifted from traditional cleaning and treatment to integrated resource management, with technical staff having expertise in waste cleaning appointed. Waste treatment control procedures have also been established in accordance with the spirit of ISO 14001, requiring all employees to comply with the requirements at all stages of sorting, collection, storage and removal.

For the sustainable utilization of resources, the first principle is to reduce chemicals used in the production process at the source, so as to reduce the subsequent generation of waste. The second principle is to recycle and reuse the waste, with the final principle being the use of other treatment methods such as incineration and sanitary burial.

In order to properly manage the waste generated by VIS, the internal management has improved from the initial legal and proper cleaning and treatment to further focus on waste reduction at source and waste recycling. Employees proposed for continuous improvement based on the results of ISO 14001 environmental assessment in order to reduce subsequent waste generated by reducing materials used at source.

Waste Reuse Methods

Waste acids, solvents and sludge are the most common types of waste generated by VIS. Most of these wastes are treated physically and thermally and then reused as technical grade raw materials, cement, road bricks or other mixing materials. Containers that cannot be recycled are cleaned and reused by qualified manufacturers. Some of metals with the certain value, such as waste hardware, white iron, and aluminum, are handed over to manufacturers for recycling. The small amount of NiCd batteries generated each year is shipped by sea to advanced countries for recycling and treatment, in accordance with the spirit of the Basel Convention. Due to the inadequate amount generated, there was no overseas disposal of NiCd batteries in 2022.

Project of Hope: Refurbished Computers - Digital Divide Collaboration Project to Continuously Donate Refurbished Computers to Underprivileged Groups

As for discarded computers, VIS has worked with ASUS since 2009 on the Project of Hope: Refurbished Computers, a project that combines environmental protection and social welfare. We fix and repair those eliminated information products that are recovered into refurbished computers and donate them to underprivileged groups, aiming to eliminate the digital divide in society and to recycle and reuse resources. To date, VIS has donated 8,432 computers, monitors and other electronic products, resulting in 191.096 metric tons of carbon emissions reduction, or 15,924.029 fewer trees cut down in conversion^{Note}. VIS will continue to keep track of international laws and regulations, customer requirements, and possible new regulatory requirements in the future in order to make better preparation in advance.



Note: ASUS' Project of Hope: Refurbished Computers project website is located at:
<http://www.asusfoundation.org/recycling.aspx>



Waste Treatment Company Management

VIS has established an annual audit plan for waste treatment companies for the management of outsourced waste treatment companies. In 2022, we completed self-initiated audits of 30 waste treatment companies. In addition to examining the safety and environmental protection of their facilities, waste-related licenses and on-site operations, we also inspected and reviewed the flow of their products and waste to ensure that the sales of their reused products and the flow of their waste treatment are through legal channels. Together with the partners in high-tech industry, VIS has developed an assessment and audit standard for waste treatment companies to improve audit quality through the industrial power for the more reliable waste treatment companies.

VIS Waste Management Procedures



VIS performs audits on waste treatment companies in four major areas: safety and health management performance, environmental management performance (including the requirements of waste disposal, treatment and recycling facilities, air pollution prevention and control, and water pollution prevention and control), loss control management performance, and onsite inspection. The audits for 2022 reported 15 deficiencies that required improvements, all of which have now been completed.

Types of Waste Treatment Companies	Specific Deficiency	No. of Instances
Waste Solvents	No records of regular inspections of local exhaust devices	1
	Lack of personal noise dose records for workplace environment monitoring	1
	Not wearing respiratory protective device during operational work	1
	No records of monthly automatic inspection of explosion proof electrical apparatus	1
	Lack of warning signs on the climbing ladder on the tank	1
	Employees were found not in compliance with the regulatory requirements of wearing seat belts when using forklift, and there was no buzzer alarm for forklift reversing.	1
	An emergency shower & eyewash is installed by the temporary storage zone, but there is no water supply during the actual test.	1
	Waste activated carbon disposed of was greater than the maximum monthly generation approved by the Waste Disposal Plan.	1
Waste Acid Solution	Forklift operators not using proper safety protection equipment	2
	Drinking water testing not meeting the testing frequency stipulated by Article 7 of the Regulations for the Use, Maintenance and Management of Fixed Equipment for Continuous Drinking Water Supply	1
	The water supply pipe of the emergency shower & eyewash installed at the work area is broken	1
Sludge	Mercury lamp disposal was greater than the maximum monthly generation approved by the Waste Disposal Plan.	1
Waste Wipes	Expiration of the Stationary Pollution Source Installation and Operating Permit	1
Waste Empty Buckets	Failure to implement an annual pollution prevention (control) abnormality and emergency handling drill in accordance with the Air Pollution Emergency Response Plan and Warning Notification Practice	1
Total		15

Waste Management Target

VIS has set a target of above 90% for the industrial waste recycling rate, the execution rate of which is tracked by the Safety, Health and Environment Committee. The waste recycling rate in 2022 reached 93.64%, which achieved the preset target. Currently, all of VIS' waste are handled with the assistance of qualified waste cleaning, treatment or recycling facilities on proper waste cleaning, treatment and recycling. The aforementioned data on VIS' product carbon footprint is validated and verified every two years by SGS, a company commissioned by VIS, with the most recent validation and verification completed in 2022.

In addition, in order to strengthen the effectiveness of the audit of waste treatment companies, VIS signed the Convention on the Self-regulation of Waste Disposal and Recycling in High-tech Industry proposed by Taiwan Semiconductor Industry Association (TSIA) in 2017 and participated in the joint audit activities of Taiwan Semiconductor Industry Association (TSIA) in order to reduce the risk of violations by waste disposal companies.

The waste recycling rate is determined mainly by identifying the waste treatment method adopted when looking for a waste treatment company to work with. The methods of waste burial or incineration which waste cannot be recycled are not included in the recycling statistics. Waste generated is shown in the table below:

Waste Generation

Unit: Metric tons/year

Type of Waste	2018	2019	2020	2021	2022
General Industrial Waste	3,135	2,670	4,046	4,018	4,237
Hazardous Industrial Waste	3,798	3,823	4,494	4,894	5,068
Total Waste Generated	6,934	6,493	8,539	8,911	9,306
Industrial Waste Recycling Volume	6,505	6,098	7,906	8,306	8,713
Industrial Waste Incineration Volume	396	390	618	597	585
Industrial Waste Burial Volume	32	4	16	8	8
Industrial Waste Recycling Rate	93.82%	93.92%	92.58%	93.21%	93.64%
Industrial Waste Incineration Rate	5.71%	6.01%	7.23%	6.70%	6.28%
Industrial Waste Burial Rate	0.47%	0.06%	0.19%	0.09%	0.08%

Note: Industrial waste recycling rate (%) = Industrial waste recycling volume (metric tons/year) ÷ Total waste generated (metric tons/year) × 100

Industrial waste incineration rate (%) = Industrial waste incineration volume (metric tons/year) ÷ Total waste generated (metric tons/year) × 100

Industrial waste burial rate (%) = Industrial waste burial volume (metric tons/year) ÷ Total waste generated (metric tons/year) × 100

Solid General Industrial Waste Statistics

Unit: Metric tons

	2019	2020	2021	2022	Target for 2022
Total Waste Recycled/Reused	2,144.29	3,257.15	3,431.06	3,673.80	-
Total Waste Disposed	365.16	611.19	580.77	562.87	578 (Target achieved)
Total Waste Buried	0.73	8.28	1.90	1.76	-
Total Waste Incinerated (Heat Recovery)	0	0	0	0	-
Total Waste Incinerated (Without Heat Recovery)	364.43	602.91	578.87	561.11	-
Waste Disposed with Other Methods	0	0	0	0	-
Waste Disposed with Unknown Methods	0	0	0	0	-
Data Coverage	100%	100%	100%	100%	-

Hazardous Industrial Waste

Unit: Metric tons

	2019	2020	2021	2022	Target for 2022
Total Waste Recycled/Reused	3,554.06	4,261.69	4,584.94	4,823.90	-
Total Waste Disposed	269.17	232.44	308.64	244.54	273 (Target achieved)
Total Waste Buried	3.46	8.28	6.37	5.73	-
Total Waste Incinerated (Heat Recovery)	239.68	196.30	282.94	214.52	-
Total Waste Incinerated (Without Heat Recovery)	26.03	26.65	18.88	24.25	-
Waste Disposed with Other Methods	0	1.21 (wastewater treatment)	0.45 (wastewater treatment)	0.05 (wastewater treatment)	-
Waste Disposed with Unknown Methods	0	0	0	0	-
Data Coverage	100%	100%	100%	100%	-

4.4 Air Pollution Control

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Air pollution control	<ul style="list-style-type: none">Achieved a 20.09% reduction in air pollution generated per wafer area, as compared to 2015	<ul style="list-style-type: none">A 8% reduction in air pollution generated per wafer area, as compared to 2015	<ul style="list-style-type: none">A 10% reduction in air pollution generated per wafer area, as compared to 2015	<ul style="list-style-type: none">A 15% reduction in air pollution generated per wafer area, as compared to 2015
No violation of environmental regulations	<ul style="list-style-type: none">0 violations of environmental protection	<ul style="list-style-type: none">0 violations of environmental protection	<ul style="list-style-type: none">0 violations of environmental protection	<ul style="list-style-type: none">0 violations of environmental protection
Awards	<ul style="list-style-type: none">Silver Award and Honorary Award in the Environmental Protection Administration's Environmental Protection AwardOutstanding Award of the Air Quality Purification Zone by the Environmental Protection AdministrationRecognition for Outstanding Performance of the Air Quality Purification Zone by the Hsinchu City Government	<ul style="list-style-type: none">Receive 1 national environmental protection awardReceive 2 county/city environmental protection awards	<ul style="list-style-type: none">Receive 1 national environmental protection awardReceive 2 county/city environmental protection awards	<ul style="list-style-type: none">Receive 1 national environmental protection awardReceive 2 county/city environmental protection awards

The air pollution generated by the semiconductor manufacturing industry is mainly composed of volatile organic compound (VOCs) and acid-base gases. VIS adopts the best feasible technology of source separation and multistage treatment in pollution control, and effectively treats the pollutants in the waste gases with high efficiency pollution control equipment. This practice is to ensure that pollutants emitted into the atmosphere are less than (or meet) government regulations. Based on actual test results, the air pollutant concentrations and emissions of VIS are well below the emission standards approved by the Environmental Protection Administration.

Each VIS Wafer Fab is equipped with a proper backup system including emergency power supply to ensure that the backup system can automatically take over in the event of partial pollution control equipment failure during operation, thereby reducing the risk of abnormal emission of pollutants. The volatile organic waste gas treatment equipment requires the cleaner natural gas as fuel, but other backup fuel supply systems are also in place to ensure normal operation of the pollution control equipment in the event of natural gas supply problems. All of the volatile organic waste gas systems in the VIS wafer fabs are equipped with zeolite rotor processing equipment. In 2022, a zeolite rotor of volatile organic compound (VOCs) processing and control equipment was replaced in Fab 1, and a new volatile organic compound (VOCs) processing and control equipment was added in Fab 3 in 2022, which effectively control the removal rate to be greater than the regulatory requirements (>90%). The average removal rate of volatile organic waste gases in the Taiwan fabs was 94.56%, which is better than the best available control technology (BACT) of 92% set by the Environmental Impact Assessment. In accordance with the emission factor of air pollutants such as volatile organic compounds (VOCs) set by the Environmental Protection Administration for the semiconductor industry, it is estimated that the volatile organic compound (VOCs) emissions in Taiwan and Singapore VIS fabs were altogether 32.5 metric tons in 2022.

VIS has set a target to reduce volatile organic compound (VOCs) emissions per wafer area in Taiwan and Singapore fabs by another 8% in 2023 compared to 2015. As of the end of 2022, volatile organic compound (VOCs) emissions per wafer area reduced by 20.09% compared to 2015.

VIS only uses natural gas and a small amount of diesel fuel (for generators) as fuels. In accordance with the emission factor of pollutants such as nitrogen oxides (NOx) and sulfur oxides (SOx) set by the Environmental Protection Administration for the semiconductor industry, the emission volumes of NOx and SOx for the VIS fabs in Taiwan are estimated to be 18.18 metric tons and 9.66 metric tons respectively in 2022.

Statistics of VOCs Emission



	2019	2020	2021	2022	Target for 2022
Volatile Organic Compound (VOCs) Emissions	32.33	36.10	38.71 ^{Note}	32.50 ^{Note}	38.00

Note: including Singapore Fab

	2019	2020	2021	2022
Nitrogen Oxides (NOx)	7.87	13.27	18.46	18.18
Sulfur Oxides (SOx)	9.59	7.65	9.79	9.66

4.5 Environmental Protection Expenditures

There was no loss due to environmental pollution for VIS in 2022. In addition, VIS is committed to the routine maintenance and optimal management of existing equipment, and continues to install new wastewater and waste gas treatment and other prevention and control equipment projects, as well as seeking better ways to reuse and treat waste to achieve a circular economy. The total invested in environmental protection in 2022 was approximately NT\$743 million.

Total Environmental Protection Expenditures 2019–2022 (Wafer Fab 1 + Wafer Fab 2 + Wafer Fab 3 + Wafer Fab 5)

Unit: NT\$100 million

Category	2019		2020		2021		2022	
	Fee Expenditures	Capital Expenditures						
Subtotal	2.52	2.34	2.52	1.71	2.48	2.69	1.96	5.47
Total Amount		4.86		4.23		5.17		7.43

Note 1: Fee expenditures include environmental protection-related testing fees, equipment operation and maintenance fees, and personnel costs.

Note 2: Capital expenditures include environmental protection-related equipment installation costs.

Note 3: No significant environmental or ecological fines (US\$10,000 or more) reported.

Breakdown of Environmental Protection Expenditures 2022

Unit: NT\$100 million

Environmental Protection Cost Category	Descriptions	Fee Expenditures	Capital Expenditures
1. Direct Cost of Environmental Load Reduction			
(1) Pollution Prevention Cost	Including air pollution control costs, water pollution control costs, and other environmental pollution control costs	1.383	4.999
(2) Cost for Resource Savings	Costs to save resource consumption (e.g., water resources)	0.005	0.443
(3) Industrial Waste Disposal and Recycling	Costs for industrial waste (including reuse, incineration, burial)	0.386	0.031
2. Indirect Costs of Environmental Load Reduction (Environmental Related Management Costs)	Including (1) environmental monitoring costs; (2) environmental management system certification-related costs; (3) environmental education expenses for employees; (4) green procurement costs; (5) dedicated environmental protection personnel costs	0.189	-
3. Other Environmental Related Costs	Including (1) soil remediation and natural environment restoration costs; (2) environmental pollution and damage insurance costs and environmental protection costs levied by the government; (3) compensation, fines and litigation costs for environmental problems	-	-
Total		1.962	5.473

Responsible Supply Chain

VIS has been dedicated to the responsible procurement towards the sustainable supply chain management. And strengthening of supply chain resilience in response to the ever changing international political and economic situation. The further expectation is to generate positive impact on the supply chain of global semiconductor industry, fulfill corporate social responsibility, and create a supply chain of sustainable development.

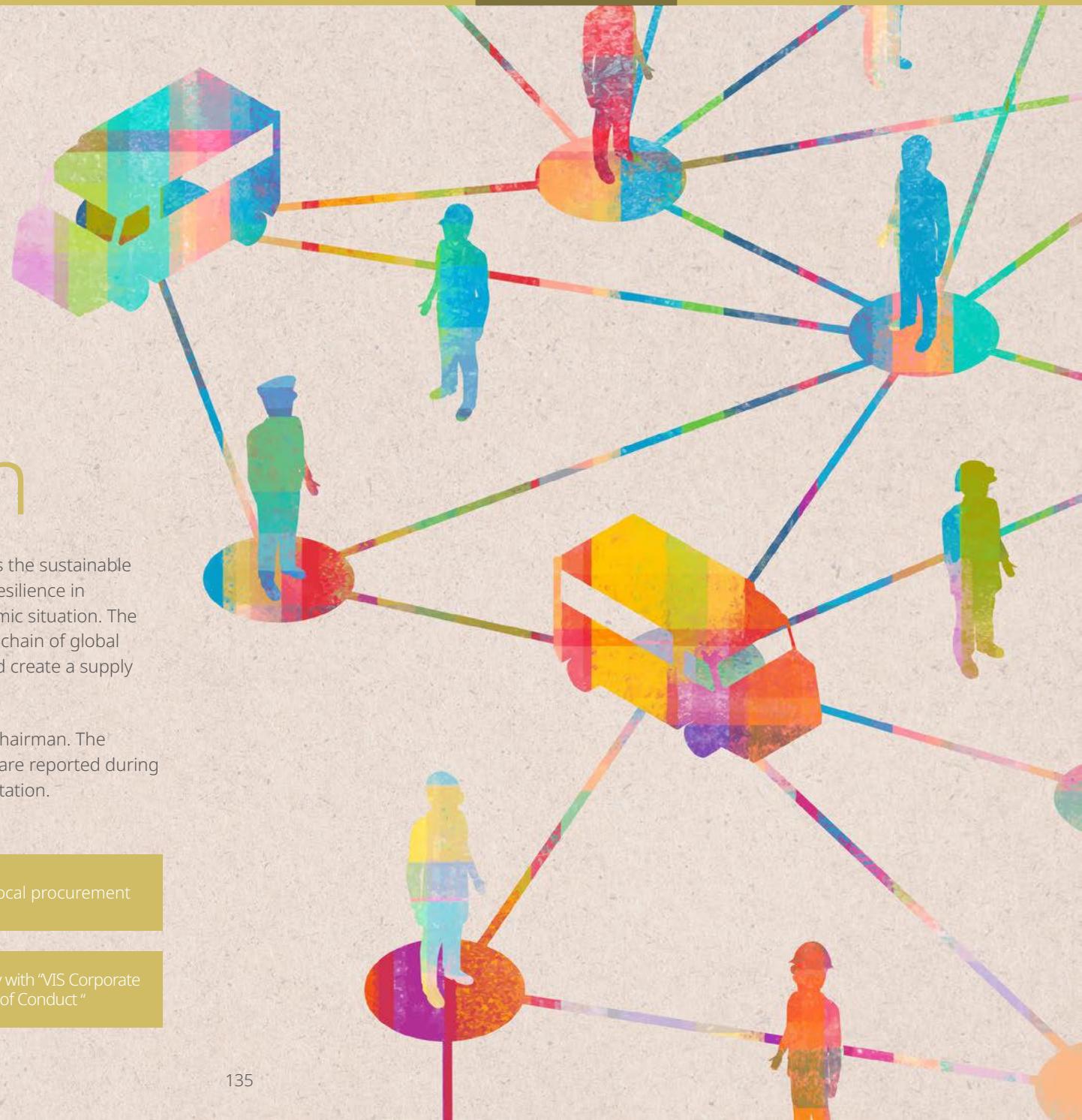
The VIS' "Supplier Code of Conduct" has been approved by the Chairman. The commitment, mechanisms, and sustainable supply chain issues are reported during regular quarterly board meetings for approval before implementation.

\$23 billion

VIS created more than NT\$23 billion of local procurement

100%

100% suppliers signed guarantee to comply with "VIS Corporate Sustainability Policy" and "VIS Supplier Code of Conduct"





Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Conveying and Signing of "Code of Conduct of Supplier"	<ul style="list-style-type: none">Conveyed VIS' "Supplier Code of Conduct" to Tier 1 suppliers, and required signing off; completion rate 100%Included biodiversity within management scope	<ul style="list-style-type: none">Convey VIS' "Supplier Code of Conduct" to Tier 1 suppliers, and require signing off; completion rate to be 100%Include biodiversity within management scope	<ul style="list-style-type: none">Convey VIS' "Supplier Code of Conduct" to Tier 1 suppliers, and require signing off; completion rate to be 100%	<ul style="list-style-type: none">Convey VIS' "Supplier Code of Conduct" to Tier 1 suppliers, and require signing off; completion rate to be 100%
Supplier ESG (RBA) Educational Training	<ul style="list-style-type: none">Tier 1 suppliers implemented internal ESG (RBA) educational training with a 100% completion rate	<ul style="list-style-type: none">Tier 1 suppliers implement internal ESG (RBA) educational training with a 100% completion rate	<ul style="list-style-type: none">Tier 1 suppliers implement internal ESG (RBA) educational training with a 100% completion rate	<ul style="list-style-type: none">Tier 1 suppliers implement internal ESG (RBA) educational training with a 100% completion rate
Supplier ESG (RBA) Questionnaire Survey	<ul style="list-style-type: none">Significant suppliers carried out ESG (RBA) questionnaire survey with a 100% completion rate	<ul style="list-style-type: none">Significant suppliers carry out ESG (RBA) questionnaire survey with a 100% completion rate	<ul style="list-style-type: none">Significant suppliers carry out ESG (RBA) questionnaire survey with a 100% completion rate	<ul style="list-style-type: none">Significant suppliers carry out ESG (RBA) questionnaire survey with a 100% completion rate
Supplier ESG (RBA) Audit	<ul style="list-style-type: none">The second round of ESG (RBA) Review 3-Year Plan of significant suppliers was launched in 2022-2024; 34% completed in 2022 (100% of first round of significant supplier ESG Review completed in 2018-2021)Included Non-Tier 1 Significant suppliers into the sustainability evaluation, and the questionnaire audits were completed for 59 suppliers	<ul style="list-style-type: none">Second round of significant supplier ESG (RBA) Review 3-Year Plan enacted 2022-2024Include Non-Tier 1 Significant suppliers into sustainability evaluations	<ul style="list-style-type: none">Third round of significant supplier ESG (RBA) Review 3-Year Plan to be enacted 2025-2027Include key issues of climate change, water safety, zero carbon emission, and use of renewable energy as key audit focusesExpand evaluations to Non-Tier 1 Significant suppliers	<ul style="list-style-type: none">Continue implementing significant supplier ESG (RBA) Review PlanExamine significant suppliers' implementation objectives, effectiveness of zero carbon emissions, and use of renewable energyExpand evaluations to Non-Tier 1 Significant supplier sustainability evaluations



Outcome	Short-term target	Medium-term target	Long-term target
2022	2023	2024-2028	After 2028
Continuous Supplier Improvement			
<ul style="list-style-type: none">Implemented ESG (RBA) Review of significant suppliers in 2022, proposed 45 specific improvements requests for 35 suppliers, and assisted suppliers to complete 100% improvementLaunched long-term counseling plans for 24 major carbon emission suppliers, implemented questionnaire inventory in 2022 to control the suppliers' carbon reduction progress to facilitate future promotion of carbon reduction measures	<ul style="list-style-type: none">Continue with implementation of second round (2022–2024) significant supplier ESG (RBA) Review, and assist suppliers to make 100% of audit-required continuous improvementsContinue with long-term counseling plans for major carbon emission suppliers to achieve mid-term carbon reduction objectives	<ul style="list-style-type: none">Continue with the implementation of the third round of (2025–2027) ESG (RBA) Review of significant suppliers, and assist suppliers to make 100% of audit-required continuous improvementsContinue with long-term counseling plans for major carbon emission suppliers to achieve mid-term carbon reduction objectives	<ul style="list-style-type: none">Continue with the implementation of ESG (RBA) Review of significant suppliers and assist suppliers to make 100% of audit-required continuous improvementsContinue with long-term counseling plans for major carbon emission suppliers to achieve the long-term objective of zero carbon emission from mid-term carbon reduction objectives
Responsible Minerals Management			
<ul style="list-style-type: none">Purchased conflict-free raw materials, and conducted responsible minerals due diligence on relevant suppliers; Compliance rate of responsible minerals reached 100%	<ul style="list-style-type: none">Purchase conflict-free raw materials, and conducted responsible minerals due diligence on relevant suppliers; Compliance rate of responsible minerals to reach 100%	<ul style="list-style-type: none">Purchase conflict-free raw materials, and conducted responsible minerals due diligence on relevant suppliers; Compliance rate of responsible minerals to reach 100%	<ul style="list-style-type: none">Purchase conflict-free raw materials, and conducted responsible minerals due diligence on relevant suppliers; Compliance rate of responsible minerals to reach 100%
Supplier Management			
<ul style="list-style-type: none">After remove one-time transactions, the sustainability risk investigation was implemented for 100% of suppliers with annual transaction volume exceeding NT\$2 million (Tier 1 Significant suppliers) in accordance with the 3-year plan	<ul style="list-style-type: none">After remove one-time transactions, the sustainability risk investigation was implemented for 100% of suppliers with annual transaction volume exceeding NT\$2 million (Tier 1 Significant suppliers) in accordance with the 2022–2024 3-year plan	<ul style="list-style-type: none">Sustainability risk investigations extend to upstream suppliers which cover 30% of Non-Tier 1 Significant suppliers	<ul style="list-style-type: none">Sustainability risk investigations extend to upstream suppliers which cover 30% of Non-Tier 1 Significant suppliers

5.1 Types of Supply Chain

The VIS supply chain covers a wide range from domestic and foreign machinery equipment suppliers, components suppliers, raw materials (including 8-inch wafers, process chemicals, gases, photoresist, and sputtering targets), engineering, services, office supplies (including computers and 3C equipment), information software, and labor outsourcing (security guards, cleaning, dormitories, shuttle bus). There were more than 1,200 cooperating suppliers all over the world in 2022.

In 2022 the VIS production lines were still in the application of power management, flat panel displays, on-board electronics, fingerprint sensor, IoT, and MEMS, so there were no major changes in the entire supply chain structure as compared to the past. Our suppliers can be divided into four major types: equipment and parts, materials, factory affairs and engineering, automation and commodities. Among them, the suppliers of materials and equipment and parts have more significant impacts on VIS daily operations and production.

5.2 Sustainable Supply Chain Management Strategies

VIS has established the sustainable supply chain management framework to implement supply chain management via four major strategies and to compose sustainable supply chain roadmap via eight major aspects. Based on the identification of supply chain sustainability risk issues, we have strengthened the supply chain resilience, promoted the suppliers' sustainability performances in order to establish long-term partnership with the supply chain, drive the joint growth of suppliers, exert the key role and influence of supply chain, and assist VIS in enhancing industrial competitiveness.

In order to implement the commitment of supply chain development, VIS has established the supply chain sustainable management process flow mechanism with circulating four major stages. All suppliers (including new suppliers and existing suppliers) have been requested to sign the Supplier Code of Conduct and score of at least 60 in the annual SAQ questionnaire to become qualified suppliers. They can be constantly enhanced via the positive cycle every year. In addition to ensuring suppliers to continuously comply with the VIS Supplier Code of Conduct, we have also led the continuous improvement of supply chain with proactive commitment and establishment of sustainable actions with upstream suppliers to jointly create a responsible, sustainable, and mutual benefitting supply chain of semiconductor industry.

VIS has established the sustainable supply chain via four major management mechanisms and eight major aspects.



5.2.1 2022 Supply Chain ESG Action Plan and Results

Corresponding Company Overall Strategies	Sustainability Aspect	Management Mechanism	Action Plan	Project Objectives	Project Results
Establishment of Friendly Workplace	Strategic Cooperation	Regular Audit of Commitment Specifications	<p>Estimating Recruiter Regulatory Compliance.</p> <p>VIS proactively protects foreign employees' human rights and launches a series of human rights protection projects, continually conducting foreign worker human rights risk assessment targeting brokers. The assessment focuses on related regulations of "Freely Chosen Employment" in RBA Code of Conduct, including freedom to change job, voluntarily work and leave employment, no need to pay any fees under any circumstance, employer and brokers may not hold employees' identity or immigration documents, and no irrational restrictions of their movements.</p>	100% Zero payment policy for foreign employees in order to protect the human rights and enhance friendly workplace.	<ul style="list-style-type: none"> In 2022, close to 100 foreign employees benefitted from the zero hiring payment project, and VIS has paid the full amount of associated cost of over NT\$3 million 100% of labor agencies have signed the Supplier Code of Conduct to promise to comply with RBA specifications. Even the dormitory environment is beautiful, thus providing foreign employees a comfortable living environment In 2022 there were no complaints from foreign employees about any fee being charged or any other illegal matter
Environmental Sustainability	Environmentally Friendly	Continuous Improvement	Pursue low carbon supply chain and continue with Scope 3 Supply Chain Carbon Reduction Action. The first step is to investigate the perception and current status of carbon emission management of suppliers, and then counseling must be provided in accordance with different progresses of suppliers to gradually implement the carbon reduction results of Scope 3.	To implement the Scope 3 Carbon Emission Management, major carbon emission suppliers must be targeted from advocacy, gradual carbon reduction to the zero carbon objective.	<ul style="list-style-type: none"> 100% advocacy of the VIS Supplier Code of Conduct with respect to major carbon emission suppliers (accounting for 90% of the total) 100% implementation of inventory of suppliers' carbon reduction management to control the suppliers' awareness and current status of carbon emission management Encourage the suppliers who have not yet started carbon emission management to apply for the certification of ISO 14064-1 (Greenhouse gas emission) & ISO 14067 (Carbon footprint)
Implementation of Company Governance	Responsible Mines	Risk Assessment	<p>As a member of RMI (Responsible Mineral Initiative), VIS has paid regular attention to the latest information related to responsible minerals procurement published by RMI and used the responsible survey template CMRT (Conflict Minerals Reporting Template) and EMRT (Extended Minerals Reporting Template) developed by RMI. We have launched due diligence on the supplier and required that the mineral smelter/refiner used by the supplier must be in compliance with the Responsible Minerals Assurance Process (RMAP) of RMI. New suppliers must sign the Environmental Protection and Social Responsibility Commitment and promise to comply with the responsible minerals procurement policies of VIS and submit the qualified CMRT/EMRT report to become qualified suppliers of VIS.</p> <p>The procurement department has formulated a hierarchical management mechanism with respect to supplier risks. When there is any supplier using conflict minerals, the procurement department must take management measures immediately in accordance with the mechanism to ensure that all products used by VIS and the supply chain are from countries/regions without any conflict minerals.</p>	Reduce the supply chain to ensure that 100% of products do not contain any conflict mineral.	<ul style="list-style-type: none"> Educate 100% of suppliers on the VIS responsible minerals policies, and require that they comply in implementation After risk assessment, 100% of minerals smelters/refiners of relevant supply chain are not from any country or region of high risk conflict mines 100% of suppliers have replied with the CMRT/EMRT forms indicating zero use of conflict minerals In accordance with the results of suppliers' survey, the CMRT/EMRT forms of VIS must be publicly disclosed on the website for stakeholders to easily access relevant information VIS will affix a Conflict-Free Label on the exterior of the product box

5.2.2 Commitment of Sustainable Development of Supply Chain

Commitment of Supply Chain Management

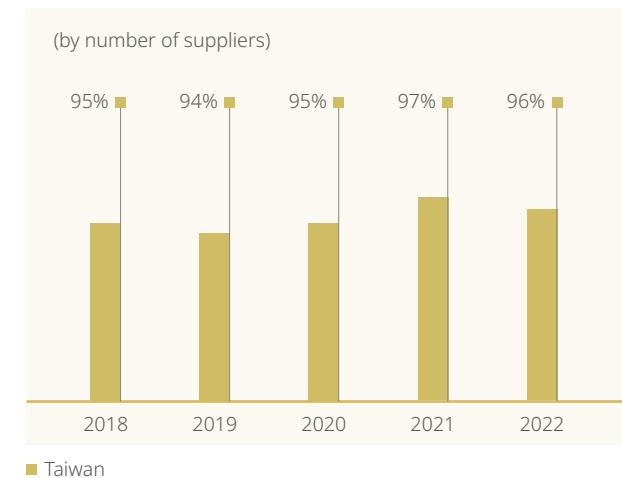
The objective of VIS' supply chain management is set as sustainable development. Our commitments to environment, society, and company governance are publicly disclosed on the company website. This helps us convey VIS' supply chain management requirements, advocate for joint creation of sustainable supply chains with our supply chain partners, and do our part for responsible procurement and proper supply chain development. We hope to generate positive impacts on the global semiconductor industry supply chain while continuing to provide customers with responsible and sustainable products and services. For VIS' supply chain development commitments, please see: https://www.vis.com.tw/tc/cs_supplier_sustainability

Commitment of Local Procurement

VIS has been dedicated to establishing a high quality, steady, and low carbon local supply chain to actively enhance the proportion of local suppliers. Even though a majority of procurements in the semiconductor industry, such as machinery equipment, some raw materials, and software, still rely on foreign imports, VIS has still been devoted to realization of localized procurement strategies to support local industrial chains and to create local employment opportunities. In addition to risk dispersion and cost reduction to strengthen the resilience of supply chain, the local procurement can lead to greatly reduced transportation path to contribute to the reduction of carbon emission on Earth.

In 2022, more than 1,200 suppliers all over the world (including Taiwan and Singapore) cooperated with VIS; the proportion of local suppliers (including branches, agents, and distributors) exceeded 75%. Out of total procurement exceeding NT\$30 billion, we created more than NT\$23 billion of local procurement.

Proportion of Local Procurement, 2018-2022



Note: The local procurement involves suppliers with direct transaction with VIS.

5.3 Supplier Risk Assessment

For VIS to understand the sustainable development of supply chain and fully control the sustainability risk of supply chain, starting from December 2020 we have conducted supplier sustainability risk investigation and assessment via the three risk identification stages as shown in the figure below to identify the suppliers with high potential risks in the four aspects of environment, society, governance, and commerce, and to provide audit and counseling for suppliers with higher risks to ensure their risks can be effectively controlled and reduced.

Supplier Sustainability Risk Identification Process Flow



Tier 1 Suppliers in the Most Recent 3 Years, and Proportion of SAQ (Self-assessment Questionnaire) Completion



5.3.1 Assessment and Management of Four Major Aspects for Screening of Important Suppliers

Environment	Society	Governance	Commerce
<ul style="list-style-type: none"> Environmental Management System Carbon Risk Management Greenhouse Gas Management Energy and Resources Utilization Efficiency Waste Disposal Management 	<ul style="list-style-type: none"> Labor Rights and Interests Labor Management Mechanism Human Rights Management Social Participation Occupational Safety and Health Management 	<ul style="list-style-type: none"> Continuous Operation Plan Sustainable Governance Policies and Organization Business Ethics Responsible Minerals Management Information Security Management 	<ul style="list-style-type: none"> Market Share Supply Track Record Production Capacity Price Competitiveness
Definition Standard for High Risk Supplier: <ul style="list-style-type: none"> Those without clear carbon reduction management policies and strategies Those not adopting any environmental management action 	Definition Standard for High Risk Supplier: <ul style="list-style-type: none"> Those not assessing the human rights risks of operation factory site and supply chain 	Definition Standard for High Risk Supplier: <ul style="list-style-type: none"> Those not implementing sustainable management of upstream suppliers Those with sustainable management not complying with regulatory requirements Those with insufficient information disclosure transparency 	Definition Standard for High Risk Supplier: <ul style="list-style-type: none"> Single supplier

5.3.2 Assessment and Management of Three Specific Risks for Screening of Important Suppliers

When VIS is conducting the risk assessment for important suppliers, we assess and manage the three specific risks of specific country risk, specific industrial risk, and specific commodity risk, as described below:

Specific Country Risk: The risk assessment must be conducted with respect to the negative impacts of politics, society, economy, or governance of a country. The Russo-Ukrainian War has direct impacts on the supply chains of some raw materials; in addition, VIS has also complied with the Code of Conduct of RBA with implementation of responsible minerals management, prevention of labor persecution and child labor, and refusal of supplies from restricted countries or regions, including Democratic Republic of the Congo (DRC) and surrounding countries and regions.

Specific Industrial Risk: The risk assessment must be conducted with respect to the negative environmental, social, and governance impacts related to the unique features from the perspectives of labor force condition, energy consumption, resources intensity, and emission or pollution potential (such as manufacturing industry, service providers, agriculture) of the industry. There is global supply for helium industry is running short, yet the demand for helium of semiconductor industry is rising, thus leading to tight global supply.

Specific Commodity Risk: The risk assessment must be conducted with respect to the negative environmental, social, and governance impacts related to the supply chain structure, labor force condition, land use and resources intensity, energy consumption, emission, and toxicity or pollution potential of materials (such as metals, fossil fuel, woods, beans, cotton) of commodities. As for the 3M coolant which accounted for 80% of the global semiconductor industry's supply in 2022, their Belgian factory was shut down by the government due to environmental protection issues. This lead to a severe imbalance between supply and demand for coolant.

After aforementioned specific risk assessment, the procurement department has identified eight important suppliers with specific high sustainability risks: 4 suppliers with specific country risks; 3 suppliers with specific industrial risks; 1 supplier with specific commodity risk.

5.3.3 Important Suppliers Sustainability Risk Investigation and Implementation Results



5.4 New Supplier Screening

As for potential new suppliers, VIS will audit the ESG records of new suppliers at the initial new supplier screening stage to examine and assess the potential ESG risk of new suppliers:

- Check the suppliers for any record of environmental/safety/health violation via the [transparent footprint website](#).
- Check the suppliers for any record of labor/human rights violation via the [Judicial Yuan website](#).
- Consider the potential risk of corporate governance, VIS is also inquired whether the company is involved in disputes over management rights, falsification of financial statements, corporate fraud, corruption, bribery, unfair competition or other illegal incidents during new supplier screening.
- Besides above-mentioned two management inquiries, the supplier's business capabilities and conditions have also been investigated, including industrial track records, quality, technical capabilities, experiences and amount of capital to ensure that the supplier is capable of contract performance to avoid the future risk of contract performance failure.

If any poor records are discovered during an audit, VIS will evaluate whether or not to provide further counseling or to refuse to list the supplier as qualified. In addition, we also provide the RBA Supplier Code of Conduct to suppliers, to help them understand VIS' requirements; suppliers are required to comply with and sign it.

Supplier Code of Conduct

VIS has regarded suppliers as important partners and been dedicated to the long-term cooperation with them to jointly establish and develop stable, competitive, and sustainable supply chain partnership. For active investment in the supply chain development to ensure the joint realization of sustainable development objectives with suppliers, VIS has formulated the Supplier Code of Conduct to be complied with by all suppliers. All regulations of this Code of Conduct are formulated based on the Code of Conduct of Responsible Business Alliance (RBA) while referring to the UN Guiding Principles on Business and Human Rights and other commonly adopted international human rights regulations, including the ILO Declaration on Fundamental Principles and Rights at Work and the UN Universal Declaration of Human Rights. The content includes five parts: labor, health and safety, environmental and ethics regulations, and management system.

Human Rights and Labor: Suppliers will be required to pay attention to the management of relevant issues, such as forced labor, child labor, working conditions (for example: working hours, physical/mental requirements of workplace, wages, benefits), occupational safety and health, discrimination and harassment, freedom of association, and collective bargaining.

Environment: They must comply with the regulations of environmental permits and reports, pollution prevention and resources reduction, hazardous substances, solid wastes, air emission, material restrictions, water resources management, energy consumption and greenhouse gas emission, biodiversity, prohibition of deforestation, or land protection.

Business Ethics: They must adhere to the principles of business integrity, no unlawful advantage, information disclosure, intellectual properties, fair commerce, advertisement and competition, identity protection and anti-retaliation, responsible mineral procurement, privacy, avoidance of conflict of interest, compliance with import/export laws and regulations, confidentiality obligation covering the anti-corruption, and management of conflict of interest and anti-competition.

In addition to regulating the management of human rights, labor, environment, and business ethics, the content also covers health and safety management and management system to be in compliance with RBA regulations while strengthening the ESG management of suppliers. In 2022 the management concepts of biodiversity, zero deforestation or land conservation were further included into the VIS Supplier Code of Conduct to be conveyed to the suppliers. All suppliers of VIS will be requested to protect or promote natural habitats, biodiversity, or soil management to avoid nutrient loss, erosion and land pollution.

100% of suppliers have signed the new VIS Supplier Code of Conduct. In addition to requiring all suppliers to comply with the laws and regulations of their respective countries and regions, VIS has also provided the regulations for labor, safety and

health, environment, business ethics, and management system. Meanwhile, all suppliers must convey such standard requirements to the next tiers of suppliers and supervise their compliance.

The entry of potential new suppliers into the selection stage must be in accordance with the regulations of the New Supplier/Material Evaluation Measures and of the Management Measures for Safety and Health and Environmental Audit of Third Parties. Potential supplier candidates must sign and guarantee to comply with the VIS Corporate Social Responsibility Policies and the VIS Supplier Code of Conduct and be qualified by the quality evaluation process flow to become qualified suppliers, so that VIS can place orders to purchase from them.

The evaluation procedures include preliminary survey and field audit. The supplier's quality management department must implement the preliminary survey and specifications review while inviting the Risk and Environmental Safety Management Department and relevant departments to conduct the audit procedures including quality, environmental protection, safety and health, and labor rights and interests. In the end the cross-department organizations for quality management, procurement, material management, and risk and environmental safety management must select qualified suppliers based on the results of survey and audit.

In addition, in order to ensure that all selected material suppliers can be in compliance with VIS' green product policies, these suppliers must submit inspection reports and safety data sheets (SDS) in accordance with the regulations to be reviewed by the responsible VIS department; and they are further required to sign the commitment letter of prohibition (restriction) of hazardous substances meeting the international regulations of RoHS and REACH as the declaration of suppliers' commitment to environmental protection, to ensure that all VIS and supplier products meet VIS' green product policy requirements, RBA regulations on responsible minerals management, and customers' product specifications.

5.4.1 Supplier Screening Definition

In order to establish the long-term, steady partnership with suppliers, VIS has defined Tier 1 suppliers, Tier 1 Significant suppliers, and non-Tier1 Significant suppliers as shown below:

- **Tier-1 Suppliers:**

All suppliers with more than one transaction and with total annual transaction amount of NT\$2 million or more.

- **Tier 1 Significant Suppliers:**

Based on the considerations of ESG risks and business transactions in the supply chain. After evaluation, all suppliers with major negative ESG impacts, and major suppliers in the top 85% of cooperative procurement, must fall within this category.

- Non-Tier1 Significant suppliers are the significant suppliers, which include the Tier 1 Significant suppliers and next Tiers of significant suppliers.

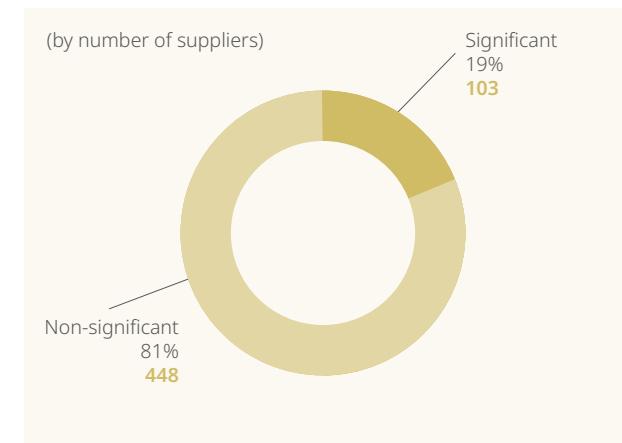
VIS screens out Tier 1 suppliers based on the numbers of annual transactions and amounts to be controlled, and carry out hierarchical management of Tier 1 Significant suppliers and non-Tier 1 Significant suppliers. There was a total of 551 Tier 1 suppliers in 2022. Of these, 103 were Tier 1 Significant suppliers, and 59 were non-Tier 1 Significant suppliers.

Suppliers Screening Results:

Suppliers Screening	2022
1.1 Number of Tier 1 Suppliers?	551
1.2 Number of Tier 1 Significant Suppliers? (including 8 high sustainability risk significant suppliers)	103
1.3 Procurement from Tier 1 Significant Suppliers as Proportion of Total Procurement	85%
1.4 Number of Non-Tier 1 Significant Suppliers?	59
1.5 Number of Tier 1 Significant Suppliers and Non-Tier 1 Suppliers?	162

Note: VIS must implement corresponding hierarchical management measures with respect to suppliers of different categories.

2022 Ratio of Significant to Non-significant Tier 1 Suppliers



5.4.2 Educational Training

Due to the COVID-19 pandemic in 2022, VIS has composed training materials for Supplier Code of Conduct for ESG supplier educational training to be distributed to 1,252 suppliers with detailed description of the content of the VIS Supplier Code of Conduct meeting RBA regulations. The audit deficiencies frequently found in semiconductor supply chain in the aspects of environmental protection, society, and economy in recent years have been summarized to serve as the reference for the suppliers to be trained to avoid any violation. This has provided these suppliers with clear and specific direction of improvement to quickly point out the possible blind spots in the practice of sustainability promotion and to demonstrate the effectiveness of sustainability training.

To enhance the effectiveness of supplier management, the procurement department must provide procurement personnel with RBA educational training from RBA terms to audit skills, along with the management connotation of newly added clauses of biodiversity, no deforestation, or land protection, and the supplier questionnaire survey and on-site audit have been implemented to bring the management connotation of biodiversity to the supply chain; the audits of 35 significant suppliers led to 45 new suggestions, and these suppliers have been provided with counseling to complete the improvement, so that they have been led to continuous improvement.

In addition, to ensure the stable quality of raw materials provided by suppliers, the quality department must implement quality system audit on each supplier every year, and all auditors have been granted the qualification of ISO 9001 leading auditor to ensure the effectiveness of audit process and result.



5.5 Supplier Assessment and Development

5.5.1 Supplier Assessment

VIS has taken the evaluation and development management of suppliers very seriously. We have adopted the hierarchical management measures for the evaluation to gradually increase the management measures in accordance with the importance of supplier. With the implementation of desk surveys, on-site audits, second-party audits, and RBA Validated Assessment Program (VAP) outsourced to third-party impartial organizations, we have gradually enhanced suppliers' basic ESG awareness, and understood the suppliers' current implementation status. This way, we can control all risks and provide suggestion and counseling for improvement, convey the future strengthening direction, and regularly track their effectiveness, thus leading to continuous improvement of VIS suppliers and forming a positive cycle.

The evaluation methods and mechanisms used by VIS are ISO related certifications, carbon footprint certification, and RBA specifications.

The statistics indicate that there are a total of 551 Tier 1 suppliers, and the sustainability questionnaire survey has been implemented for 100% of them; a 3-year plan has been implemented for a total of 103 significant suppliers, and the second round of on-site sustainability audits will be implemented for 100% of them in the 2022–2024 period (the first round of audits was completed in 2019–2021). In 2022 the on-site audits for 35 significant suppliers were completed in accordance with the plan, and the RBA Validated Assessment Program (VAP) was implemented for 7 significant suppliers by a third party impartial organization.

As for the supplier evaluation, in addition to the desk survey for 551 suppliers and on-site audits for 35 suppliers conducted by the procurement department, the risk and environmental safety management department also conducted the annual desk survey of environment/safety/health/fire protection laws and regulations for 49 suppliers; the quality department conducted the quality system audits for 82 suppliers. There was a total of 717 audits (both desk survey and on-site audit) in 2022, accounting for 57% of 1,252 total suppliers.

VIS has conducted cross-department supplier evaluation once every six months, where procurement, quality, and industrial safety departments have gotten together to evaluate the performance of suppliers in the past six months from the five major perspectives of quality, delivery time, cost, safety & environmental protection, and sustainability governance, which is the QCDSS evaluation. Different weights are granted based on the importance of different factors; sustainability has been included in this evaluation since 2019, and granted weights of 5%–15%.



The result of evaluation in 2022 indicates that the performances of all suppliers were normal, with scores of 80 or higher; however, given such good performance, VIS still requires all suppliers to adhere to the attitude of continuous improvement to enhance their competitiveness. Suppliers are required to propose the improvement plans with respect to the deficiencies found during the audits, and the improvement measures must be completed within 3 months; the major improvement activity can be extended once after being approved by VIS, and the suppliers who fail to pass the evaluation after the improvement by the deadline will be disqualified from the list of qualified suppliers.

For suppliers with excellent or poor performance in supplier sustainability evaluation, there are rewards or elimination mechanisms to provide encouragement or punishment as appropriate.

Suppliers ranked at level C will be disqualified as qualified suppliers and excluded from contracts. Suppliers ranked at level B will have their procurement levels or quotas reduced; improvement measures must then be completed within 3 months and confirmed by VIS before the transactions with them can be restored to normal. The 2022 evaluations indicated no suppliers with poor scores.

If a supplier's ESG performance is outstanding with ESG single score of 90 or higher, then in addition to increasing their procurement levels or quotas, the supplier will be prioritized for new demands in the future as the specific incentive to encourage suppliers to emphasize and improve ESG management. There were two highlights from the 2022 evaluations:

- **One Software Supplier:** With outstanding ESG scores, and being granted a GCSA Silver Award for two years in a row, VIS has granted a new demand (NBL design) order to this company.

- **One Wafer Supplier:** In addition to the outstanding score in ESG evaluation, the supply chain delivery risk has also been taken into consideration, so we have signed an LTA (Long Term Agreement) with this company for the first time, as a reward and for the purpose of supply risk management.

In addition, VIS will give out awards for all suppliers with outstanding ESG performance during the annual Supplier Day as the encouragement. (Due to the pandemic in 2022, this event was postponed to 2023.)

5.5.2 Supplier Development

The sustainability on-site audits implemented for 35 significant suppliers in 2022 suggested a total of 45 improvement measures based on VIS counseling or proposed by the suppliers themselves; corrective measures were all proposed within 3 months to complete the deficiency improvement without any supplier not meeting VIS regulations will continue to strengthen suppliers' capabilities via project counseling and educational training in response to the ever-changing sustainability trend and help suppliers to establish the awareness and capabilities of sustainability to enhance their sustainability.

After analysis, audit results showed that out of 45 improvements, a portion of significant suppliers' sustainability policies did not include all RBA management requirements in detail. Examples include not having formulated anti-forced labor, anti-discrimination/anti-harassment (e.g., based on gender, skin color, ethnicity, religion, etc.), and anti-unfair treatment policies/statements (e.g., harassment, assault, corporal punishment, physical and mental oppression, etc.); and not having introduced ISO 45001 or other occupational health and safety management systems. After completing education and guidance, all suppliers have reached a high level of compliance. After they create and implement improvement plans, improvements are confirmed by the procurement department.

The procurement department launched an in-depth supplier counseling plan with respect to climate change (CDP) management in 2022 to cooperate with suppliers to begin with carbon reduction to achieve the goal of net zero emission. After carbon inventory, VIS conducted questionnaire survey for 29 major carbon emission suppliers in 2022 to understand the suppliers' awareness of this issue and current status in order to implement advocacy and provide counseling. The suppliers have been encouraged to pursue ISO 14064-1 (organization greenhouse gas) or ISO 14067 (Product carbon footprint) certificates to serve as the basis for continuous promotion of net zero project.

Climate Change	Company A	
Carbon Reduction	<ul style="list-style-type: none">• 2030 carbon emissions reduction will be a 35% reduction as compared to 2016 (Scope 1 + Scope 2)• 2030 carbon emissions reduction will be a 15% reduction as compared to 2020 (Scope 3)	
Net Zero Emissions	2050 Net Zero Emission	
Other Climate Objectives	<ul style="list-style-type: none">• 2025 GHG density is to be reduced by 10% as compared to 2015• Renewable energy consumption in 2025 will reach 27%	
Organization Greenhouse Gas	Self-examination	Progress: The self-examination data has been provided
	Third Party Verification (ISO 14064-1)	Progress: A valid third-party ISO 14064-1 Organization Greenhouse Gas Verification has been provided
Product Carbon Footprint	Self-examination	Progress: The self-examination data has been provided
	Third Party Verification (ISO 14067)	Progress: A valid third-party ISO 14067 Organization Greenhouse Gas Verification has been provided

Note: Supplier CDP questionnaire survey.

Also, VIS has a training program to support one major wafer supplier to enhance the overall ESG capability. The cross functional departments, include Public Relations, HR, Facility, Safety and Procurement launched an in-depth supplier counseling plan with respect to optimize the overall ESG capability. Finally, the supplier decided to apply for DJSI project.

In accordance with the characteristics and requirements of suppliers of different industries, VIS has developed four sectors of sustainability questionnaires, including software, technology, service, and commodity. Based on the requirements of questions of questionnaires, suppliers can easily understand the industry requirement standard from VIS. In addition, if the procurement department identifies a success performance/practice during a significant supplier sustainability audit, it will share with other suppliers as benchmark learning.

The supply chain sustainable management of Supplier Day activity, originally scheduled by VIS for 2022, was postponed to 2023 due to the pandemic. The expectation is to provide the supply chain with opportunities for observation, discussion, and promotion of long-term counseling projects to continuously towards the sustainable supply chain.

5.5.3 Results of Implementation of Supplier Evaluation and Development

The coverage and progress of supplier evaluation:

Supplier Evaluation	2022	Objectives of 2022
1.1 Total suppliers evaluated by questionnaire surveys/on-site audits	586 Questionnaire: 551/ on-site audit: 35	<ul style="list-style-type: none"> Number of suppliers: 584 Questionnaire: 551/ on-site audit: 33 Proportion of significant suppliers: 100%
1.2 Proportion of significant suppliers evaluated	100%	100%
1.3 Total high risk suppliers evaluated to have major/potential negative impacts	8	NA
1.4 Proportion of approved improvement measures of high risk suppliers evaluated to have major/potential negative impacts	100%	NA
1.5 Total terminated high risk suppliers evaluated to have major/potential negative impacts	0	NA

Coverage and progress of suppliers' improvement measures:

Supportive Suppliers Improvement Measures	2022	Objectives of 2022
2.1 Total suppliers implementing supportive improvement measures	<ul style="list-style-type: none"> 45 (measures) 35 (suppliers) 	<ul style="list-style-type: none"> Number of suppliers: 35
2.2 Proportion of high risk suppliers evaluated to have major/potential negative impacts implementing supportive improvement measures	100%	NA

Proportion of significant suppliers capable of establishment:

Significant Suppliers Capable of Establishment	2022	Objectives of 2022
3.1 Total significant suppliers capable of establishment	29 suppliers (Scope 3 emissions program)	Number of suppliers: 20
3.2 Proportion of significant suppliers capable of establishment	18% (29/162)	Proportion of suppliers: 20%

Analysis of supplier desk audit by questionnaire and on-site audit:

There are 31 suppliers have a valid RBA VAP verified assessment report, 4 suppliers have a valid SA8000 verification certificate and 24 suppliers have public its ESG Report among total 551 Tier 1 suppliers.

In addition, we found some weaknesses areas to improve, for example there are around 15% of suppliers still not have organization that promotes corporate sustainability of RBA, and didn't have a policy related to corporate sustainability management. Also, most of suppliers didn't have corresponding actions for the management of biodiversity and conservation of forests. VIS will focus on the sustainability audit findings to communicate and develop suppliers for continue improvement.

5.5.4 Third Party Certification and Public Disclosure

The VIS sustainability report has been certified by the third party international certification company DNV. The content of this sustainability report has been disclosed on the VIS website to be accessed by stakeholders.

5.6 Responsible Procurement

5.6.1 Statement of Responsible Minerals

100% of the OEM products produced by VIS in 2022 do not contain any conflict mineral, and the shipment packages of all OEM products have been labeled as "Conflict-Free". In terms of the management of Responsible Minerals, VIS has conducted due diligence on raw material suppliers in accordance with RBA requirements and in compliance with the Rule 13p-1 under the US Securities Exchange Act of 1934 to confirm that 100% of suppliers in 2022 purchased no conflict minerals (gold, tin, tantalum, tungsten, cobalt, mica) from specific countries (Democratic Republic of the Congo or its nearby countries).

VIS has disclosed responsible minerals management policies and implementation results on the official website, conducted due diligence in accordance with RBA specifications, and announced the CMRT and EMRT forms. For details please refer to the link: http://media-vis.todayir.com/20210907094024223009963_tc.pdf



5.6.2 Responsible Minerals Risk Assessment Mechanism

VIS formulated the supplier hierarchical management mechanism based on the different risk level which defined in the document of "Purchase Operation Instruction" (1L1-0011) as shown in the table below. When there is any supplier using any conflict mineral, the procurement department will take relevant management measures in

accordance with this mechanism to ensure that all smelters or refiners of the products used by VIS and our supply chain are from countries and regions without any conflict mineral.

Risk	Condition	Action
Level 1 (Low)	Supplier's products or raw materials do not use responsible minerals.	<ul style="list-style-type: none"> • VIS makes a declaration to supplier and requires the supplier to cooperate and sign back
Level 2	The supplier's products or raw materials use responsible minerals, but the source: did NOT originate from the Democratic Republic of Congo, and its surrounding region or other applicable areas ("Covered Countries") or are from recycled or scrap sources.	<ul style="list-style-type: none"> • VIS makes a declaration to supplier and requires the supplier to cooperate and sign back • Suppliers need to reply to "Investigation Spreadsheet" (Downloaded from RMI website) to understand the origin country of responsible minerals
Level 3 (High)	The supplier's products or raw materials use responsible minerals, but the source: did originate from the Democratic Republic of Congo, and its surrounding region or other applicable areas ("Covered Countries") or are from recycled or scrap sources.	<ul style="list-style-type: none"> • The supplier is required to propose a plan to replace the source of responsible minerals • Conduct an audit to check its control mechanism on suppliers, and request improvement reports for deficiencies, and fulfill the responsibilities of global citizens

In 2022 the listed conflict mineral metals used in VIS were tungsten and tantalum. These were evaluated at Level 2 in the table above. Our due diligence reveals that all suppliers have provided VIS with CMRT or EMRT reports in accordance with RBA specifications, proving that there are no smelters or refiners from the restricted countries or regions. Based on this, VIS has composed CMRT and EMRT to be uploaded to the [company website](#), facilitating stakeholder access.

If supplier disclose its smelter / refinery is in the high risk countries or areas, supplier shall stop to order from the restricted source and change the source immediately. Otherwise, VIS will stop the business with the supplier.

Smelter list is disclosed on RBA website. VIS is the member of RBA and will support supplier for the process of smelter source changing.

Non of supplier against Conflict-Free regulation in 2022.

5.6.3 Responsible Minerals Risk Management Mechanism and Alternatives

Based on VIS regulations, if a smelter/refiner disclosed by a supplier is from a restricted country or region, VIS will force the supplier to stop the original purchase and immediately switch to legal smelters or refiners for the purchase. There are a lot of legal and RMI-certified smelters or refiners so it is not difficult to find the source for such switch, and as a RBA member, VIS will also provide necessary counseling and assistance. If the supplier refuses to do so, VIS will immediately stop purchasing products from the supplier.

In addition, in terms of risk management, VIS has already established alternative sources (2nd source or even multi-source) with inventory in place. Therefore, even if any of the aforementioned situation takes place, VIS will have sufficient time to help suppliers deal with the switch to alternative source or to terminate the purchase from the supplier and switch to another supplier without being affected. Therefore, the procurement department can take a tough stance towards the supplier without compromising due to the concern of material supply, and perform the due diligence.

	2019	2020	2021	2022
Proportion of Revenue Accounted for by Products Containing Conflict Minerals	0%	0%	0%	0%
Products Containing Conflict Minerals as Proportion of Those Verified to be Conflict-free	0%	0%	0%	0%

* VIS did not use any conflict mineral

5.6.4 Responsible Minerals Due Diligence and Results Thereof

VIS has declared responsible minerals management policies among all suppliers, required that the final sources of suppliers must come from Conflict-Free Smelters in the certified approved table announced by RMI via the Responsible Minerals

Assurance Process (RMAP), established a reasonable certainty mechanism, and performed due diligence to acquire relevant certificate documents; as for the smelters not in the approved table of RMI certificate, the supplier's smelter has been requested to submit the application for certificate to RMI or any third party audit agency to be certified in order to ensure that all minerals used by VIS and the supply chain are in compliance with responsible mineral management.

In light of the fact that customers also care about the management information of responsible minerals, to facilitate customers' access to relevant management information, the procurement department must proactively disclose the latest forms of Conflict Minerals Reporting Template (CMRT) and Extended Minerals Reporting Template (EMRT) on VIS-Online to be inquired and downloaded by customers at any time.

In 2022 the supply chain survey was completed in coordination with the version upgrade of CMRT (Revision 6.22, 2022/05/11) and EMRT (Revision 1.1.1, 2022/11/04) of international organization RMI, indicating that we were in compliance with all regulations and that there are no products from conflict countries or regions. The latest VIS versions of CMRT and EMRT are disclosed on the VIS-Online website to facilitate customers' online access. Starting in April 2021, to support the legislative spirit of the US Dodd-Frank Act and to implement corporate social responsibility, VIS has placed the "Conflict-Free" label on our own OEM product packages, to declare that VIS' OEM products do not contain any conflict minerals.

The procurement department has also formulated a hierarchical management mechanism with respect to the supplier risks. When there is any supplier using the conflict mineral, the procurement department must immediately take relevant management measures in accordance with this mechanism to ensure that all products used by VIS and the supply chain are from countries/regions without any conflict mineral. The audit in 2022 indicated that all suppliers met the Conflict-Free policy.

Friendly Workplace

VIS is people-oriented while providing our employees with safe, healthy, challenging, and interesting working environment and educational training to assist them in self-enhancement and development of their strengths.

92.1 %

Retention rate of key talents of 92.1%

100%

Annual training plan achievement rate of 100%

0 Case

0 case of major occupational injury and disease



6.1 Talent Attraction and Retention

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Survey on Identification with Business Principles	<ul style="list-style-type: none">Coverage rate reaches 98.2%Recognition level of business philosophy reaches 77.3%	<ul style="list-style-type: none">Coverage rate reaches 98%Recognition level of business philosophy reaches 88%	<ul style="list-style-type: none">Coverage rate reaches 98.5%Recognition level of business philosophy reaches 88.5%	<ul style="list-style-type: none">Coverage rate reaches 99%Recognition level of business philosophy reaches 90%
Strengthening of Employee Communication	<ul style="list-style-type: none">Annual communication meeting completion rate of 100%Case closure rate of employee feedback of 100%	<ul style="list-style-type: none">Annual communication meeting completion rate of 100%Case closure rate of employee feedback of 100%	<ul style="list-style-type: none">Annual communication meeting completion rate of 100%Case closure rate of employee feedback of 100%	<ul style="list-style-type: none">Annual communication meeting completion rate of 100%Case closure rate of employee feedback of 100%
Turnover Rate	<ul style="list-style-type: none">Turnover rate of 9.5%	<ul style="list-style-type: none">Turnover rate of 5% -10%	<ul style="list-style-type: none">Turnover rate of 5% -10%	<ul style="list-style-type: none">Turnover rate of 5% -10%
Key Talents Retention Rate	<ul style="list-style-type: none">Key talents retention rate 92.1%	<ul style="list-style-type: none">Key talents retention rate \geq 97%	<ul style="list-style-type: none">Key talents retention rate \geq 97%	<ul style="list-style-type: none">Key talents retention rate \geq 97%
Ratio of Female Supervisor	<ul style="list-style-type: none">Ratio of female supervisor 19.1%	<ul style="list-style-type: none">Ratio of female supervisor 19%	<ul style="list-style-type: none">Ratio of female supervisor 20%	<ul style="list-style-type: none">Ratio of female supervisor 20%

In addition to promotion and salary adjustment for outstanding employees based on performance review, VIS also provides competitive welfare system to attract and retain competitive talents. In terms of welfare, we advocate a balance between work and life, and establish a friendly working environment by organizing various activities and promoting health-related lectures; we also provide diversified channels to collect employee feedback, and arrange employee training and development courses to encourage self-improvement of employees in order to achieve their personal career development.



Strategy

VIS will pursue like-minded talents via fair and open recruitment channels and treat them equally regardless of race, gender, age, religion, nationality, or political party. We only pursue appropriate employees without any discrimination and with emphases on character and talent, and they must be equipped with the company's four major core functionalities – integrity, customer orientation, value orientation, and commitment.



Commitment

Since its founding, VIS has always treated "talents" as the company's most important asset, and has been dedicated to creating a challenging and interesting working environment which allows continuous learning to attract outstanding professional talents of all fields to join this company to make it a diversified and innovative enterprise with stable growth.



Vision

Become a leading brand of special IC fabrication service.

Achievements and Objectives of Talent Recruitment

The achievements of campus relationship management in 2022 include:

1. A total of 10 academia-industry cooperation projects with 5 universities.
2. A total of 32 students from domestic and foreign universities and academia-industry cooperation projects participated in the summer internship programs.
3. A total of 19 campus recruitment activities involving more than 3,000 students.
4. Deepening the management of campus relationships in 15 universities by holding seminars and special lectures.

Recruitment Strategies

Short-Term Goals

- (1) Deepening campus management: strengthening the linkage with each target school by organizing various campus activities.
- (2) Establishing diversified recruitment channels: enhancing recruitment process efficiency via social media, campus activities, and training organizations for better talent recruitment.

Mid-to-Long-Term Goals

- (1) Becoming a top-notch brand of employer to attract outstanding talents.
- (2) Providing competitive overall salaries to attract and retain top-notch talents while rewarding the employees with outstanding performance and long-term contribution.

Talent Recruitment and Retention

Diversified Marketing of Employer Branding

In light of the fact that the employer branding is a major factor affecting the talent employment, VIS has actively managed the employer branding via different channels to explore the potential market of job seekers and cultivate the potential job seeker groups in the next 3 to 5 years. The promotion methods include: participating in campus recruitment activities, company supervisors sharing practical industrial experiences as alumni, academia-industry cooperation, summer internship programs, social media marketing, and deep cultivation of campus relationship. We share the company news, various employee activities, and recruitment information via the Facebook fan page of "Vanguard International Semiconductor Corporation"; the total number of accumulated fans has reached 5,487 in 2022, and the major audience is the group with the age of 18-44. The LinkedIn page of "Vanguard International Semiconductor Corporation" has accumulated up to 7,119 connections. These two major social media have become the employer branding channels for job seekers and the general public. VIS continues with investment of various

recruitment resources to expect students, potential job seekers, and the general public to understand the company's business philosophy and corporate culture via diversified employer branding marketing strategies to attract the like-minded talents.

Recruitment Costs in 2019-2022

Unit: NT\$

	2019	2020		2021		2022
Factory	Taiwan	Taiwan	Taiwan + Singapore	Taiwan	Taiwan + Singapore	Taiwan
Average Cost	8,904	9,699	9,783	6,251	8,345	5,582

Note: recruitment cost of new employee = Annual recruitment cost /Annual number of new employees.

Summer Internship Program

In 2022, outstanding domestic and foreign students were selected via the recruitment channels of professors of various universities, internal employees, and social media to participate in the internship programs in the company's key development units. A total of 32 interns participated in the summer internship programs of VIS. During the internship period, the instructions of exclusive career mentors will help students apply what they learn to the internship project and cultivate potential talents to be dedicated to the semiconductor industry. In order to deepen the linkage with outstanding talents and recruit like-minded partners to join the company, VIS has sent pre-offer letter to interns with outstanding performance during the internship period. The pre-offer letters have been sent to more than 70% of interns in 2022.



Interns' project presentation



Orientation for interns

Academia-Industry Cooperation Project

VIS is a leading specialty IC foundry service provider which has invested resources in smart fabrication and management. Since 2020, the company has carried out the academia-industry cooperation with Department of Industrial Engineering and Management, National Yang Ming Chiao Tung University and completed several projects for effective enhancement of decision making quality and efficiency of in-plant production management. In 2022, we jointly established the "Intelligent Manufacturing and Management Laboratory" to cultivate digital transformation talents for the semiconductor industry. The "Intelligent Manufacturing and Management Laboratory" will continue the long-term cooperation between both parties, deepen the tight cooperation in recent years, and enhance the smart prediction and decision making capabilities of the enterprise via digital transformation; meanwhile, there will be mutual benefitting exchanges where the industrial experts of VIS will be the lecturers to share the practical scenarios of semiconductor fabrication and the digital transformation subjects, and the scholars of National Yang Ming Chiao Tung University will introduce the latest theories and trends of smart manufacturing and management in order to cultivate the semiconductor fabrication and management talents with theoretical and practical competence in Taiwan to bridge the theory-practice gap.

Hiring of Disabled

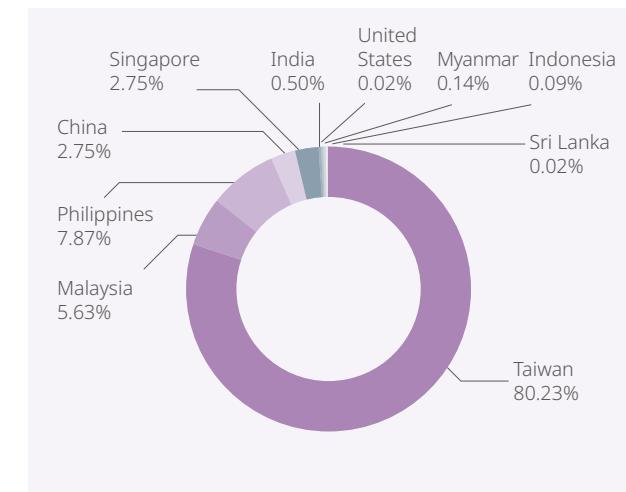
VIS has been hiring massagists with mental or physical disabilities since 2009. In 2020 new job positions such as factory cleaning and document management were added, and the job positions of campus recruitment representatives were added in 2022 to actively establish good and diversified job opportunities. A total of 61 people with disabilities were hired in 2022 accounting for 0.9% of total employees of the company, which is about 5% higher than the regulatory requirement. In addition to the instructions by senior employees, local employment service stations were also invited to carry out work design and visit counseling to help individual cases to adapt to the employment.

Labor Structure

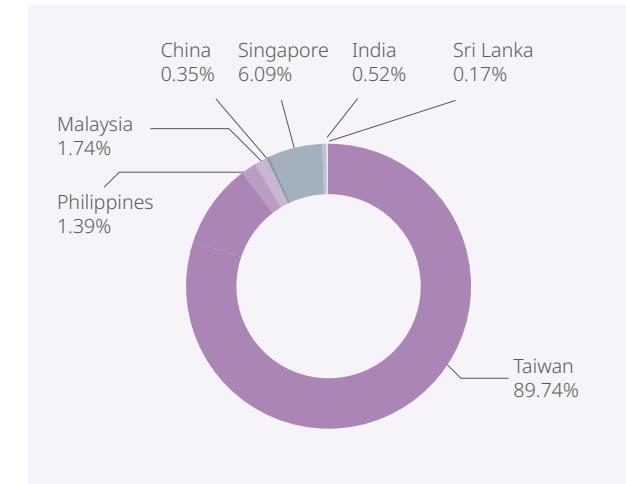
VIS has conducted talent recruitment process flow in accordance with international human rights conventions and human rights and employment related laws and regulations: no child labor is hired, and no discrimination based on race, religion, skin color, nationality, age, gender, sexual orientation, age, marriage, appearance, disability, or other legally protected situations. For employees from 12 countries all over the world, VIS is dedicated to creating a friendly working environment respecting diversified ethnic groups, blending cultures of multiple countries, and constant promotion of exchanges among employees from various ethnic groups.

The total number of employees of VIS has reached 6,641 by the end of 2022, of whom those working in Taiwan account for 87%, and employees from other countries account for 13%. About 80% of employees are Taiwanese, and about 20% are non-Taiwanese. 96.3% of employees of VIS are non-regular employees, and 3.7% of them are regular employees. Based on the job category, there are a total of 575 supervisors, 3,171 professionals and 2,895 technicians.

Share in total workforce



Share in all management positions, including junior, middle and senior management



Non-Employee Workers

There were around 15,450 non-employee workers in VIS in 2022, and there were around 33 workers in the Singapore Plant. The most common type is the construction subcontractor, and there were also a small number of security, cleaning, and restaurant workers. The difference between the number of non-employee workers in 2022 and 2021 is around 2,184.

Distribution of Numbers of Employees

Type	Type of Employment	Male		Female		Subtotal and Ratio	
		Number	Ratio of the Group	Number	Ratio of the Group	Number	Ratio of the Group
Gender		3,324	50.1%	3,317	49.9%	6,641	100.0%
Nationality	National	2,766	51.9%	2,562	48.1%	5,328	80.2%
	Foreigner	558	42.5%	755	57.5%	1,313	19.8%
Job Title	Supervisor	465	80.9%	110	19.1%	575	8.7%
	Professional	2,317	73.1%	854	26.9%	3,171	47.7%
	Technician	542	18.7%	2,353	81.3%	2,895	43.6%
Identity	Non-regular	3,215	50.3%	3,178	49.7%	6,393	96.3%
	Regular	109	44.0%	139	56.0%	248	3.7%
Age	30 and below	548	49.6%	556	50.4%	1,104	16.6%
	30 to 50	2,333	49.8%	2,348	50.2%	4,681	70.5%
	50 and above	443	51.8%	413	48.2%	856	12.9%
Education	High school and below	402	22.4%	1,396	77.6%	1,798	27.1%
	College	1,705	52.1%	1,569	47.9%	3,274	49.3%
	Master	1,162	77.1%	345	22.9%	1,507	22.7%
	Ph.D	55	88.7%	7	11.3%	62	0.9%

Note: This table includes employees in Taiwan HQ and the overseas subsidiaries.

Distribution of Numbers of Employees by Region

Type	Type of Employment	Taiwan						Singapore/US					
		Male		Female		Subtotal and Ratio		Male		Female		Subtotal and Ratio	
		Number	Ratio of the Group	Number	Ratio of the Group	Number	Ratio of the Group	Number	Ratio of the Group	Number	Ratio of the Group	Number	Ratio of the Group
Gender		2,770	41.7%	3,006	45.3%	5,776	87.0%	554	8.3%	311	4.7%	865	13.0%
Nationality	National	2,743	51.7%	2,561	48.3%	5,304	91.8%	23	95.8%	1	4.2%	24	2.8%
	Foreigner	27	5.7%	445	94.3%	472	8.2%	531	63.1%	310	36.9%	841	97.2%
Job Title	Supervisor	410	81.0%	96	19.0%	506	8.8%	55	79.7%	14	20.3%	69	8.0%
	Professional	1,969	72.5%	745	27.5%	2,714	47.0%	348	76.1%	109	23.9%	457	52.8%
	Technician	391	15.3%	2,165	84.7%	2,556	44.3%	151	44.5%	188	55.5%	339	39.2%
Identity	Non-regular	2,751	47.8%	2,999	52.2%	5,750	99.5%	464	72.2%	179	27.8%	643	74.3%
	Regular	19	73.1%	7	26.9%	26	0.5%	90	40.5%	132	59.5%	222	25.7%
Age	30 and below	462	49.3%	476	50.7%	938	16.2%	86	51.8%	80	48.2%	166	19.2%
	30 to 50	1,946	47.6%	2,143	52.4%	4,089	70.8%	387	65.4%	205	34.6%	592	68.4%
	50 and above	362	48.3%	387	51.7%	749	13.0%	81	75.7%	26	24.3%	107	12.4%
Education	High school and below	233	16.0%	1,220	84.0%	1,453	25.2%	169	49.0%	176	51.0%	345	39.9%
	College	1,373	48.6%	1,454	51.4%	2,827	48.9%	332	74.3%	115	25.7%	447	51.7%
	Master	1,115	77.4%	326	22.6%	1,441	24.9%	47	71.2%	19	28.8%	66	7.6%
	Ph.D	49	89.1%	6	10.9%	55	1.0%	6	85.7%	1	14.3%	7	0.8%

The gender ratio structure of the employees of VIS is rather balanced, where male employees account for 50.1% and female employees account for 49.9%. Based on the factors of characteristics of technology industry and the supply of job market, supervisors and professionals are mostly male, and the technicians are mostly female. At the management level, the male employees account for 80.9%, while female employees account for 19.1%. The total number of female employees at the management level is about the same as last year.

Distribution of Numbers of Female Employees

Number/Ratio	2019		2020		2021		2022	
	Number of Female	Ratio of Female						
Overall Employees	2,758	51.9%	2,959	49.9%	3,127	49.4%	3,317	49.9%
Management Level	72	17.7%	87	18.1%	103	19.1%	110	19.1%
Junior Management (Section)	35	17.1%	44	18.4%	54	19.5%	60	19.9%
Middle Management (Department)	27	17.5%	32	18.1%	37	19.2%	38	18.6%
Senior Management (Division/ Regional)	10	20.4%	11	16.9%	12	17.4%	12	17.1%
Supervisors of Production Revenue Related Departments	41	12.2%	54	13.3%	74	15.4%	78	15.3%
Employees of STEM Categories	586	22.1%	696	22.8%	790	24.1%	872	24.5%

Employment Rate and Turnover Rate

Domestic and Foreign Recruitment

By the end of 2022, the total number of employees of VIS reaches 6,641, and the total number of new employees is 1,250 with the new employment rate of 19.3%. By gender, male employees account for 52.6% and female employees account for 47.4%. In terms of age distribution, those of the age of 30-50 account for the most at 54.5%, followed by those under the age of 30, and then finally those age 50 or above. 40% of the labor vacancies in 2022 were filled by internal transfer.

Ratios of Vacancies Filled by Internal Transfer in 2019-2022

	2019	2020	2021	2022
Internal Transfer Rate	58%	15%	32%	40%

Distribution by Nationality, Region, and Age of New Employees in 2022

Type	Group	Male		Female		Subtotal and Ratio	
		Number	Ratio	Number	Ratio	Number	Ratio
Region	Taiwan	500	49.1%	519	50.9%	1,019	81.5%
	Singapore/US	157	68.0%	74	32.0%	231	18.5%
Nationality	Taiwan	495	68.0%	233	32.0%	728	58.2%
	Others	162	31.0%	360	69.0%	522	41.8%
Age	30 and Below	264	48.6%	279	51.4%	543	43.4%
	30-50	372	54.6%	309	45.4%	681	54.5%
	50 and Above	21	80.8%	5	19.2%	26	2.1%
Total		657	52.6%	593	47.4%	1,250	100.0%

Note: New employee refers to the official non-regular employee who completes the registration procedure.

Employment Rate by Region, Gender and Age of New Employees in 2022

Type	Group	Number of New Employees	Employment Rate of Each Group
Region	Taiwan	1,019	18%
	Singapore/US	231	26%
Gender	Male	657	20.1%
	Female	593	18.4%
Age	30 and Below	543	48.4%
	30-50	681	14.9%
	50 and Above	26	3.3%
Total		1,250	19.3%

Note 1: Employment rate of each group=Total number of new employees of each group in 2022/((Total number of employees of each group at the beginning of the year)+(Total number of employees of each group at the end of the year)/2).

Note 2: Overall employment rate= Total number of new employees in 2022/((Total number of employees at the beginning of the year)+(Total number of employees at the end of the year)/2).

Employee Turnover Rate

In 2022 the number of resigned employees in Taiwan is 443 (including 19 retirees) with a turnover rate of 7.7%, which is relatively stable for a company with continuous business growth. By gender, the average turnover rate of male employees is 11.2%, and the average turnover rate of female employees is 4.5%; based on the age group, the average turnover rate of employees with the age of 30 and below is 18.0%; the average turnover rate of employees with the age of 30 to 50 is 5.8%; the turnover rate of employees with the age of 50 and above is 3.8%.

Gender/Item	2018		2019		2020		2021		2022	
	Number	Turnover Rate								
Male	237	9.1%	154	5.9%	165	6.6%	274	10.7%	310	11.2%
Female	126	4.6%	94	3.3%	75	2.8%	94	3.5%	133	4.5%
Total	363	6.7%	248	4.6%	240	4.6%	368	7.0%	443	7.7%
Age/Item	Number	Turnover Rate								
30 and Below	129	10.3%	113	10.1%	114	12.4%	162	18.1%	182	18.0%
30~50	214	5.7%	124	3.2%	121	3.2%	177	4.7%	235	5.8%
50 and Above	20	5.6%	11	2.7%	5	1.0%	29	4.9%	26	3.8%
Total	363	6.7%	248	4.6%	240	4.6%	368	7.0%	443	7.7%

Note 1: Monthly turnover rate = total number of resigned employees of the group ÷ average number of employees of the group of the month.

Note 2: Calculation of annual turnover rate= Σ (Turnover rate of each month of the year).

Note 3: The calculation of turnover rate involves the resigned official full-time employees, not including the employees on unpaid leaves.

Turnover Rate in Taiwan



Turnover Rate in Taiwan – Gender



Turnover Rate – Age



The total number of resigned employees in Singapore in 2022 is 190. Based on the observation of employee resignation in recent years, the economy was still booming in the first half of 2022, and it was still under the impact of pandemic. With the limited sources of talents and the active production capacity expansion among major companies in Singapore, the labor force remains in short supply, so all companies have been raising basic salaries to attract the limited labor resources. Due to the economic slowdown in the second half of the year, the number of resigned employees was showing a trend of decline, so that the total number of resigned employees was less than that of 2021.

Total and Voluntary Turnover Rate of the Entire Company



Turnover Rate of the Entire Company – Gender



Turnover Rate of the Entire Company – Age



Remuneration

Compensation Committee

The Compensation Committee was established with the objective of enhancing corporate governance and assisting the Board of Directors in developing the company's overall compensation policy and framework in order to attract, motivate, reward, and retain outstanding talent. According to the Organizational Regulations of the Compensation Committee, its duties include: formulation of the company's overall compensation policies and architectures, framework formulation of the remuneration and payment forms for directors (including Chairman), formulation of the remuneration and payment forms for managers (including President), proposal of the rewards and long-term incentives for managers (including President), planning and execution of performance evaluations for directors (including Chairman), planning and execution of performance evaluations for managers (including President), and other matters specified or authorized by the board of directors.

The policy of remuneration for President and Vice President must be formulated to be competitive among competitors in order to attract and retain outstanding managers, and encourage managers to create optimal long-term and short-term performance under the affordable risks. The procedures for remuneration determination shall be based on the company's "Policies, Systems, Standards, and Structure of the Performance Assessment and Remuneration of Directors" and "Policies, Systems, Standards, and Structure of the Performance Assessment and Remuneration of Managers". The company's remuneration can be divided into the fixed part and the variable part, where the variable remuneration is determined in accordance with the company's operation performance (with indicators of return on shareholders' equity, net profit margin, and gross margin); reasonable and market competitive remunerations will be granted to managers based on the company's overall operation performance, individual performance, and the contribution to the company's performance. Managers' performance assessments also include sustainable environmental development. ESG implementation, waste reduction, electricity, water and carbon emissions, and zero environmental safety accidents, etc. form part of the reward evaluations. Through promoting climate change governance and integrating it into the management team's interests, we are making sustainable enterprise development a shared goal for VIS. The performance review and remuneration must be regularly reviewed and adjusted by the Compensation Committee and Board of Directors annually. In principle there shall not be any significant change unless it is due to the common level of the industry or major changes to the company's performance targets.

Corporate Officer Shareholding Policy

Vanguard International Semiconductor Corporation (VIS) provides customers with the most competitively comprehensive solutions and high value-added services, which are the core of VIS' long-range development and the foundation for our sustainability. In the pursuit of long-term and stable profits, while taking into account the interests of shareholders, VIS has been growing together with stakeholders such as employees, suppliers, communities and society, and following the conviction of sustainability to coexist and prosper with the environment and society.

In the practice of "Environment, Social, Governance, ESG", the ESG has been listed as one of the Corporate Officer's performance evaluation items; and the part of their annual reward has been based on each of their execution results in terms of corporate governance, environmental protection, corporate commitment and social engagement.

To further implement the corporate governance, the policy was approved by the Board of Directors and the Compensation Committee in May, 2022. The Corporate Officer's bonus at the Vice-President level (and above) shall be linked with the long-term shareholders' interests of the company, which not only motivate their performance, but also protect the rights and interests of all shareholders. Therefore, the "Corporate Officer Shareholding Policy" is then formulated to encourage the related corporate officers to hold the long-term ownership of the Company's stock shares. Within three years from the date of appointment, the President, Chief Operating Officers, and Vice-President should hold the equity value of the company's stock respectively at 10 times, 6 times and 5 times of their annual fixed salary, of which the number of shares can include oneself, spouse and minor children. During their entire employment period, the shareholding value required by the company should be well maintained.

Overall Compensation

VIS has regarded "shareholders and employees as the important stakeholders of the company", and has been dedicated to granting shareholders the above-average returns from their investments in the company while providing employees with benefits above the industrial average. The overall compensation of employees of VIS is determined according to the professional knowledge and skills, job duties, performance, and long-term dedication in conjunction with the company's operation objectives. In order to maintain the competitiveness of the company's overall remuneration, the company will make proper adjustment to the salaries of employees via salary survey, evaluation of the market salary level, and overall economic indicators. For employees to share the company's operation achievements, VIS distributes employee compensation based on no less than 10% of the annual profit, and the distribution targets may include employees meeting certain conditions. There were a total of 11 managers in VIS in 2022, and 5,625 non-managerial full time employees. The average annual salary was NT\$1,857,000, and the median annual salary was NT\$1,179,000. (According to the Taiwan Stock Exchange Corporation Rules Governing Information Filing by Companies with TWSE Listed Securities and Offshore Fund Institutions with TWSE Listed Offshore Exchange-Traded Funds) All aforementioned data has been qualified by the audits by Deloitte & Touche. The total employee remuneration of 2022 is around NT\$3.32 billion, which will be distributed after the resolution by the board of directors and the approval by the shareholders' meeting in 2023 in order to encourage the constant contribution by our employees. The overall remuneration of VIS will not vary due to the difference in gender, age, race, religion, political stance, or marriage, and all employees will be treated equally. We abide by the principle of equality while respecting the equal pay for equal work between male and female, and the salary ratio between male and female grass-root employees in 2022 was close to 1 to 1.

Ratio of Total Annual Salaries of Female and Male Employees in Taiwan in 2017-2022

		2017	2018	2019	2020	2021	2022
Managerial	Middle and Senior Management (Executive managers not included)	0.95	0.94	0.91	0.92	0.97	0.98
	Junior management	0.95	0.98	0.95	0.98	0.93	0.90
Non-managerial	*Indirect staff	0.76	0.80	0.85	0.80	0.80	0.78
	Direct staff (Taiwan)	1.03	1.05	1.03	1.03	1.04	1.09
	Direct staff (Foreign)	-	-	1.02	1.04	1.02	1.04

Note: Due to the type of work, the indirect non-managerial staff is mostly male employees related to engineering.

Ratio of Total Annual Salaries and Base Pay of Female and Male Employees in Taiwan in 2022

Base Pay			Total Annual Salaries		
Executive managers	Managerial (Executive managers not included)	Non-Managerial	Executive managers	Managerial (Executive managers not included)	Non-Managerial
0.91	0.95	1	1.8	0.94	0.97

Welfare System

VIS provides a welfare system that is superior to the regulatory requirements while meeting the needs of employees and a perfect leave management system, such as: insurances, flexible vacation days, pensions, emergency assistance, marriage and childbirth gifts, funeral subsidies, birthday gift certificates, year-end party subsidies, special store discounts, occasional group travel activities, community subsidies, and adjustment of "Leave for pregnancy checkup" and "Paternity leave" from the statutorily required 7 days to 10 days; maternity leave is increased from the legally-mandated 56 days to 70 days. Meanwhile, foreign employees will have access to the same welfare system as the local employees. VIS provides every employee with the insurance meeting local laws and regulations. In addition to the labor insurance and national health insurance for every employee as required by law, we also provide group comprehensive insurance, including: life insurance, accident insurance, medical insurance and cancer insurance, etc. Starting from the day of registration, every

employee will join the group comprehensive insurance paid by the company covering the spouse, children, and family members of every employee so that they can be fully protected to be concentrated to their works without any worry.

Leave System Superior to Statutory Requirement

Item	Statutory Standard	Measures Superior to Statutory Standard
Holiday	12 national holidays per year	In addition to the 12 national holidays per year, another 7 days of memorial day holidays will be granted to be used flexibly by our employees
Special Leave	Those who serve for more than 6 months but less than one year will be granted three days of such leave	To take care of the needs for leave for new employees who have served for less than a year, one day of special leave will be granted for every 2 months of service

Employee Compensation and Welfare Expenses in 2017-2022

Unit: NT\$ thousand

Item	2017	2018	2019	2020	2021	2022
Employee Compensation and Welfare Expenses	6,437,992	7,590,795	7,508,045	8,111,480	11,106,860	12,823,275
Average Employee Compensation and Welfare Expenses	1,238	1,366	1,386	1,561	2,099	2,199

Note 1: The average number of employees is calculated by the average number of people of the year (annual average number of employees =sum of total number of current employees at the end of each month/12).

Note 2: Employee compensation and welfare refer to salaries, bonuses, and welfare expenses.

The Balance between Family and Work

In order to create a friendly workplace and enhance employees' maternity benefits, VIS has provided employees with the "Leave for pregnancy checkup" and "Paternity leave" superior to the statutory requirements by changing them from the statutorily required 7 days to 10 days. Maternity leave is increased from the legally-mandated 56 days to 70 days; also, if any employee needs to take long leave due to the need to take care of young children, in addition to the application method specified in the employee handbook and human resources regulations, the company will also provide a consultation window to assist the employee in application in accordance with the "Gender Employment Equality Act" and "Regulations for Implementing Unpaid Parental Leave for Raising Children". In addition, VIS also grants employees with same-sex marriage colleagues the right to apply for unpaid parental leave when adopting the children of other spouses.

In 2022 there were a total of 206 employees of VIS granted the parental leave, and 118 of them applied for the unpaid parental leave, which were all approved. In 2022 there were 51 employees returning to work from the unpaid parental leave with the reinstatement rate of 79.7%; among them, the reinstatement rate of male employees was 80%, and the reinstatement rate of female employees was 79.6%. The main reason for female employees not returning to work after the expiration of unpaid parental leave was that there was still need to take care of the family (accounting for 88.9%), and the main reason for male employees not returning to work after the expiration of unpaid parental leave was that he found another job (accounting 100%). In addition, in 2021 the retention rate of the employees reinstated from the unpaid parental leave and serves for more than one year was 95.8%, where the retention rate of male employees was 100% and the retention rate of female employees was 94.7%.

Unpaid Parental Leave and Reinstatement

Item	Total	Male	Female
Total number of employees granted unpaid parental leave in 2022 ^{Note}	206	143	63
Total number of employees applied for unpaid parental leave in 2022	118	30	88
Total number of employees actually reinstated from unpaid parental leave in 2022 (A)	51	16	35
Total number of employees who should be reinstated from unpaid parental leave in 2022 (B)	64	20	44
Reinstatement rate from unpaid parental leave in 2022 (A)/(B)	79.7%	80%	79.6%
Total number of employees actually reinstated from unpaid parental leave in 2021 (C)	24	5	19
Total number of employees reinstated from unpaid parental leave and serving for more than one year in 2021(D)	23	5	18
Retention rate of employees reinstated from unpaid parental leave in 2021 (D)/(C)	95.8%	100%	94.7%

Note: The total number of employees granted unpaid parental leave from 2020/01/01 to 2022/12/31.

Retirement System

Complete and Sound Pension System

VIS has abided by laws and regulations with its pension system, and the employees applicable to the old system of the "Labor Standards Act" and the employees applicable to the new system of the "Labor Pension Act" all have their retirement rights properly protected. The company has also established an internal retirement forum to provide new

knowledge of retirement based on new/old system and reminder of relevant rights and interests to help employees with their retirement plans. In 2022 there were a total of 19 employees applying for retirement in VIS, and they were all approved; among them, male employees accounted for 42% and female employees accounted for 58%.

For employees who choose the new system, the company allocates 6% of their salary every month and deposits it into the personal account of the Labor Insurance Bureau; for those who choose the old system, and those who choose the new system but retain the seniority of the old system, the "VIS Labor Pension Reserve Fund Supervisory Committee" has been established by law to deposit 2% of labor pension reserve fund every month.

By 2022, the fair value of the pension plan assets of VIS is NT\$841.82 million; the amount which needs to be appropriated by law in the future has been listed as accrued pension liabilities, and the amount by the end of 2022 is NT\$372.89 million. In addition to the deposit of pension reserve fund, the company also conducts actuarial calculations of retirement reserve funds through professional accounting consultants every year to confirm the full amount of appropriation and protect the rights and interests of employees to claim pensions in the future.

6.2 Talent Development

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Talent Development	<ul style="list-style-type: none">Ratio of supervisor vacancies filled by promoted internal staff >75%	<ul style="list-style-type: none">Ratio of supervisor vacancies filled by promoted internal staff >75%	<ul style="list-style-type: none">Ratio of supervisor vacancies filled by promoted internal staff >75%	<ul style="list-style-type: none">Ratio of supervisor vacancies filled by promoted internal staff >75%
Educational Training	<ul style="list-style-type: none">Annual training plan achievement rate is 100%Average training hours per person are 24.1 hours	<ul style="list-style-type: none">Annual training plan achievement rate is 93%Average training hours per person are 18 hours	<ul style="list-style-type: none">Annual training plan achievement rate is 95%Average training hours per person are 20 hours	<ul style="list-style-type: none">Annual training plan achievement rate is 95%Average training hours per person are 25 hours

Comprehensive Talent Development and Cultivation

In order to cultivate professional talents meeting the company's needs and discover the potentials of employees, the company has established learning resources such as complete talent development system, training management system (learning passport system), knowledge management platform, and online learning platform to provide our employees with tailor-made personal learning and development plans, comprehensive talent training courses, and rich and diversified learning resources in order to enhance the talent development for employees and to improve the corporate competitiveness.

Personnel Development

Performance-Oriented Management and Development

The performance management and development system of VIS have set the development of employees' potentials and strengthening of talent quality as the objectives. A good communication mode has been established via the joint participation and cooperation between supervisors and subordinates, establishing positive communication channels, inviting cross-functional units to provide evaluation suggestions, creating a learning environment for continuous employee development, and aligning company strategic goals with employees' personal work goals to enhance individual and organization performance.

The company has formulated the management capability training roadmap and organized multiple management training courses in order to develop the management skills required by supervisors of all levels and establish a common language. For example, there are more than a dozen courses such as The First Lesson for the New Supervisor, Subordinate Training and Guidance, Skills for Performance Interview, Effective Encouragement and Communication Counseling, Cross-Department Cooperation, and Situational Leadership. There were a total of 25 sessions of management training courses organized in 2022 with 584 participants and a total of 3,516 training hours; these courses and after-course learning plans allow the supervisors of all levels to apply what they learned to the daily business management to continuously improve their leadership.

In 2022 an external lecturer was invited to host the course of "Subordinate Training and Guidance" and there were 58 grass-root supervisors participated to learn the key communication skills for subordinate training and to understand the possible problems they could face during the process of guidance and feedback. The content of the course also included how to use positive work evaluation skills to establish and maintain the confidence of the department team in order to enhance the employees' engagement and performance. Current this course has been listed in the management training plan for grass-root supervisors every year. Grass-root supervisors of all units will be gradually trained to establish mutual management languages to continuous contribute to the growth and development of the entire team of the company.

Strengthening Cross-Disciplinary Capabilities of Employees

All employees of VIS have formulated Individual Development Plan (IDP) with company

compulsory courses, department compulsory courses, and other elective courses. Supervisors will also provide employees with training resources in accordance with the needs of their current positions to continuously improvement the professional knowledge and skills of every employee in different periods. In addition, the company also supports employees to develop according to their individual career planning and expertise, advocates proper talents for suitable positions, respect employees' willingness of job transfer, encourage employees to accumulate different professional capabilities, and cultivate internal cross-disciplinary talents.

The company continues to promote the training of Quality Six Sigma Course (Black Belt/Green Belt Course) and has trained 11 Black Belt experts and 341 Green Belt experts by 2022 to establish solid quality improvement and problem analysis and solving capabilities; the company has propose the counseling improvement project to allow all employees to apply what they learned to their works. The total benefits of these projects have been certified to worth NT\$189.71 million.

2022 Quality Six Sigma Course (Green Belt Course)

Project Classification and Actual Benefits	Generation of 5 Projects: 1. To improve UTC Available Time 2. To reduce He usage for supply shortage 3. To reduce machine damage caused by TPC voltage sag 4. To improve metal sputter capacity 5. To reduce 88DD backside Helium scrap rate
Quantitative Benefits (Amount)	1. Successfully reduce the generation of defect to achieve the AT enhancement. The total amount of CIT benefits is NT\$1,260,000. 2. The company's Gas procurement cost has been greatly increased and the supplier has stopped the material supply. The company is facing the production loss of 45%. The total amount of CIT benefits is NT\$17,489,702. 3. Improve the factory dual-loop wiring system to reduce the impact of feeder tripping accidents in partner factory & TPC; evaluate the installation of UPS and the re-wiring of EMO inside the machine. The total amount of CIT benefits is NT\$12,300,000. 4. Saving of machine investment*New machine modification cost/depreciation. The total amount of CIT benefits is NT\$3,173,576. 5. The total amount of CIT benefits (year): NT\$3,511,980.
Participation Rate of All Employees	Total Benefits: \$37,735,258

Development of Leader: Junior and Middle Level Management Development Plan

Project Classification and Actual Benefits	Cultivate the management/technology leaders with potentials and refine the leadership of junior and middle level supervisors to ensure the continuity of key positions and establish the management echelon 1. Select supervisors with potentials from all regions to participate in the development plan via the talent selection and evaluation tools 2. Provide leadership training courses to improve the management thinking of supervisor 3. The activities of development plan include mentor counseling, job rotation, overseas assignment, and participation in training, which last for a year
Quantitative Benefits (Amount)	1. Provide mentor counseling with respect to the capability of each individual supervisor. There were a total of 16 supervisors participating in the development plan 2. Organize scenario leadership training with a total of 22 participants and a total of 154 hours to improve the leadership of the management level 3. Among all participants in the plan, there have been 6 supervisors promoted to important positions of the management team of the company
Participation Rate of All Employees	0.25%

Learning and Development**Rich and Diversified Learning Resources**

VIS has a complete talent development system including new employee training, management functional training, professional training, external training, and self-development. In addition, there are close to 740 courses on the company's e-Learning on-line learning website with teaching materials constantly adjusted according to the needs covering engineering technologies, professional job functions, management, and general knowledge. With this rich and real-time learning mechanism, our employees can learn at any time and place and formulate learning plan according to their learning progress to enhance self-competitiveness while create the company's culture of self-learning. There have been close to 99,640 participants of on-line learning during the year of 2022.

The total number of internal training hours in 2022 reached 160,015 hours with a total of 135,714 participants. The average training hours for every employee were around 24.1 hours, and the total training cost was around NT\$17.58 million.

Statistics of Training Indicators of VIS in 2019-2022

Year	Total Number of Employees	Total Training Hours	Average Training Hours	Total Number of Participants
2019	5,315	139,974	26.34	105,744
2020	5,929	86,256	14.55	88,211
2021	6,333	139,317	22.00	122,697
2022	6,641	160,015	24.10	135,714

Statistics of Training Indicators of VIS in 2019-2022 (by Employee Category)

Unit: Hour

Year	Direct Staff	Indirect Staff	Supervisor	Average Training Hours
2019	11.34	40.11	32.10	26.34
2020	9.17	18.9	17.49	14.55
2021	14.64	27.66	27.94	22.00
2022	14.02	34.49	26.81	24.10

Training and Personnel Development Indicators of VIS in 2019-2022

Unit: NT\$

Personnel Development Indicator	2019	2020	2021	2022
Average Training Cost for A Full-Time Employee	999.55	1,177.13	1,199.0	2,647.94

Statistics of Training Indicators of VIS in 2019-2022 (by Gender)

Gender	Number of Employees	Total Training Hours	Average Training Hours	Total Number of Participants
Female	3,317	63,228.92	19.06	55,062
Direct Staff	2,353	35,052.48	14.90	34,620
Indirect Staff	964	28,176.44	29.23	20,442
Male	3,324	96,786.24	29.12	80,652
Direct Staff	542	8,082.12	14.91	6,934
Indirect Staff	2,782	88,704.12	31.89	73,718

Note: Different training courses will be provided based on the attributes of current job titles. Currently the majority of engineers are male, so the average training hours for male employees are greater.

Return on Human Resources Capital Investment

Unit: NT\$ thousand

	2019	2020	2021	2022
(A) Operating Income	28,286,072	33,131,202	43,951,087	51,694,310
(B) Operating Expense	3,423,398	3,840,078	5,049,955	6,116,773
(C) Employee Salary and Benefits Expenses	7,508,045	8,111,480	11,106,860	14,686,307
Return on Human Resources Capital Investment (A- (B-C))/C	4.31%	4.61%	4.50%	4.10%
Total Number of Employees	5,315	5,929	6,333	6,641



Training of Internal Lecturer – Let students understand how effective, interesting, and innovative teaching can be via on-stage practice



Supervisor management course – Use multiple management methods and tools to help supervisor with effective and efficient decision making

Introduction of Training Courses of VIS in 2022

There were as many as 709 sessions of physical courses organized throughout the year. Only some of them are excerpted as shown below:

Type of Course	Name of Course	Content and Benefits of Course	Number of Trainees
Engineering	Common New Engineer Series Courses	New engineer courses are summarized according to the needs of various factories, and there are intensive trainings for the registration of newcomers to strengthen the capabilities of new engineers.	5,389
Engineering	AI Lecture	Set up AI Lecture to develop AI seeds for all departments and lay a solid foundation for the company's future AI applications.	459
Quality	Six Sigma Courses	The organization of quality improvement method training courses will allow engineers to understand the quality methods to be further applied to the works. A total of 28 seed students were trained, so that the annual benefits of this project reached NT\$7.7 million, which can continuously improve the company's product quality and talent competitiveness.	782
General Knowledge	Teacher's Day: The Lecture of Changing the World with Innovation	During the activity period, it has improved the professional knowledge of internal lecturers and encouraged them via posters and thank-you cards to enhance their teaching enthusiasm and appreciate their efforts.	121
Management	Supervisor Management Courses	Courses for supervisors of all levels have been planned according to different management functions, such as the course of talent development and personnel management, in order to strengthen the supervisors' management capabilities and enhance the functions of supervisors of all levels.	584



Teacher's Day Lecture – Detonate the output of knowledge and light up VIS



Quality course – Six Sigma

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6.3 Human Rights

VIS supports international human rights related regulations, takes human rights as the most important consideration during policy planning, and announced the human rights policies of VIS in October, 2018. In terms of employee labor related systems and regulations, it has complied with or formulated the regulations superior to laws and international human rights regulations to ensure that the company's code of conduct can be aligned with international indicators; it has also been dedicated to establishing active and positive employee relationships and to create a fun and challenging working environment.

Human Rights Policies

VIS supports the "Universal Declaration of Human Rights (UDHR)" and complies with the understanding of international human rights standards, including "International Bill of Human Rights", "ILO Declaration on Fundamental Principles and Rights at Work", "United Nations Guiding Principles on Business and Human Rights (UNGPs)", "OECD Guidelines for Multinational Enterprises", and "United Nations Global Compact (UNGC)", and adopts the actions consistent with the "Code of Conduct - Responsible Business Alliance (RBA)" and complies with the laws and regulations of the locations of various global operation bases in order to protect human rights and create a working environment with dignity, carry through the company's core value, implement the "[Human Rights Policies of VIS](#)", and protect the safe working environment and respect for employees; meanwhile, all major suppliers will be requested to formulate and implement human rights policies in accordance with the regulations of "Code of Conduct - Responsible Business Alliance (RBA)", and all supply chain partners are required to comply with the same standard.

Human Rights Risk Assessment and Risk Mitigation Measures

VIS promises to ensure the safety of supply chain working environment, the respect and dignity for all employees, emphasis on environmental protection policies, compliance with morality, and constant innovation and improvement plan; the checklist of human rights risks will be established annually according to international human rights conventions and policies, and the supervisors of all responsible units (Human Resources Division, Risk and Environmental Safety Department) will carry out risk assessment and human rights due diligence with respect to all subjects on the checklist. For mitigation of human rights risks, the company has actively carried out specific improvement plans to create an outstanding, more challenging, safer, and more interesting working environment; meanwhile, it has also provided the educational training of human rights protection to ensure all employees understand their rights.

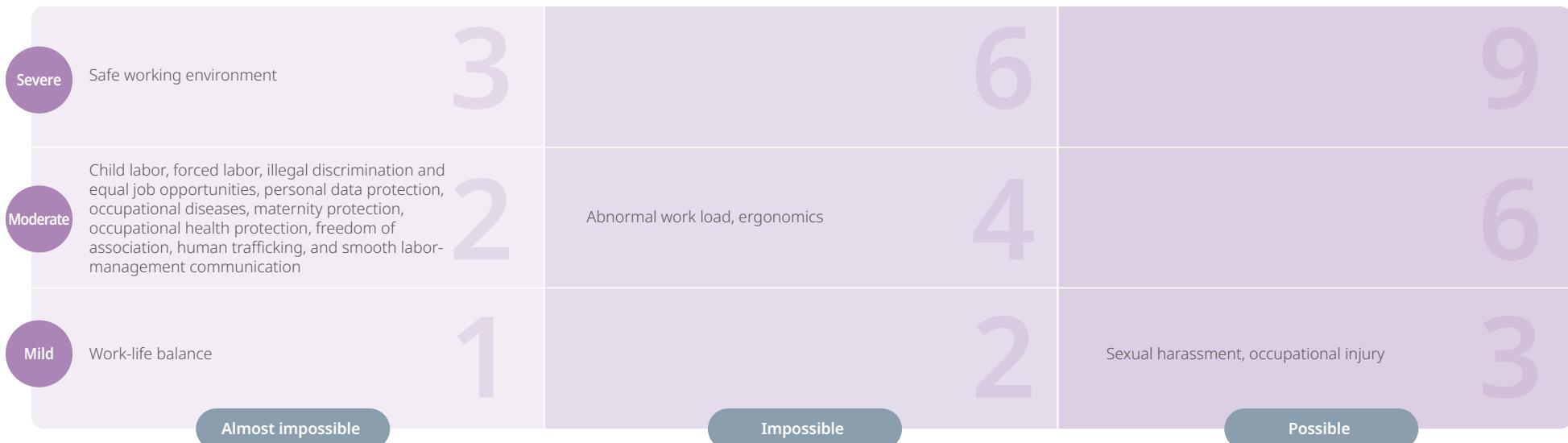
In 2022 supervisors of all units of Human Resources Division listed a total of 16 risk issues in accordance with the checklist of risk issues established by the meetings on international human rights conventions and policies. The following human rights risk matrix is the result of risk assessment conducted by the responsible units of various issues in accordance with the occurrence probabilities and severities; in the human rights risk assessment in 2022, there was no issue listed as high risk (9 points); there were a total of 5 issues listed as moderate risk (3~6 points): safe working environment, abnormal work load, ergonomics, sexual harassment, occupational injury; there were 11 issues listed as low risk (1~2 points): child labor, forced labor, illegal discrimination and equal job opportunities, personal data protection, occupational diseases, maternity protection, occupational health protection, work-life balance, freedom of association, human trafficking, and smooth labor-management communication.

Human Rights Risks Matrix Diagram

High Risk (9 points); moderate risk (3~6 points); low risk (1~2 points)

Severity

Possibility



Human Rights due Diligence Process Flow

Step	1. Information Collection	2. Identification of Level of Impact	3. Analysis	4. Execution
Execution Method	Evaluation of own business, value chain and relevant business, and new business relationship including joint venture and merger and acquisition	Actual	Primary cause, contributing factors, and correlation conditions	Integrated in the process flow and operation
	Collect and study the issues of risk groups such as employees, women, children, aborigines, immigrants, third-party contracted labor, and local communities	Potential	Scale, scope and remedial ability	Remedies
	Employee Opinion Mailbox		Severity and possibility	Communication
	Feedback of stakeholder			

Human rights regulations is one of the sectors of due diligence. The responsible unit shall formulated the due diligence checklist with contents including implementation standards for risk assessment, integrated human rights assessment, and implementation framework.

Vulnerable Object	Human Rights Issue	Preventive/Mitigation Measures	Remedies	Number of Bases with Improvement Plans and the Ratio of Improvement
All Employees	Occupational Health Protection and Occupational Diseases	<p>System</p> <ul style="list-style-type: none"> Set the management objective of "Safe with Zero Accident, Healthy with Zero Occupational Disease". Comply with laws and regulations and international conventions to establish a safe and healthy working environment Provide all current employees with health examinations every year Provide special operation health examinations every year and carry out classified management according to the results of examinations Promote health improvement activities and employee assistance programs in conjunction with the company's philosophy, health examination analysis, and employees' health needs, and encourage the participation by employees <p>Training</p> <ul style="list-style-type: none"> List occupational health protection courses as compulsory courses <p>Communication</p> <ul style="list-style-type: none"> Advocacy via bulletin board and employee communication meeting 	<p>Compensation</p> <ul style="list-style-type: none"> Arrange outpatient clinics with factory doctors for employees with abnormal health examinations, provide individualized health consultations, and strengthen medical assistance and tracking for employees with medium and high health risks Arrange outpatient clinics with factory doctors for employees with abnormal special operation health examinations, provide individualized health consultations and health educations, and provide referral medical assistance and tracking when necessary 	The evaluation indicates that there is no base of risk
All Employees	Abnormal Work Load	<p>System</p> <ul style="list-style-type: none"> Establish the prevention plan for VIS abnormal workload-induced diseases Arrange overwork scale survey every year, and establish a tracking list for prevention and management of occupational cerebrovascular and heart diseases 	<p>Compensation</p> <ul style="list-style-type: none"> Arrange outpatient clinics with factory doctors for employees, provide individualized consultation and professional suggestions, and assist employees in creating health life modes 	The evaluation indicates that there is no base of risk
All Employees	Forced Labor	<p>System</p> <ul style="list-style-type: none"> Comply with the labor laws of the local government, emphasize the willingness of employees to freely choose occupations, and never force employees to provide labor services by means of coercion or threat; all employees work voluntarily and have the right to terminate their employment relationship at any time Employees can make complaints on various issues via Ombudsman Mailbox and Employee Opinion Mailbox 	<p>Compensation</p> <ul style="list-style-type: none"> Mediation and coordination in accordance with internal procedures 	The evaluation indicates that there is no base of risk
All Employees	Work-life Balance to Maintain Employees' Physical and Mental Health	<p>System</p> <ul style="list-style-type: none"> Provide employees with diversified art, health, parent and child, and society activities Conducting an annual questionnaire survey on work-related stress levels and establishing a tracking system to prevent and manage occupation-induced cerebrovascular and heart diseases. This proactive approach combines the results of physical examination reports, effectively reducing the increased risk of cardiovascular conditions caused by work pressures Provide EAP (Employee Assistance Programs) and provide employees with mental, legal, financial, health, and management related professional consultation and medical services 	<p>Compensation</p> <ul style="list-style-type: none"> Professional consultants assist employees in legal, financial, health, management, psychological and other issues 	The evaluation indicates that there is no base of risk

Vulnerable Object	Human Rights Issue	Preventive/Mitigation Measures	Remedies	Number of Bases with Improvement Plans and the Ratio of Improvement
All Employees	Freedom of Association	<p>System</p> <ul style="list-style-type: none"> Formulate Corporate Social Responsibility Manual which specifies that employees have the freedom of association according to local laws and regulations and respects the union formed by employees in accordance with legal procedures Employee Welfare Committee encourages employees to participate in legitimate leisure and welfare activities, formulates association management methods, and provides financial subsidies 	<p>Compensation</p> <ul style="list-style-type: none"> Mediation and coordination in accordance with internal procedures 	The evaluation indicates that there is no base of risk
All Employees	Labor Management Communication	<p>System</p> <ul style="list-style-type: none"> Provide smooth employee communication channels According to the Implementation Measures for Labor-Management Meetings, labor and management representatives shall be assigned in each plant, and employees can make proposals during the quarterly labor-management meeting The Chairman Communication Meeting will be held once every six months for close communication between Chairman and employees 	<p>Compensation</p> <ul style="list-style-type: none"> Mediation and coordination in accordance with internal procedures 	The evaluation indicates that there is no base of risk
All Employees	Protection of Personal Data	<p>System</p> <ul style="list-style-type: none"> Establish the Personal Data Protection Committee to accept consultation, complaints, exercise of rights of owner of personal data, and emergency notification The Personal Data Protection Committee shall carry out regular sampling inspections and reviews and convene regular meetings to strengthen the personal data protection; internal audit and external audit units shall conduct law compliance inspections every year <p>Communication</p> <ul style="list-style-type: none"> Carry out occasional advocacy of personal data protection 	<p>Compensation</p> <ul style="list-style-type: none"> Mediation and coordination in accordance with internal procedures <p>Punishment</p> <ul style="list-style-type: none"> Mediation and coordination in accordance with internal procedures 	The evaluation indicates that there is no base of risk
All Employees	Sexual Harassment	<p>System</p> <ul style="list-style-type: none"> Formulate sexual harassment prevention and management measures, and insist on zero tolerance of discrimination Set up sexual harassment complaint mailbox with the CLO as the top person in charge <p>Training</p> <ul style="list-style-type: none"> Sexual harassment prevention, control, and management are listed as the annual compulsory courses <p>Communication</p> <ul style="list-style-type: none"> Maintain a working environment with gender equality and list sexual harassment prevention and control as one of the key projects. Produce advocacy animation and eDM for monthly advocacy via bulletin, TV, and employee communication meetings 	<p>Compensation</p> <ul style="list-style-type: none"> Comprehensively investigate the who/what/when/where/which of the case, track, audit, and supervisor of individual case, and ensure the effective implementation of punishment or counseling measures to adjust the workplace environment and system to avoid the occurrence of same incidents or retaliations <p>Punishment</p> <ul style="list-style-type: none"> The Sexual Harassment Complaint Committee will warn or punish the perpetrators depending on the circumstances of the violation, and request the perpetrator to apologize to the victim. If the circumstances are serious, they may be dismissed according to the company's regulations 	The evaluation indicates that there is no base of risk

Vulnerable Object	Human Rights Issue	Preventive/Mitigation Measures	Remedies	Number of Bases with Improvement Plans and the Ratio of Improvement
Female Employees Who are Pregnant or within One Year After Giving Birth	Maternal Protection	<p>System</p> <ul style="list-style-type: none"> Establish VIS maternal health protection management plan, conduct pregnant and parturient maternal health consultation and work safety assessment and hierarchical management Establish maternal health protection and management notification system <p>Communication</p> <ul style="list-style-type: none"> Advocate maternal health protection plan via the channels of bulletin board and posters 	<p>Compensation</p> <ul style="list-style-type: none"> Arrange pregnant and parturient women to receive health consultation, work safety assessment, pregnancy and postpartum health guidance from factory doctors, and refer medical assistance and tracking when necessary 	The evaluation indicates that there is no base of risk
All Employees and Suppliers	Ergonomics	<p>System</p> <ul style="list-style-type: none"> Carry out regular operation analysis and hazard assessment with respect to all employees and resident suppliers 	<p>Compensation</p> <ul style="list-style-type: none"> For employee cases with suspected hazards, nurses will arrange health clinics, and conduct on-site operation observations in conjunction with the Risk and Environmental Safety Management Department. Propose suggestions for improvement after analysis of operation process, content and actions 	The evaluation indicates that there is no base of risk
All Employees and Suppliers	Safe Working Environment	<p>System</p> <ul style="list-style-type: none"> There shall be gas and liquid leakage detectors installed in the plant for on-site real-time monitoring; the operation environment measurement shall be conducted once every 6 months <p>Training</p> <ul style="list-style-type: none"> All employees shall participate in safety and health works to control the EHS risks at the sources; the awareness of safety and health responsibilities shall be strengthened via communication and education training, and the safety and health culture shall be deeply rooted 	<p>System Adjustment</p> <ul style="list-style-type: none"> Strengthen the education and advocacy of EHS for employees and suppliers <p>Compensation</p> <ul style="list-style-type: none"> Implement selection and assignment of workers and health management classification in accordance with the health examination reports and the results of operation environment measurements 	The evaluation indicates that there is no base of risk
All Employees and Suppliers	Occupational Injury	<p>System</p> <ul style="list-style-type: none"> Carry out hazard identification and risk assessment regularly with respect to the contents and items of all operations The coordination organization safety meeting must be convened in advance for all construction projects in order to implement the management of dangerous operation permits and on-site operations <p>Training</p> <ul style="list-style-type: none"> Safety and health training shall be listed as the compulsory courses for new employees <p>Communication</p> <ul style="list-style-type: none"> Industrial safety advocacy must be implemented for all employees and suppliers Advocacy of prevention and control of occupational injuries of employees 	<p>Compensation</p> <ul style="list-style-type: none"> Occupational injuries and industrial safety cases shall all be listed as the tracking and improvement items, and improvement plans shall be proposed for these cases 	The evaluation indicates that there is no base of risk

Vulnerable Object	Human Rights Issue	Preventive/Mitigation Measures	Remedies	Number of Bases with Improvement Plans and the Ratio of Improvement
Foreign Employees	Human Trafficking	<p>System</p> <ul style="list-style-type: none"> Comply with the labor laws and regulations of local government and carry out recruiting process flows according to the laws while confirming the identity documents of the interviewees All employees reporting to work must sign the employment contract to ensure that all procedures are in compliance with legal procedures Cooperate with legal labor agencies to hire foreign direct employees, and apply for foreign employee work permits in accordance with laws and regulations. Strictly verify relevant information to ensure that the process flow complies with laws and regulations 	<p>Punishment</p> <ul style="list-style-type: none"> By law the company shall downgrade or suspend the labor agencies with major human rights violations 	The evaluation indicates that there is no base of risk
Employees with the Age Under 18	Child Labor	<p>System</p> <ul style="list-style-type: none"> Strictly abide by labor laws and regulations while carrying out the recruitment process flow All employees must be with the age of 18 or above, and the data confirmation shall be surely implemented after the hired employees report to work 	<p>Compensation</p> <ul style="list-style-type: none"> Explain to the hiring unit and assess the improvement plan for each individual case 	The evaluation indicates that there is no base of risk
All Employees and Job Seekers	Unlawful Discrimination and Equal Employment Opportunity	<p>System</p> <ul style="list-style-type: none"> Promote and implement internal control procedures, abide by labor laws and regulations of local government, and never discriminate job applicants based on the screening conditions of race, class, language, ideology, religion, party affiliation, place of origin, place of birth, gender, sexual orientation, age, marriage, appearance, facial features, and physical and mental disabilities Employees can make complaints of relevant issues via the Ombudsman Mailbox and Employee Opinion Mailbox Carry out recruitment process flow according to laws and regulations to eliminate unlawful discrimination 	<p>Compensation</p> <ul style="list-style-type: none"> Mediation and coordination in accordance with internal procedures 	The evaluation indicates that there is no base of risk

Employee Communication

VIS takes employees' opinions and ideas serious so that it establishes diversified and smooth employee opinions feedback channels and provides bilateral open communication environment to improve the harmonic labor-management relationship. The top persons in charge of each communication channel include: independent director, Chairman, President, Vice President & CFO, CLO, Human Resources Director, and Director of each plant, indicating that the company attaches great importance to employees' opinions. There were a total of 437 reported cases via internal employee opinion channels in 2022. All reported cases were quickly and properly handled by relevant units based on the principle of highest confidentiality, and the special case investigation team will be formed depending on the situation. These cases include: 221 cases of the Speak Out, 189 cases from the Employee Opinion Mailbox, 26 cases from the Ombudsman Mailbox, and 1 case from the Anti-Sexual Harassment Mailbox. A sexual harassment complaint is a situation where there is inappropriate contact against the willingness of the victim in the workplace, causing the victim to feel offended. We have formulated the "Regulations Governing Sexual Harassment Prevention" in accordance with the "Act of Gender Equality in Employment" and "Regulations for Establishing Measures of Prevention, Correction, Complaint and Punishment of Sexual Harassment at Workplace", where the Sexual Harassment Complaint Committee shall carry out undisclosed investigation procedures to protect the parties concerned, and the case shall be closed after processing. All communication channels have been explained and advocated on the internal company website, electronic bulletin board, and new employee training materials to ensure all employees are aware of them.

In addition, the company shall at least arrange two Chairman Communication Meetings every six months, which are the Manager meeting for Job Grade 35 or above, and the Town Hall meeting open for all employees. They were organized 5 times in 2022, where the Chairman shared the company operation status and future outlook and answered the questions raised by employees for effective bilateral communication.

For continuously creating a communication friendly environment, heading towards the "Open Management Style", and implementing effective communication principles, the factory and division communication meetings have been regularly organized since 2022 to allow supervisors to communicate with employees face to face, listen to their opinions, immediately feedback and effectively solve the problems, so as to further strengthen the employee relationship.

Frequency and Content of Implementation of Diversified Communication Channels

Item	Implementation Frequency	Description of Content	2022 Implementation Results
Labor-Management Meeting	Quarterly	It shall be organized in each plant according to laws and regulations	VIS organized a total of 14 labor-management meetings in the four plants in Taiwan
Employee Opinion Channels	Occasionally	Speak Out, Employee Opinion Mailbox, Ombudsman Mailbox, Anti-Sexual Harassment Mailbox, Audit Committee Mailbox, Chairman Mailbox, and President Mailbox	There were a total of 437 complaint cases in the year with case closure rate of 100%
Chairman Communication Meeting	Semi-annually	Manager meeting for JG 35 or above, and Town Hall meeting open for all employees	A total of 5 Chairman Communication Meetings were organized in the year, and around 1,350 people participated in Taiwan and Singapore
Fab/Area Communication Meeting	Occasionally	All Fabs and Areas shall organize all employee communication meetings, Skip Level or Workshop in accordance with actual needs	There were a total of 102 meeting organized in 2022 with a total of 4,953 participants

Survey of Employee Recognition of Business Philosophy

VIS has always cared about and emphasized employees' opinions, which can serve as the basis for improvement measures to create a more harmonic working environment and to strengthen the cohesion of employees. In order to understand the employees' recognition of the company's business philosophy, the company has cooperated with experts and consultants to conduct "Survey of Employee Recognition of Ten Major Business Philosophies" since 2018. In 2020 this survey covered employees in Taiwan, West America, and Singapore with the questionnaire response rate of 98.2% and the degree of recognition of 4.42/5.0, which was 0.03 higher than 2018. The score of every question was significantly increased, indicating the high degree of employees' recognition of the company's business philosophies and engagement (work commitment).

The questionnaire includes 51 questions from the aspects of business philosophies and employee engagement which shall be answered based on a five-point scale. There were a total of ten business philosophies. The average degree of recognition of the business philosophies of all employees is 4.42 with the recognition of 77.3% of all employees, which is slightly higher than the degree of recognition in 2018 (4.39), yet there were less recognized employees (77.5% in 2018). The degree of recognition of male employees is 4.40, slightly lower than the 4.45 of female employee; in terms of job position, the recognition is the highest for senior management at 4.76 followed by the middle-level management of 4.52 and the first-level management of 4.47, and the recognition is the lowest for the non-supervisor employees at 4.41. From the aspect of employee engagement, the average score of all employees is 4.42; the engagement score of female employees is 4.43, higher than that of male employees at 4.41; in terms of job position, the engagement score of senior management is the highest at 4.88 followed by the engagement score of middle-level management at 4.60 and first-level management at 4.50. The engagement score of the non-management employees is the lowest at 4.39.

Aspect	Content	2018	2020							
		All Employees	All Employees	Gender		Job Position				
				Male	Female	Non-Management	First-Level Management	Middle-Level Management	Senior Management	
Business Philosophy Article 1	Upholding Ethical Business Practices									
Business Philosophy Article 2	Focusing on Core Business									
Business Philosophy Article 3	Internationalized Operation with View on Global Market									
Business Philosophy Article 4	Focusing on Long-term Business Strategies, Striving to Be a Perpetual Enterprise									
Business Philosophy Article 5	Treating Customers as Partners									
Business Philosophy Article 6	Building Quality into All Aspects of Our Business Compliance	4.39 (77.5%)	4.42 (77.3%)	4.40 (75.9%)	4.45 (80.2%)	4.41 (77.4%)	4.47 (81.7%)	4.52 (83.2%)	4.76 (95.3%)	
Business Philosophy Article 7	Constant Innovation and Entrepreneurial Vitality									
Business Philosophy Article 8	Creating a Dynamic and Enjoyable Working Environment									
Business Philosophy Article 9	Establishing an Open Management Style									
Business Philosophy Article 10	Being a Good Corporate Citizen by Contributing and Caring for both Shareholders and Employees									
Level of Employee Engagement	Commitment	4.42 (86.3%)	4.42 (85.1%)	4.41 (84.4%)	4.43 (86.1%)	4.39 (84.1%)	4.50 (91.4%)	4.60 (95.3%)	4.88 (95.3%)	

Explanation:

1. The survey used a 5-point scale questionnaire (Strongly Agree: 5; Agree: 4; Neutral: 3; Disagree: 2; Strongly Disagree: 1).
2. The percentages in brackets are the percentages of employees answering Agree and Strongly Agree.
3. Business philosophy article 8 and 9 are about in-depth understanding of the employees' purpose of working, and the job satisfaction and happiness
4. The business philosophy survey once every two years originally scheduled in 2022 was postponed by one year due to the office work style adjustment caused by the pandemic and the business organization adjusted according to the company growth.

6.4 Workplace Health Management

Emergency Response for Infectious Diseases

For the protection of employees' health and safety, the epidemic prevention team of VIS will advocate epidemic prevention policies and regulations while paying close attention to the current status of epidemic prevention. The Health Center will continue with personnel care and tracking in accordance with the result of epidemic prevention investigation and carry out the survey on in-plant COVID-19 vaccine coverage rate. According to the survey in 2022, the vaccination rates of the first dose and the second dose among all employees in Taiwan have been over 95%, and the vaccination rate of the third dose has reached 85%. We have advocated and encouraged the concept of early vaccination for early protection to actively cooperate with the government's epidemic prevention policies to reduce the risk of infection.

接種三劑新冠疫苗・防護升級行動不受限

第3劑疫苗三大好處

- 01 大幅提升體內抗體效價，降低染病風險
- 02 增加體內抗體和Omicron的能力，降低染病後引發重症或死亡風險
- 03 延長抗體效價時間，持續維持保護力。

WHO曾提出建議這波新的Omicron疫情，染疫者大都未接種2劑疫苗。
家中長輩應完整接種第3劑疫苗可有效降低46%感染Omicron風險，有效降低感染達成的重症、住院或死亡的風險。

- 5/17起，完成三劑疫苗接種者得免居家隔離，7天自主防疫期間，持二日內快篩陰性證明，可外出工作及採買用品
- 未完成3劑疫苗接種者，維持「3天居家隔離+4天自主防疫」

VIS 防疫小組關心您

Upgrade of COVID-19 vaccine protection without limitation

次世代雙價疫苗你打了嗎?

Q1：我可以接種次世代雙價疫苗嗎？
A1：12歲以上民眾，均可預約施打莫德納次世代雙價疫苗做為追加劑。

Q2：什麼是次世代雙價疫苗？
A2：台灣採購的是含有原始株及變異株之雙價疫苗，相較於原始株疫苗，對於抵抗Omicron變異株有較佳的保護力。

Q3：什麼是追加劑？
A3：一般健康民眾打完基礎劑後，由於疫苗保護力逐漸下降，而追加的疫苗。

Q4：什麼時候可以接種次世代雙價疫苗？
A4：與前一劑應間隔至少12週（84天）；確診後則需間隔三個月才能接種。

Q5：疫苗如何預約？
A5：符合接種間隔的民眾可透過「COVID-19疫苗防治一網通」或至疾病管制署網站的「COVID-19疫苗接種院所」，選擇鄰近合約醫療院所預約接種。

防疫小組關心您

COVID-19 防疫FAQ

Q1 請問廠內有那些情況需要通報？
Ans 依目前防疫政策，如有下列情況請進行通報：
• 本人或同住者確診/PCR陽性/快篩陽性
• 本人為居家照護者(7日內自處外人處)

Q2 請問公司的防疫通報窗口為何？
Ans 各廠健康中心公辦機：1508/1515(平日08:30-17:30)
各廠ERC分機3466/3499(夜班及假日)

Q3 快篩陽性就是確診嗎？本人快篩陽性怎麼辦？
Ans 1.目前一般民眾快篩陽性還是需要PCR檢測，PCR陽性才為確診，若65歲以上、居家隔離、自主防護以及居家檢疫、原住民、離島居民等對象，快篩呈現陽性，經醫師認定後可視同確診病例。
2.通報健康中心/ERC
3.密封快篩試劑，配戴口罩至社區篩檢站所作PCR檢測 <https://antiflu.cdc.gov.tw/ExaminationCounter>

Q4 本人確診，要幾天才能來上班？上班前還要快篩嗎？
Ans 原則上依採檢日隔天起算，第8天若無症狀即可上班，實際日期以居隔通知書為準。
上班前不需再快篩，入廠當天請先至門口警衛室刷卡

Q5 為什麼確診個案返廠不需快篩？
Ans 確診個案經過7天隔離，傳染力已經大幅下降。
很多染後患者，仍可能會在3周內出現胸悶反覆狀況；快篩做出來屬性，代表體內還有病毒量，但不代表有傳染力，故依據政府政策，確診個案隔離期滿、無症狀即可返廠，不需快篩

Q6 同住人確診，我可以上班嗎？
Ans 1.本人已完3劑疫苗接種者，且無症狀，持2日內快篩陰性可入廠，加強廠內自主健康管理2天。
2.本人未完成3劑疫苗接種者，居家隔離期滿後，第4~7天持2日內快篩陰性可入廠，加強廠內自主健康管理4天

Q7 請問執行快篩適當時機？
Ans • 有症狀：在症狀高峰時容易測到，如：發燒、喉嚨痛、流鼻水
• 無症狀：與確診者接觸後第2、3天進行快篩

防疫小組 關心您！

Health Management

VIS is dedicated to creating a safe and health workplace by providing the health examinations at frequencies superior than the statutory requirement, including physical and health examinations for new employees, special operation personnel, and current employees. We have appointed professional nurses, special on-site service physicians and occupational physicians according to the laws and regulations to provide employees with professional consultation on medical and health examination reports, along with the comprehensive health management plan including special protection, health promotion, and psychological counseling in order to enhance the employees' health awareness.

To allow all employees to better understand personal health risks, in 2022 VIS has optimized the health management APP with the addition of health classification, so that employees can have access to their health trends over the years to strengthen their emphases on health and awareness of self-health management; the APP can also be combined with the National Health Insurance Autotoll Platform to collect medical records and medication records, which can be connected to personal wearable devices to fully record daily sleep, walking and other health information, leaving a complete footprint on the health records of our employees to allow them to "Have full control over health information anytime anywhere". In 2022, VIS was recognized and praised by relevant units for its workplace health service, promotion of well-being of corporate employees, and creation of mother-friendly workplace and awarded the "Outstanding Healthy Workplace – Health Management Award", "CHR Healthy Corporate Citizen – Silver Award", and "Epidemic Prevention Pioneer – Gold Award".



H2U Health Bank+



Outstanding Workplace - Health Management Award



CHR Healthy Corporate Citizen-Silver Award



Epidemic Prevention Pioneer-Gold Award

Special Protection

VIS will arrange special operation physical and health examinations every year to allow our employees to work without any worry. There were a total of 270 employees engaging in special hazardous operations (such as: noise, ionizing radiation, arsenic, nickel, and indium) in Taiwan in 2022, and 100% of them have accepted the examinations. The result of special operation health examination indicates that there are no personnel of the Third Level and Fourth Level Management; for the personnel of the Second Level Management, factory occupational physicians have been assigned to interview them to provide personal health guidance. Meanwhile, the list of prevention and management of occupational cerebrovascular and heart diseases has been established according to the result of health examination to actively arrange outpatient clinics of factory occupational physicians to provide individualized consultation and professional advices to help employees create healthy lifestyles. In addition, the regular employees musculoskeletal and overload questionnaire surveys have been conducted to actively promote and ensure the physical and mental health of employees and the safety of working environment.

VIS has provided a maternal health protection management plan, arranges pregnant and parturient women to receive health consultation, work safety assessment, pregnancy and postpartum health guidance, sets up exclusive parking spaces for pregnant mothers, breastfeeding and collection rooms, and provided practical and exquisite gifts Deer gauze towels to ensure the physical and mental health of female workers during pregnancy, childbirth and breastfeeding, and to achieve the purpose of maternal health protection. In addition, considering that breastfeeding not only provides the baby with nutrition and enhances immunity, but also has a positive impact on the promotion of maternal health, the company has actively improved the breastfeeding room to create a friendlier workplace and has been granted the "Friendly Breastfeeding Room - Premium Certification". Furthermore, the VIS Employee Welfare Committee offers support to colleagues through measures such as maternity subsidies. VIS has established childcare contracts with 12 kindergartens in Taoyuan and Hsinchu, providing childcare benefits and discounts.



Factory occupational physician outpatient clinic consultation service



Maternal protection



Friendly Breastfeeding Room - Premium Certification

Health Care Program

VIS has provided all current employees with health examinations every year. There were a total of 4,826 employees participating in such examinations in Taiwan in 2022 with the health examination rate of 96%; for employees with abnormal health examinations, nurses will arrange factory physician outpatient clinics to provide individualized health consultation, and strengthen the medical assistance and tracking for employees with moderate or high health risks. There were a total of 782 employees receiving factory outpatient consultation in 2022.

Influenza prevention is the key project for the company safety and health management. VIS has organized annual influenza vaccination in coordination with the health examination activities. In 2022 all employees were provided with newly launched FLUCELVAX/TOYO cell-based vaccine with the subsidy increased from NT\$500 to NT\$900. There were a total of 1,611 employees vaccinated in 2022 with a total subsidy of NT\$1.531 million.



Vaccination



Influenza vaccine poster



Health Examination Poster



Employees Health Examination

To encourage our employees to develop the exercise habits to improve the physical and mental health and to enhance working efficiency, VIS has been issuing personal exclusive sports coupons since 2020. Before the promotion of sports coupons, the sports population of the company was around 7%, which was far lower than the young and middle-aged sports population based on the survey by the Sports Administration in 2020 at 22%. After the promotion of sports coupons, the statistics by the end of December, 2022 indicated that the company's sports population was increased to 33%, which was higher than the young and middle-aged sports population based on the survey by the Sports Administration in 2021 at 23%. "Health Exercise 2.0" sports coupons were successfully concluded by the end of December, 2022 and well received among all employees. A total of 107 special sports classes were provided in the plant with 7 external cooperative organizations and 31 external sports bases. A total of 5,220 sports coupons were used by a total of 1,903 people.

In combination with the 2020 "Belly Worriers Weight Loss Competition" and 2021 "Love the World Step by Step Online Walking Activity", in 2022 the weight loss walking activity aimed at rescuing the DEER babes – "Belly Worriers Weight II Loss Competition" and "Extra Story – Calling People from the World Online Walking Activity" were designed with the company's mascot MYDEER as the main character. The winning thresholds of different stages were designed and the targets of the individual competition and group competition were planned, and there were a total of 2,718 participants.

In addition, VIS also organized health lecture "Flash Mob Exercise Course" and invited professional fitness instructors to teach all employees elastic band training and stretching to achieve the exercise effect; and the "Encounter Plant Extracted Essential Oils X European Floral Lecture" was organized by inviting professional counseling psychologists to combine natural dried flowers with the essential oils to relax and relieve the pressure of body and mind; there were close to 100 employees participating in either of these two events.



Weight loss walking activity



European floral lecture



Sports coupons

6.5 Occupational Safety and Health

Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Implementation of occupational safety and health management system				
	<ul style="list-style-type: none">Qualified by ISO 45001 and TOSHMS Occupational Safety and Health Management System Certificate every year	<ul style="list-style-type: none">Qualified by ISO 45001 and TOSHMS Occupational Safety and Health Management System Certificate every year	<ul style="list-style-type: none">Qualified by ISO 45001 and TOSHMS Occupational Safety and Health Management System Certificate every year	<ul style="list-style-type: none">Qualified by ISO 45001 and TOSHMS Occupational Safety and Health Management System Certificate every year
Occupational safety and health audit				
	<ul style="list-style-type: none">Counsel and audit the safety and health completion rate of high risk operation contractor to reach 28%	<ul style="list-style-type: none">Counsel and audit the safety and health completion rate of high risk operation contractor to reach 30%	<ul style="list-style-type: none">Counsel and audit the safety and health completion rate of high risk operation contractor to reach 40%	<ul style="list-style-type: none">Counsel and audit the safety and health completion rate of high risk operation contractor to reach 50%
Frequencies of occupational hazards identification and risk assessment				
	<ul style="list-style-type: none">The completion rate of risk assessments of new and existing operations reaches 100%	<ul style="list-style-type: none">The completion rate of risk assessments of new and existing operations reaches 100%	<ul style="list-style-type: none">The completion rate of risk assessments of new and existing operations reaches 100%	<ul style="list-style-type: none">The completion rate of risk assessments of new and existing operations reaches 100%
EHS educational training				
	<ul style="list-style-type: none">EHS educational training completion rate reaches 100%	<ul style="list-style-type: none">EHS educational training completion rate reaches 100%	<ul style="list-style-type: none">EHS educational training completion rate reaches 100%	<ul style="list-style-type: none">EHS educational training completion rate reaches 100%
Workplace dangerous behaviors prevention advocacy				
	<ul style="list-style-type: none">Workplace hazard prevention advocacy training completion rate reaches 100%	<ul style="list-style-type: none">Workplace hazard prevention advocacy training completion rate reaches 100%	<ul style="list-style-type: none">Workplace hazard prevention advocacy training completion rate reaches 100%	<ul style="list-style-type: none">Workplace hazard prevention advocacy training completion rate reaches 100%



Sustainability goals	Outcome 2022	Short-term target 2023	Medium-term target 2024-2028	Long-term target After 2028
Health program voluntary participation rate	<ul style="list-style-type: none">Health program self-participation rate reaches 50%	<ul style="list-style-type: none">Health program self-participation rate reaches 50%	<ul style="list-style-type: none">Health program self-participation rate reaches 51%	<ul style="list-style-type: none">Health program self-participation rate reaches 52%
Employees safety accidents	<ul style="list-style-type: none">0 major occupational disaster and 12 minor accidents in the entire company	<ul style="list-style-type: none">0 major occupational disaster and ≤ 12 minor accidents in the entire company	<ul style="list-style-type: none">0 major occupational disaster and ≤ 10 minor accidents in the entire company	<ul style="list-style-type: none">0 major occupational disaster and ≤ 8 minor accidents in the entire company
Fatality rate caused by occupational injuries	<ul style="list-style-type: none">Fatality rate of occupational injuries is 0Disabling injury frequency ≤ 0.96 (in one million working hours)Severity of disabling injury at 7	<ul style="list-style-type: none">Fatality rate of occupational injuries is 0Disabling injury frequency ≤ 0.62 (in one million working hours)Severity of disabling injury ≤ 3.5	<ul style="list-style-type: none">Fatality rate of occupational injuries is 0Disabling injury frequency ≤ 0.47 (in one million working hours)Severity of disabling injury ≤ 3.2	<ul style="list-style-type: none">Fatality rate of occupational injuries is 0Disabling injury frequency ≤ 0.45 (in one million working hours)Severity of disabling injury ≤ 3.0
Occupational Disease	<ul style="list-style-type: none">0 case of occupational disease caused by chemical exposure	<ul style="list-style-type: none">0 case of occupational disease caused by chemical exposure	<ul style="list-style-type: none">0 case of occupational disease caused by chemical exposure	<ul style="list-style-type: none">0 case of occupational disease caused by chemical exposure
Awards	<ul style="list-style-type: none">Top 10% Outstanding Enterprise of Occupational Health and Safety Index Announced in the Sustainability Report of Ministry of Labor	<ul style="list-style-type: none">Granted 1 safety and health award	<ul style="list-style-type: none">Granted 1 safety and health award	<ul style="list-style-type: none">Granted 1 safety and health award

6.5.1 Environmental, Safety, and Health Policy and Management System

Environmental, Safety and Health Policy

VIS is a professional company of design, R&D, fabrication, and sales of IC which adheres to the core values of "Integrity, Customer Orientation, Value Orientation, Commitment), actively establishes good interaction and enhance awareness and common senses with the stakeholders such as customers, employees, suppliers, shareholders, and society, fulfills the responsibility of environmental safety and health investigation before mergers and acquisitions, and is dedicated to achieving the objectives of "Zero Safety Accident and Sustainable Environmental Development".

The policy has been formulated and revised by the Environmental, Safety, and Health Protection (simply know as ESH) Committee and reviewed by the board of directors to be applicable to all operation bases and contractors. The Risk and Environmental Safety Department is in charge of supervisor and promotion, and presenting performance and results during quarterly Environmental, Safety, and Health Committee. Major events must be reported to the board of directors.

The ESH policy and the applicable scope of ESH management system of VIS have been announced on the company website to be inquired by stakeholders at all times. In addition, all contractors are required to implement ESH management in coordination with company policy, and the ESH policy shall be advocated during the contractors' safety and health educational training so that all contractors entering the VIS for construction can understand the company's ESH policy.

Environmental, Safety, and Health Management System

VIS shall establish the environmental, safety, and health management system in accordance with the clauses of ISO 14001, ISO 45001 and the requirements of environmental, safety, and health laws and regulations. Taiwan Plant ^{Note} and Singapore Plant have both acquired the third party certification of ISO 14001:2015 version and ISO 45001:2018 management system; stakeholders such as suppliers and general public can inquire the relevant certificates via the following path: https://www.vis.com.tw/tc/press_document

According to the operation activities, products and services in the workplace, process hazards, audit by insurance company, suggestions of experts, cases took place in all departments or partner plants and regulatory requirements, all departments shall

assign senior personnel to carry out registration and assessment of safety and health risks and environmental considerations, and to propose environmental, safety, and health (ESH) plan for improvement with respect to items with high risks and significant environmental considerations. The main methods for promotion are as shown below:

- **Regulatory Compliance Identification**

Risk & Environment Safety Management Department shall login the Laws and Regulations Database of the Republic of China (Taiwan) every month to access the latest environmental, safety and health laws and regulations and other required information in ensure that the company is in compliance with the aforementioned laws and regulations and the requirements of other stakeholders organizations.

- **Environmental, Safety, and Health Risk Assessment and Formulation of Management Plan**

All units shall assign senior personnel (trained personnel for Singapore Plant) to carry out the registration and assessment of safety and health risks and environmental considerations, and propose ESH plans for improvement with respect to the items of high risks and significant environmental considerations.

Taiwan Plant: Risk & Environmental Safety Management Department shall outsource the operation environment monitoring according to the regulatory requirements once every six months, and the results of monitoring shall be announced and the units with abnormality detected shall be requested for improvement. Singapore Plant: The industrial sanitation inspection shall be implemented for dangerous chemicals every year according to the local regulatory requirements.

- **Environmental, Safety, and Health KPI (Key performance indicator)**

Competition (For Singapore Plant it is the Annual Best Workplace Safety and Health Performance Award)

- **The Factory Engineering Department and Equipment Engineering Department in Taiwan Plant Have Organized Environmental, Safety, and Health KPI Competition Once Every Six Months**

The competition items include: accident deficiency, continuous improvement of environment, safety, and health, and operation control. The winning units will be awarded pennants and bonuses. The competition items of the Annual Best Workplace Safety and Health Performance Award of Singapore Plant include: monthly accident deficiency, monthly inspection discovery/closure rate, ESH items, ESH sharing, and meeting attendance.

- Implementation of Internal and External Audits**

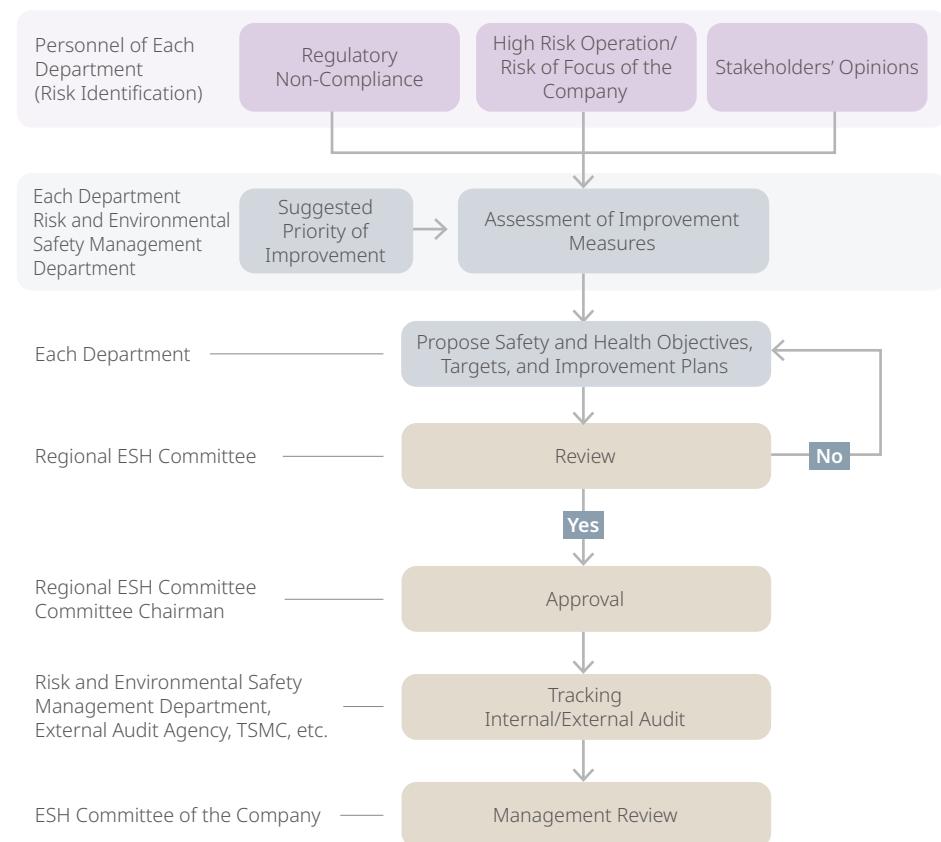
Risk & Environmental Safety Management Department shall conduct internal audit once every six months (once per year for Singapore), and the management system audit shall be outsourced to a third party certification agency every year to ensure the effectiveness of management system.

If there is any abnormality or deficiency found, an accident investigation system and the Corrective Action Request (CAR) shall be established to request the deficiency unit for improvement. The environmental, safety and health management shall be implemented according to the PDCA method as shown below:

The architecture of environmental, safety, and health management is as shown below:

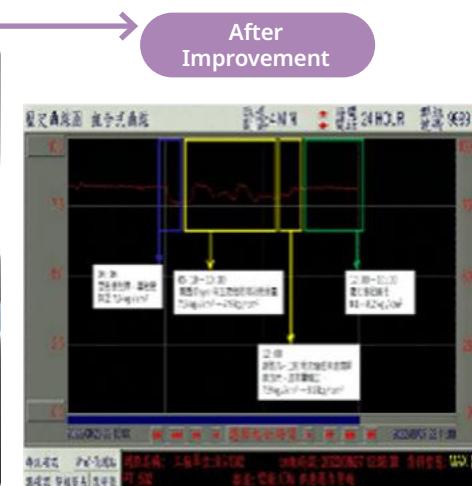
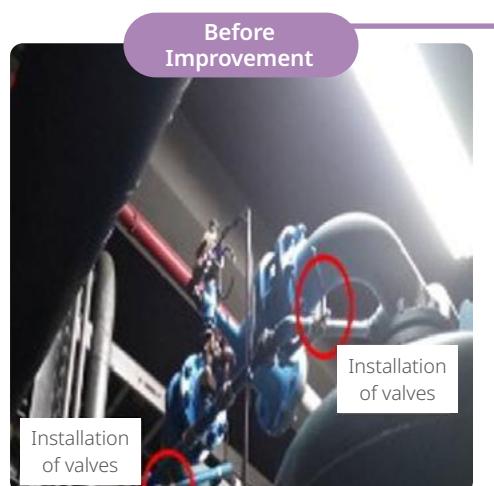


The implementation and operation process flow of the environmental safety and health organization are as shown below:



Implementation of green production and reduction of environmental impacts are the company's important environmental policies. A total of 78 environmental improvement plans were completed in Taiwan Plant in 2022, and they can be divided into the three categories of waste reduction, saving of energy and resources, and compliance with environmental protection regulatory requirements, including change of energy saving/variable frequency dry pump, extension of acid change time, reduction of ammonia water, silicon dioxide etchant (BOE), nitrogen (N2), recycling of concentrated water of ultrafiltration membrane (UF), renewal of UPS batteries, and reduction of the consumption of process chemicals and gases such as isopropyl alcohol (IPA) and photoresist from the sources in order to reduce the environmental loads and impacts. In addition, continue to purchase green (recycled) products such as paper towels and photocopying paper, and use raw materials that do not contain banned substances to reduce environmental load and impact.

The examples of the important safety and health plans completed in Taiwan Plant in 2022 are as shown below:



F3 CDA Dryer Machine renewable pipelines
Installation of valves for improvement (Risk Level:2 → 5)



F3 MAU-4&5 panel,ground tray
Protective paddle addition plan (Risk Level:3 → 5)



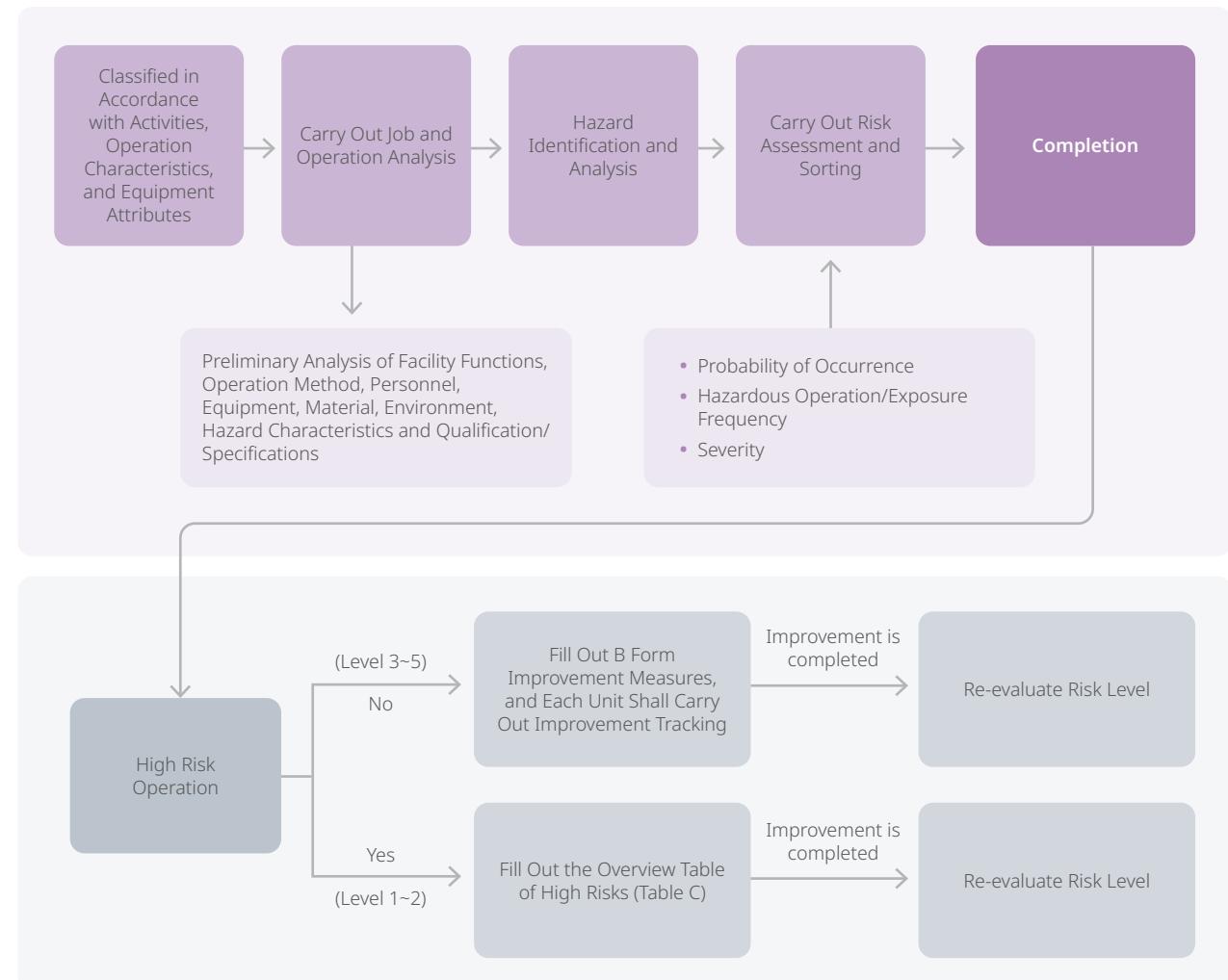
The improvement of Singapore Plant has been conducted according to the mid-year review in the risk items, including: fire disaster risk, expedite duct sprinkler installation work, MEMS FAB/data center/implantation, Very Early Smoke Detection Apparatus (VESDA) installation project, License Management e-system, reduction of carbon emission, device monitoring improvement), safety, health and environmental protection, and ESH ISO & regulation compliance, where there are a total of 15 items. And the volatile organic compounds removal rate, process water recycling rate, and waste reutilization rate have been tracked.

Hazard Identification, Risk Assessment, and Accident Investigation

All responsible departments shall identify the safety and health hazards of equipment, facilities, and production environments for employees, contractors, distributors, visitors, contracted personnel, activities of personnel related to plant leasing, and other external personnel need to enter the workplace in accordance with various operation activities and provided facilities in the workplace and other operation activities near the operation area, including regular and irregular works, hazards classification (including physical, human, chemical, biological, and psychosocial hazards), planned or newly developed, or new or modified activities, products, and services. Meanwhile, the risks of operation activities resulted from personnel behaviors, capabilities, and other human factors shall be taken into considerations; and the operation improvement and risk and opportunity assessment operation control shall be conducted in accordance with the identification results.

Taiwan Plant during coordination organization meeting for all outsources projects or contracted operations, project owners and contractors must fill out the Job Safety Analysis (JSA) for project hazards analysis to find out problems in advance and propose improvement measures. Toolbox Meeting shall be convened before daily construction operation to notify contractors' personnel of all possible risks and requirement protective measures of the daily operation.

Operating Procedures for Hazard Identification and Risk Assessment of Taiwan Plant

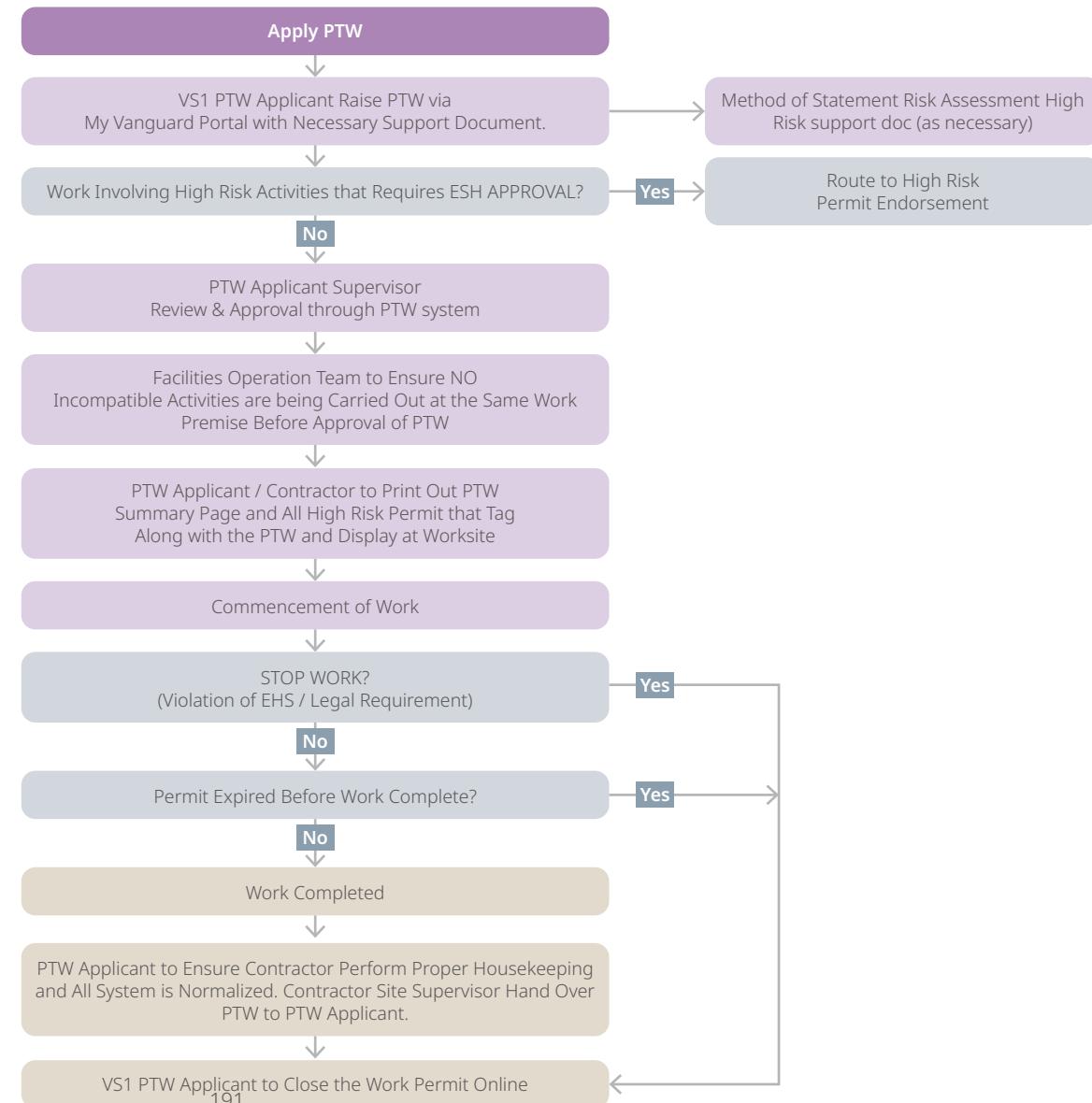


There must be risk assessment based on work activities hazard analysis for all outsources projects or contracted business in Singapore Plant. During the toolbox meeting, contractors shall be notified of the emergency evacuation plan, Personal Protective Equipment (PPE) requirements, scope of work, and method of work. For the contractors/maintenance service providers who have just contracted by the Singapore Plant, it is necessary to carry out an on-site inspection along with the contractors/maintenance service providers in order to get familiar with the Singapore Plant.

If there is any safety concern found during the implementation of hazardous operation and high risk operation, any employee of VIS is entitled to inquire, stop the operation, and notify the Emergency Response Center or the responsible unit of the responsibility area at the operation site.

VIS has stipulated in the "Code of Practice for Safety and Health" that when the personnel performing their duties found the "imminent danger", without endangering the safety of other workers, they may stop operations and evacuate to a safe place on their own, and immediately report to their immediate supervisors. They shall stop the operation and retreat to a safe place without endangering the safety of other workers, and report to the direct supervisor immediately. The company must not dismiss, transfer, retaliate, and refuse to pay wages during the suspension of operations, or take other unfavorable punishments for those who exercise the right of retreat.

Operating Procedures for Hazard Identification and Risk Assessment of Singapore Plant

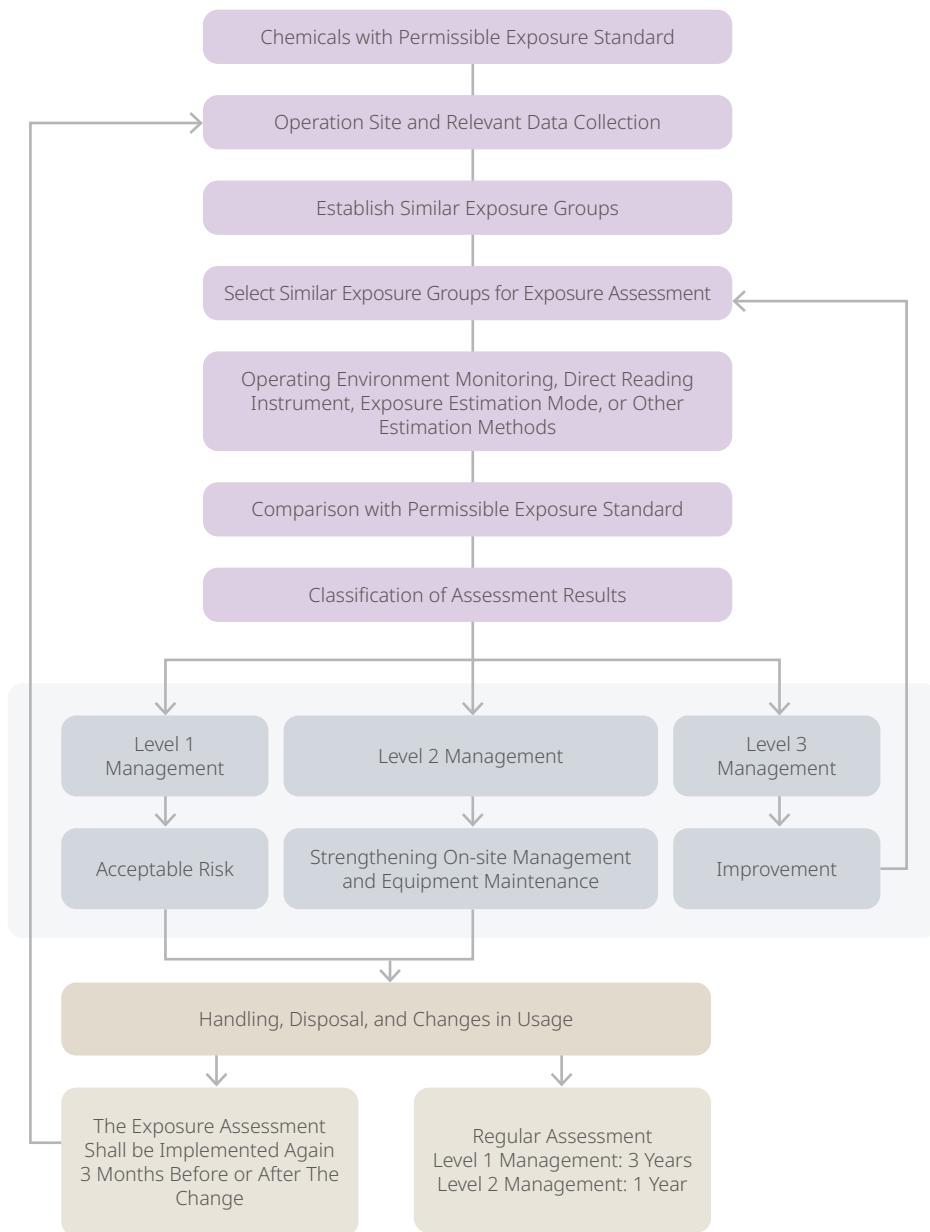


If the results of hazard identification, risk assessment, and environmental considerations reveal items of major risk and significant environmental considerations, the management plan needs to be formulated. The environmental, safety and health plan shall be initially reviewed by the supervisor of the proposing unit, industrial safety representative of the department, and RESM, and approved by the Committee Chairman of the Regional Environmental Safety and Health Committee before it can be implemented. Each plant shall report the environmental, safety and health implementation performance during the Plant ESH Committee Meeting every month, and the environmental, safety and health implementation performance of all plants shall be summarized and reported during the ESH Committee of the entire company.

The risk levels of hazardous chemicals used or stored in Taiwan Plant shall be assessed in accordance with the degree of health hazard, distribution status, and consumption, and the hierarchical management shall be adopted. If there is any chemical change in Singapore Plant, the change management shall be implemented according to the technical data document "Engineering Change Risk Management Measures". The evaluation results and hierarchical management process flow of chemicals with permissible exposure standards are as follows:

The Emergency Response Center (ERC) of each plant of VIS will organize emergency response trainings and drills in accordance with the "Emergency Response Training Implementation Measures"; there are internal regulations stipulated in the "Emergency Response Plan". If there is any abnormal accident in the plant, ERC must carry out emergency response and handling in accordance with various emergency response procedures. For example, if there is any gas leakage or fire disaster in the plant, ERC will broadcast to ask all personnel in the area to be evacuate to the designated area, and the trained Emergency Response Team (ERT) wearing protective gears shall confirm and carry out emergency response. The reports to the competent authorities inside and outside the plant and the accident investigation shall be started in accordance with the "Accident Reporting/Accident Investigation Measures". The improvement progresses of all accidents/deficiencies will be tracked and reported to all committee members and worker representatives during Plant ESH Committee Meeting and the ESH Committee Meeting of the entire company.

15 items of drills of Emergency Response Team (ERT) have been organized in Wafer Plant 1, 2, 3, and 5. A total of 137 drill sessions were completed with a total of 4,626 participants.



Situations of Taiwan ERT Educational Training

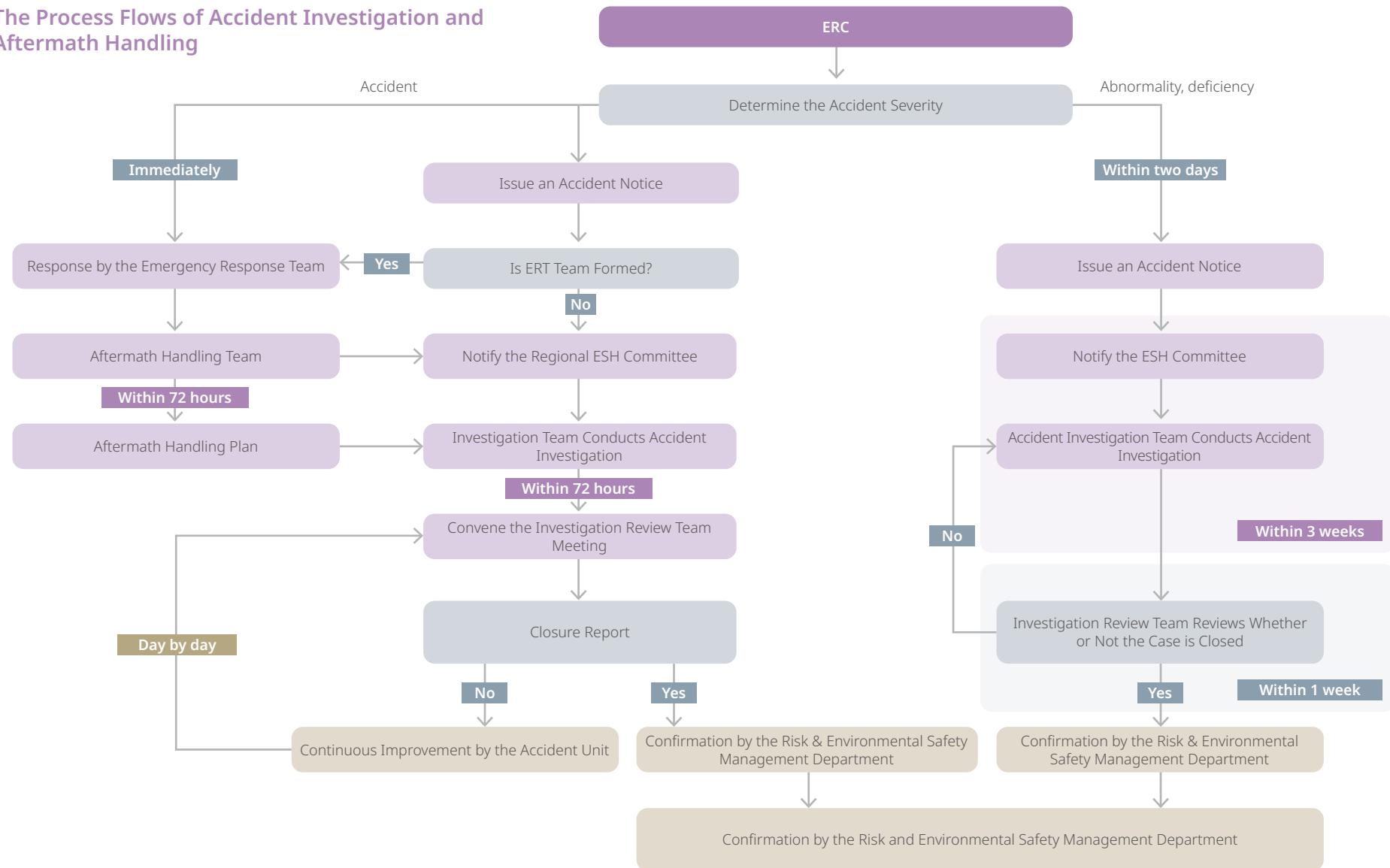
Training Item	Content of Implementation	Hours	Number of Courses	Total People Trained
Training	1. ERT Basic Training	New engineer emergency response skill training	4	2
	2. ERT Advance Training	Annual retraining of protective suit dressing	1	8
	3. SCBA Gas Cylinder Filling Operation Training	Retraining of filling of air compressor	1	2
	4. ERT IC Commander & Team Leader Training	Accident hazard identification, and disaster condition assessment training	1.5	10
	5. Professional Fire Protection Basic Fire Training/Chemical Disaster Training	Professional training in Minghu, Hsinchu	8	12
	6. Professional Fire Distinguishing Training (advanced fire training)	Professional training in Zhushan, Nantou	16	2
	7. EMT-1 Retraining	Rescue skill retraining	8	9
Drill	1. TE Evacuation Drill	Simulated evacuation scenario startup drill	0.5	16
	2. ERT Unannounced Assembly Drill	Holiday/Night-time ERT unannounced assembly	0.5	6
	3. ERT Drill	Implement the overall drill of the plant	0.5	56
	4. Toxic Chemicals Drill	Statutory drill items	0.5	5
	5. Public Dangerous Objects Drill	Statutory drill items	0.5	4
	6. Air Pollution Drill	Statutory drill items	0.5	3
	7. Office Evacuation Drill	Simulated fire disaster evacuation scenario startup drill	0.5	1
	8. Post-earthquake Building Assessment Drill	Building appearance/interior damage assessment drill	0.5	30
Summary				137 4,626

The Data of ERT Training and Drill of Singapore Plant

Training Item	Content of Implementation	Hours	Planned Session	Implemented Session	Trainees
Training	1. Evacuation Drill	Shift A-D Evacuation Drill	1	4	484
		Office Evacuation Drill	1	1	298
Drill	1. ERT Drill	The company's emergency response team drill committee is audited by A-CERT company authorized by the Singapore Civil Defense Force (CERT audit by A-CERT with SCDF)	9	1	19
Total				6	6
801					

Note: CERT: Company Emergency Response Team, SCDF: Singapore Civil Defense Force.

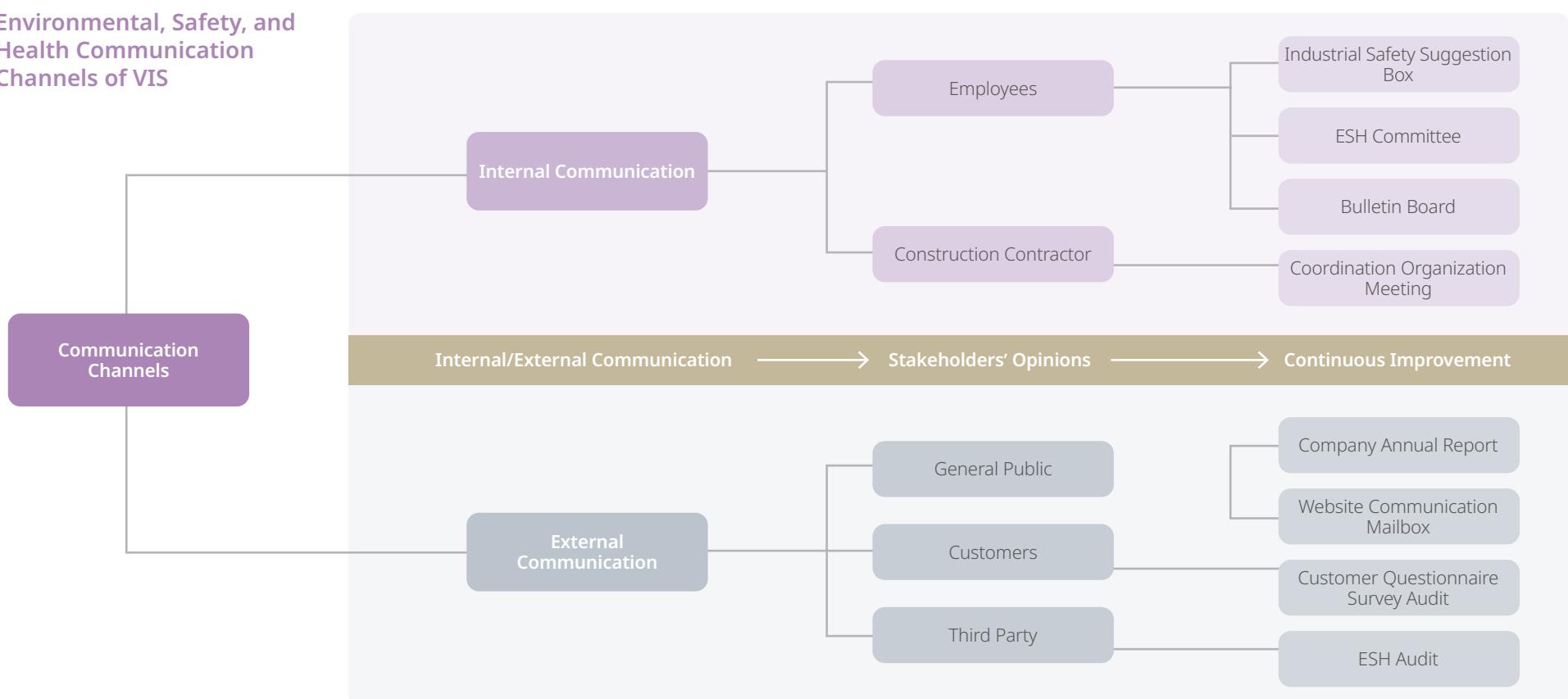
The Process Flows of Accident Investigation and Aftermath Handling



Participation, Consultation, and Communication of Environmental, Safety and Health Workers

There is a dedicated person who is on duty 24 hours per day in the plant to provide emergency response consultation, and the engineers on the day shift can be consulted for the environmental, safety, and health, and environmental protection questions. The communication channels include: TE on-line personnel communication monthly meeting, physical and e-bulletin board, restroom literature, department safety and environmental meeting, regional safety and environmental meeting, industrial safety and environmental protection suggestion box, proposal improvement system, new employee symposium, feedback to supervisors or industrial safety representative, and labor-management e-communication platform; if the resident contractor finds any problem during normal operation, it can be reflected to the responsible engineer immediately or reflected to the company via the monthly Hook-Up coordination organization meeting of Taiwan Plant; in addition, the supplier audit allows face-to-face communication of environmental, safety and health issues with the contractor personnel.

Environmental, Safety, and Health Communication Channels of VIS



Environmental, Safety, and Health Protection Committee

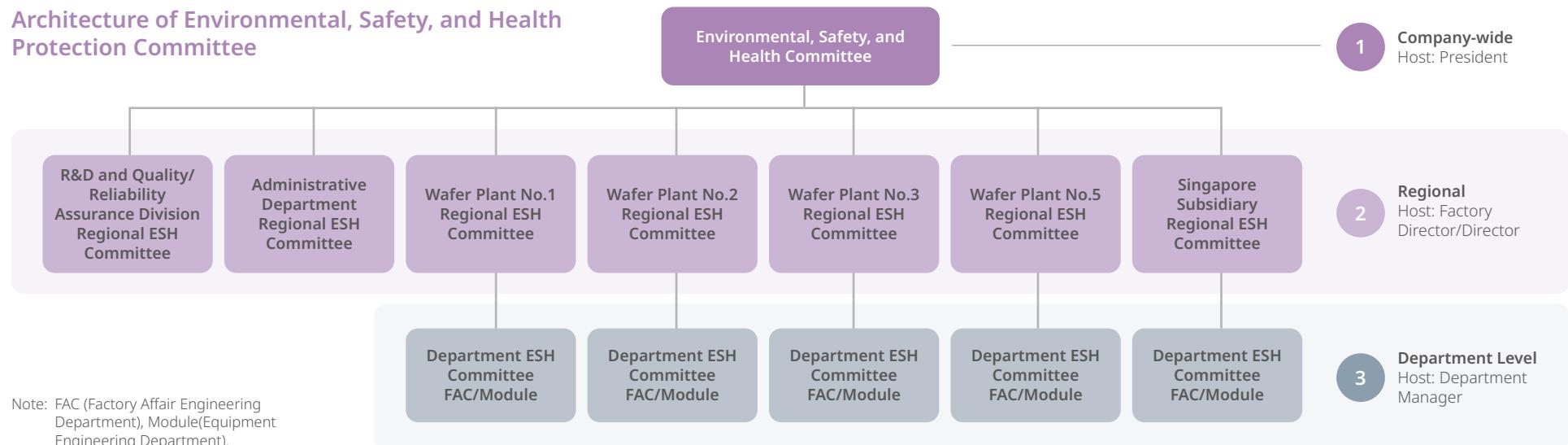
VIS has set up Occupational Environmental, Safety, and Health Protection Committee to allow President, all unit supervisors, labor representatives, factory nurses, and Environmental, safety and health personnel to regularly review the current status of implementation of various environmental, safety, and health issues; in addition, the Regional Committee has been set up according to the attributes of the unit for in-depth and effective proposal for improvement and review of current management status with respect to the characteristics of department operation, so as to effectively enhance the overall management performance. The architecture of the Committee is as shown below:

Committee Member: President (Management representative), Plant Director of each region, ESH and nursing personnel, department managers and labor representatives (accounting for more than 1/3 of all members).

Labor representatives: They are formed by the labor representatives elected by the labor-management meeting and the representatives elected by each regional ESH committee.

For the Workplace Safety and Health Committee of Singapore Plant formed by the management and employees in accordance with the "Workplace Safety and Health Act", the labor representatives are not required according to the law.

Architecture of Environmental, Safety, and Health Protection Committee



Workers Covered by the Occupational Safety and Health Management System

There are a total of 6,641 employees in VIS (5,782 in Taiwan Plant and 859 in Singapore Plant). There are a total of 793 workers of contractors or at the workplace controlled by the organization (452 in Taiwan Plant and 341 in Singapore Plant), accounting for 10.7% of all workers.

Note: The number of employees/contractors is as of December 31, 2022.

6.5.2 Statistics of Occupational Injuries

In 2022 there were 8 cases of occupational injuries of employees in Taiwan Plant of VIS, and there were 4 cases of occupational injuries of employees (0 case for contractor) in Singapore Plant. The main types of injuries were contusions and sprains, and there were no fatal cases. The aforementioned cases were minor injuries took place during operations, where the employee care was initiated immediately until the employees are recuperated and returned to work. The causes of accidents were reviewed to strengthen all safety management sectors at the operation site and the supervisory mechanism, and the hardware aspect has been improved to reduce the risk of human error.

There was no major injury or death caused by occupational disaster in 2022, indicating that the hazard awareness of the employees of VIS has been constantly enhanced with continuous improvement of operating environment so that all employees and contractors can work in a safe environment.

Statistics of Occupational Injuries – Taiwan Plant

	2018	2019		2020		2021		2022		
Total Number of Employees	65,212	64,944		62,265		63,275		68,204		
Total Person-Work Hours	11,407,132	11,619,703		11,653,073		11,838,737		12,555,198		
Number of Occupational Injuries	6	8		5		8		8		
Number of People with Occupational Injuries	Male 3	Female 3	Male 3	Female 5	Male 0	Female 5	Male 2	Female 6	Male 2	Female 6
Proportion of People with Occupational Injuries	4.6E-05	4.6E-05	4.62E-05	7.7E-05	0	8.03E-05	3.16E-05	9.48E-05	2.93E-05	8.8E-05
Frequency of VIS Occupational Injuries ^{Note 1}	0.26	0.26	0.26	0.43	0	0.43	0.17	0.51	0.16	0.48
VIS Occupational Injury Severity Rate ^{Note 2}	2	3	2	3	0	16	2	11	1	6
Frequency-Severity Indicator ^{Note 3}	0.02	0.03	0.05	0.03	0	0.08	0.02	0.07	0.01	0.05

The total number of days lost due to occupational injuries is the sum of the days when employees of the company are temporarily or permanently unable to return to work due to injuries; the calculation of these cases does not include the traffic accidents took place during commuting.

Note 1: Occupational injury frequency=(Number of occupational injuries / Total person-work hours (including overtime hours)) x 1,000,000

Note 2: Occupational injury severity=(Total number of days lost due to occupational injury/Total person-work hours (including overtime hours)) x 1,000,000

Note 3: Frequency-Severity Indicator = $\sqrt{(\text{Occupational injury frequency} * \text{Occupational injury severity})/1,000}$

Note 4: There was no occupational disaster case involving any contractor in 2018-2022.

Statistics of Occupational Injuries – Singapore Plant

	2020		2021		2022	
Total Number of Employees	8,663		10,692		11,579	
Total Person-Work Hours	1,633,448		2,009,902		2,030,325	
Number of Occupational Injuries	2		2		4	
Number of People with Occupational Injuries	Male	Female	Male	Female	Male	Female
	0	2	1	1	5	0
Proportion of People with Occupational Injuries	0	2.31E-04	9.35E-05	9.35E-05	4.00E-04	0
Frequency of VIS Occupational Injuries ^{Note 1}	0	1.22	0.5	0.5	1.97	0
VIS Occupational Injury Severity Rate ^{Note 2}	0	2	7	7	19	0
Frequency-Severity Indicator ^{Note 3}	0	0.06	0.06	0.06	0.22	0

The total number of days lost due to occupational injuries is the sum of the days when employees of the company are temporarily or permanently unable to return to work due to injuries; the calculation of these cases does not include the traffic accidents took place during commuting.

Note 1: Occupational injury frequency=(Number of occupational injuries / Total person-work hours (including overtime hours)) x 1,000,000

Note 2: Occupational injury severity=(Total number of days lost due to occupational injury/Total person-work hours (including overtime hours)) x 1,000,000

Note 3: Frequency-Severity Indicator = $\sqrt{(\text{Occupational injury frequency} * \text{Occupational injury severity}) / 1,000}$.

Note 4: There was no occupational disaster case involving any contractor in 2020-2022.

Absentee Rate

	2019	2020	2021	2022
Total accumulated work hours	11,619,703	13,286,521	13,848,639	14,585,523
Occupational injuries, personal leave, and sick leave hours	113,059	108,240	106,533	182,925
Absentee Rate	0.97%	0.81%	0.77%	1.25%

6.5.3 Environmental, Safety and Health Educational Training and Promotion

VIS is employee-oriented and encourages all employees to participate in the safety educational training and professional skill certification. With comprehensive training, we would like to strengthen employees' safety awareness, enrich employees' knowledge and skills, and create the safety culture to be shared by all employees in order to achieve the vision of "physical and mental health, happy workplace, and joyful homeland".

VIS has carried out various trainings in accordance with the safety and health/environmental protection educational training measures and annual industrial safety courses planning. They can be divided into the four major categories based on the training object, content of work, and work requirements, which are on-job training, environmental promotion training, professional training, and disaster prevention training. The training effectiveness shall be verified by assessment to enhance the safety awareness of every employee in order to achieve the purpose of protecting work safety and physical health.

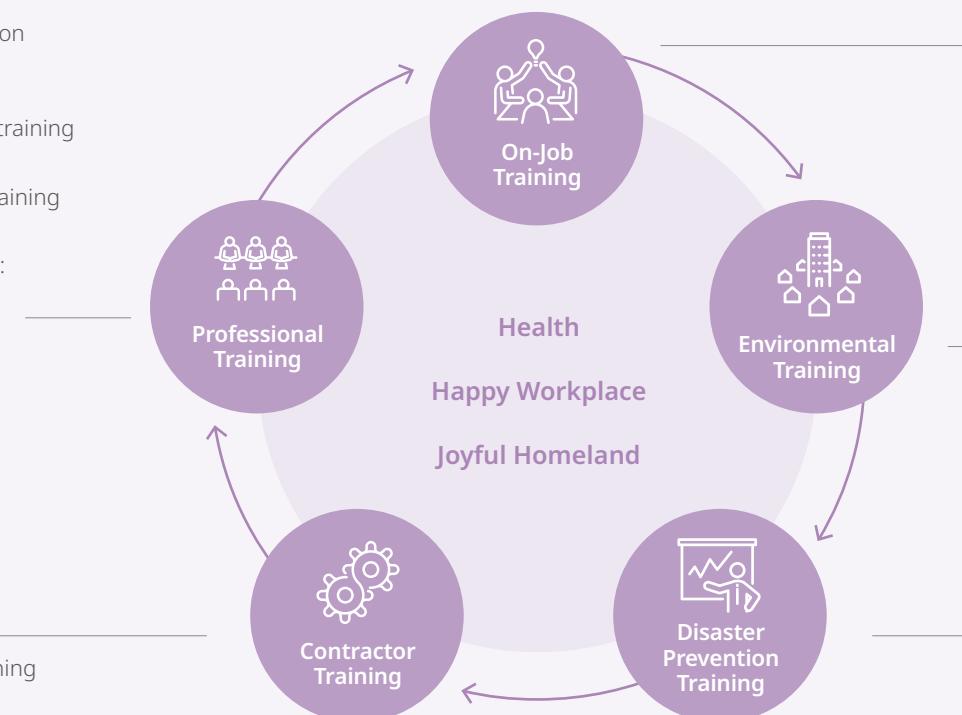
1. VIS Educational Training Planning and Implementation Process Flow



2. Types of Educational Trainings

1. Organic solvent operation supervisor training
2. Special chemical substances operation supervisor training
3. Radiation protection training
4. Human hazard prevention practical training
5. Civil defense training
6. Plant fire safety planning practical training
7. Accident investigation training
8. Risks of corporate risk management: Management procedures and risk quantification training

1. Initial contractor training
2. Contractor retraining
3. Six-hour contractor supervision training



Note: 1. The objects of new employee training refer to the official non-periodic employees of substitute military service or contracted employee transferred to full-time positions.

Note 2. For disaster prevention training please refer to the chapter of emergency response.

1. New employee training
2. Hazard general knowledge retraining
3. Supervision certification training
4. Post-earthquake building risk assessment training
5. Motorcycle safe riding training
6. Environmental, safety and health retraining at the section chief level
7. Hazard general knowledge retraining

1. Greenhouse gas inventory training
2. Firefly restoration

1. Accident commander training
2. Emergency response team basic training
3. Emergency response team leader training
4. Emergency response equipment practical training
5. Professional chemical accident handling training
6. Green Grass Lake fire fighting training
7. EMT-1 educational training
8. Respiratory protective equipment fit test training
9. Fire distinguishing practical training

3. Photographs of Educational Training (Taiwan Plant)

- Enhancement of on-job training and disaster prevention training: various safety and health educational trainings have been organized according to different operation characteristics.



Commander training (Total number of trainees: 195)



Emergency response team leader training (total number of trainees: 119)

- Safety and health educational training grading system: a grading system has been implemented for environmental, safety and health courses to enhance the professional skills of environmental, safety and health personnel at all levels.



Organic solvent operation supervisor training
(Total number of trainees: 114)



Specific chemical substances operation supervisor training (Total number of trainees: 60)



Forklift operator training (Total number of trainees: 50)

6.5.4 Contractor Management

Contractor management is a sector rather emphasized by VIS. All contractors cooperating with VIS must sign the "Contractor Construction and Safety Management Affidavit", and every operator of contractor must also sign the "Contractors' Personnel Safety, Health, and Environmental Management Signature Form" to fully understand the environment of the contracted work and the required safety measures, and be responsible for all safety and health matters during the construction period and promise the implementation of automatic inspection.

Hazard Notification and Educational Training

The hazard notification must be completed for all contracted works of VIS in order to confirm all possible hazards facing the operators of contractors before, during, and after the operations, and their preventive measures.

- Coordination organization meeting: The risk assessment and job safety analysis must be surely filled out according to the laws and regulations of Taiwan to list all risks and preventive measures in the project to be advocated during the coordination organization meeting. Supervisors and all agents of contractors must attend the coordination organization meeting, and the meeting minutes must be reviewed by the person in charge of the contractor and the subcontractor to ensure that the person in charge of the contractor and all supervisors are clearly aware of the hazards of the contracted operation and the preventive measures.

- Daily toolbox meeting: During the toolbox meeting prior to the start of work every day, the supervisor must advocate safety, health, and environmental protection matters to all operators. VIS shall from time to time audit the contractor to see if this meeting is indeed convened. The purpose is to allow all operators to be clearly aware of the hazards of operation and the precautions.

VIS has provided educational training for the contractors every week to notify them of various operation hazards, precautions, and regulations to be complied with. Various cases have been explained in a rather simple way to allow every operator of contractor to enhance his/her safety awareness.

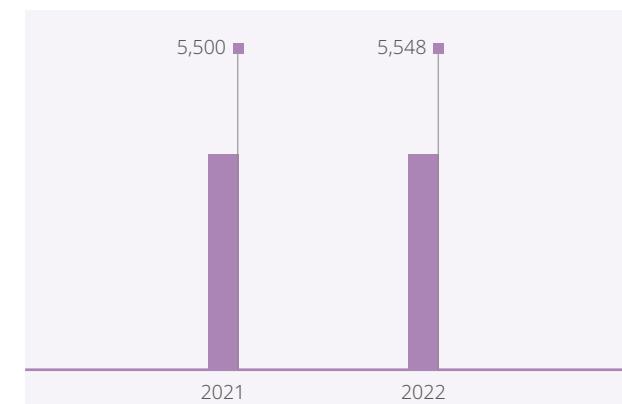
Qualification of Contractor's Operators

The confirmation of contractor's operators is under strict control:

- In addition to labor insurance, completion of statutory 6-hour industrial safety training, and required certificates, VIS also requires the contractor's operators in Taiwan to have the following qualifications:
 - (1) The operators of high risk Level-1 critical operation must be equipped with relevant working experience for more than two years
 - (2) General construction contractors must have more than one year of seniority before they can be granted long-term work permits
 - (3) High risk operators must be at least 20 years old and approved by the contractor to engage in the operation
- For the supervisor and safety and health personnel of the contractor, VIS specifically stipulates the following qualifications:
 - (1) Supervisors must be authorized the person in charge of company via a letter of authorization
 - (2) Contractor's supervisors (for projects with more than 5 people) and safety and health personnel (for projects with more than 30 people) must be equipped with at least the qualification of Class C Labor Safety and Health Business Supervisor

The Number of Contractor Personnel Passing the Courses

Unit: People



"e-Management System" with Layers of Control to Confirm Personnel Entry to the Plant

With the e-management system, such as the contractor management system, contractor hazard notice, and construction safety permit application system, all contractors need to enter the plant for services must establish personnel and company information and hazard notification data, such as the record of coordination organization, and they must be reviewed to be confirmed; meanwhile, all contractors' operators must be qualified by the "Contractors' Safety and Health Educational Training". All supervisors, safety and health personnel, and operators meeting aforementioned qualifications can be listed in the "Construction Safety Permit Application System" to be selected and appointed by the applicant.

Supervision of Contracted Operation

- **According to the Company's Regulations, Employees Responsible for the Contracted Operation must be Equipped with the Qualifications of "Supervisor" in order to Achieve the Source Management, and the Retraining must be Implemented Once Every Two Years.**

- **Prior Application for Approval is Required for the Contracted Operation**

For the safety of operations, the applications for various high risk operations and dangerous operations must be completed in advance. After the application is approved, the inspection form shall be printed out to be checked by the contractor's supervisor item by item together with the inspection of working environment, and then it shall be re-examined by the person in charge of sales of VIS.

- **High Risk Operation**

According to the company's regulations, before the high risk critical operation, the three parties of the contractor's supervisor, the supervisor of the responsible unit and industrial safety personnel of VIS must confirm that there is no problem before proceeding with the operation; the contracting unit can use a driving recorder to supervise the project progress depending on the degree of hazard of this project.

- **Daily Control of Operation Progress**

The daily joint defense morning meeting of the Risk and Environmental Safety Management Department will confirm that the protective measures are completed for all the application operations in each factory area. Industrial safety personnel will carry out daily sampling inspection and supervision (prior to the construction) during the toolbox meeting of each operation in the company. The "Emergency Response Center" will have all high risk and dangerous operations in the company under control and conduct inspections during and after construction to confirm that all operations are carried out according to the regulations.



The figure above indicates an operator who was identified by AI as not wearing the safety helmet according to the regulations

- **Comprehensive Supervision**

Director of each plant, supervisor of engineering unit, and industrial safety representatives shall conduct inspections from time to time and correct any problem found and list them as one of the follow-up improvement items.

- **Technology-based Law Enforcement**

VIS "used AI integrated CCTV image recognition system" to identify those who did not wear safety helmets according to the regulations or the lifting of raised floor without setting up fences with an accuracy as high as 98%. This has effectively improved the precision of contractor's operation.

"Exclusive" Abnormal Conditions Acceptance Unit

If the contractor is found to have any unsafe condition, the emergency response center of each plant must be notified immediately. After being notified, the acceptance unit shall immediately visit the place for confirmation along with relevant units, correct the unsafe situation, and carry out follow-up systematic tracking and improvement.

Contractor Evaluation

VIS will conduct contractor evaluation every year, and the results of evaluation will be reported in the Safety Committee Meeting of each plan and the company-wide Safety Committee Meeting and submitted to the procurement unit to serve as the basis for the company to decide whether or not to continue to cooperate with them.

Contractor's Health Management

VIS has emphasized the health management for contractors by setting up a health center, qualified first aid personnel, junior rescue technician and first aid equipment in the Taiwan Plan to provide immediate assistance in case of medical emergency. For those who provided personal health information based on the contractor's consent, the health center of the company will conduct the tracking management and health guidance for those with abnormal results of health examinations. During the epidemic prevention period, the contractors are also the key objects of epidemic prevention management. The measures are: only those with body temperatures, travel histories, and contact histories meeting the requirements of the company's Epidemic Prevention Committee will be allowed to enter the plan, and all epidemic prevention measures after plant entry must comply with the company's regulations.

"Big Hands Holding Small Hands" Plan

VIS continued with the "Big Hands Holding Small Hands" plan in 2022 to enhance the contractors' environmental, safety and health management performance. The environmental, safety and health audit and counseling system will be promoted after the COVID-19 epidemic is over. Expanding from current third parties to each contractor, the "Contractor audit system" will be introduced to the normal track in order to bring the safety and health management level of contractors closer to that of VIS so that we can jointly prevent the construction accidents.

Contracting Operation Management Architecture of VIS

Contractor Operation



Annual Evaluation

- Annual contractor evaluation (according to the tracking data of listed cases)
- The evaluation results will be reported during the Safety Committee Meeting of each plant and the company-wide Safety Committee Meeting
- The evaluation results shall be submitted to the procurement unit to serve as the basis to determine the continuous adoption or cooperation



Data Establishment Data Review

- Establishment and review of company and personnel information
 - Statutory industrial safety training, certificate, supervisor qualification
 - Labor insurance, seniority



Educational Training Hazard Notification

- Educational training
 - Contractor physical training
 - In-plant employee supervisor training
- Hazard notification
 - Coordination organization meeting



Plant Entry Card Control

- All e-management systems are linked to each other for card control
 - Only qualified personnel are allowed to apply for plant entry
 - Confirm all personnel exit the plant safely via card activation/deactivation



Operation Execution Safety Supervision

- Second hazard notification-daily toolbox meeting
- Qualified construction machines -Qualified electrical machine inspection
- Complete personal protection
- Management of dangerous and high risk operations (inspection included)
- Video recording of the entire operation by a driving recorder (Making up for the dead corner of monitoring)
- Audit of violation by AI
- Case listing for tracking and improvement(accident notification/investigation)



Operation Audit Abnormality Improvement

- Audit of dangerous and high risk operations
- Patrol audits at all levels
- Improvement based on abnormality report found by all staff supervision
- Operation observation for problem improvement
- Audit of violation by AI
- Case listing for tracking and improvement(accident notification/investigation)



Health Maintenance

- Emergency medication
- Health management of resident contractors
- Epidemic prevention measures

Common Good

VIS proactively invests resources to help the disadvantaged, support education in remote rural areas, participate in community building, and advocate UN SDGs, becoming a force that drives the improvement of society.

\$33.68 million

The total value of social engagement is approximately NT\$33.68 million

4,274 person-times

A total of 4,274 person-times in the Year-end Charity Donation Campaign

2,026 hours

Employees worked as environmental volunteers for 2,026 hours

Sustainability goals	Outcome	Short-term target	Medium-term target	Long-term target
	2022	2023	2024-2028	After 2028
Social Welfare and Charity	<ul style="list-style-type: none">The total value of social engagement is approximately NT\$33.68 millionYear-end charity donation activity, with 4,274 employees participating	<ul style="list-style-type: none">VIS' social engagement investment reached NT\$25 million3,000 employees participating in social activities.	<ul style="list-style-type: none">VIS' social engagement investment to reach NT\$35 million4,000 employees participating in social activities	<ul style="list-style-type: none">Continued increasing VIS social engagement investmentContinued increasing numbers of employees participating in social activities
Environmental Education	<ul style="list-style-type: none">1,271 individuals receiving environmental educationEnvironmental protection volunteers serving 889 individuals	<ul style="list-style-type: none">1,000 individuals receiving environmental educationEnvironmental protection volunteers serving 350 individuals	<ul style="list-style-type: none">1,500 individuals receiving environmental educationEnvironmental protection volunteers serving 400 individuals	<ul style="list-style-type: none">1,600 individuals receiving environmental educationEnvironmental protection volunteers serving 450 individuals

As a member of Taiwan society, VIS believes that only by improving the overall social environment can VIS' operations become more stable and sustainable. To practice the concept of social common good, in 2022 under the supervision and regularly held review of the Corporate Sustainability Committee, VIS evaluates the impact of VIS' operations on communities and society and participates in social activities by upholding five principles: Care for Disadvantaged Groups, Care for Elderly Living Alone, Diverse Empowerment, Sustainability Initiatives, and Environmental Conservation. Through donations, volunteer services, resource investment, VIS proactively takes measures to implement the UN sustainable development goals, promotes public welfare and sustainable projects, and invites suppliers and customers to participate in social activities in the hope of creating more diverse positive social influences to achieve the goal of social co-prosperity.

Driven by this goal, to effectively evaluate the efficiency of invested resources, VIS relies on London Benchmark Group's community investment evaluation mechanism to calculate the quantified benefit and impact of every project by considering time, money, and materials invested. In addition to knowing the results of each project, this assessment also allows us to integrate and allocate resources more reasonably in a way that resources waste can be avoided. At the same time, we also deeply care about the disadvantaged. In our interactions with them, we think about how to provide proper and long-term benefits for them to increase the quality and positive influences of our social footprints.

Ratios for Investment in Public Welfare by Type from 2020 to 2022



The Types and Financial Values of Resources Invested in Public Welfare and Charity from 2019 to 2022

Years	Cash Donations		Materials Donations		Volunteers		Administrative Expenses		Total	
	Amount (NT\$)	Percent	Amount (NT\$)	Percent	Amount (NT\$)	Percent	Amount (NT\$)	Percent	Amount (NT\$)	Percent
2022	31,562,303	93.7%	387,575	1.2%	1,610,200	4.8%	124,160	0.4%	33,684,238	100%
2021	27,538,624	81.2%	5,696,189	16.8%	520,490	1.53%	157,480	0.46%	33,912,783	100%
2020	8,144,240	79.82%	567,340	5.56%	941,250	9.23%	550,262	5.39%	10,203,092	100%
2019	4,300,000	75.35%	835,700	14.64%	370,700	6.5%	200,178	3.51%	5,706,578	100%

Note: In 2021, VIS donated zero-contact anti-COVID inspection stations and anti-COVID materials to the public and vulnerable groups in response to the spread of COVID-19 in Taiwan. Therefore, money for materials donation was higher than other years.

Achievements and Benefits of the Five Major Public Welfare and Charity Principles in 2022

In February 2023, the Corporate Sustainability Committee proposed a mid-to-long-term plan for the ESG social engagement projects featuring five principles to the Board of Directors and obtained their support. In the future, VIS will continue to implement sustainable goals with specific actions.

VIS' Five Principles for Public Welfare and Charity	Concrete Measures in 2022	Impact on Business	Impact on Society
Care for Disadvantaged Groups 	<ul style="list-style-type: none"> With the theme of Empowerment for the Disadvantaged and Spending the New Year with the Elderly, a year-end charity donation event was held. Employees, customers, and suppliers were invited to participate. A total of NT\$4.37 million was raised for six social welfare organizations. An annual CSR video was filmed with the theme of Empowerment for the Disadvantaged to introduce the three social welfare organizations to stakeholders: the Garden of Hope Foundation, Bornanew Youth Caring Association, and Lezhi Charity Association. Organized the event of "Sending Love Home in Winter - Material Donation Event" to raise 27 boxes of materials for the homeless and the elders who live alone. Donated NT\$1.2 million to 12 social welfare organizations with which VIS has developed long-term cooperation. Organized the activity of "Order Instead of Donate: Celebrate the Festival with Social Welfare Groups" campaign, to encourage the ordering of gift boxes from social enterprises or sheltered workshops. Volunteer clubs donated anti-COVID masks to the disadvantaged elders and children who need help with which VIS has developed long-term relationships. 	<ul style="list-style-type: none"> Help stakeholders (including customers and suppliers) understand VIS' sustainable philosophy and concrete implementation measures. Improve employees' identification and solidarity with VIS. In 2022, a record high of 4,274 person-times in the Year-end Charity Donation Campaign. Improve potential job seekers' identification with VIS and increase their willingness to apply for VIS' positions and become VIS' employees. Improve the way non-enterprise opinion groups (such as the government, local residents, NGOs, media, etc.) perceive VIS and increase the public recognition of VIS' name. Reduce operational risks that may be caused by the spread of infectious diseases. Being helpful in applying for corporate sustainability-related awards (won 18th place in the group of large enterprises of the Commercial Citizen Award of Commonwealth Magazine, Taiwan Corporate Sustainability Awards' Taiwan Top 100 Sustainable Model Enterprises Award, the Platinum Award of Sustainability Report Award, and Global Corporate Sustainability Award's Sustainability Report Award Silver Award). 	<ul style="list-style-type: none"> Six social welfare organizations received a donation of NT\$4.37 million, which can be used for the designated "Care for Disadvantaged Groups" and "Spending the New Year with the Elderly" projects. Making a charity film to raise the publicity for three social welfare organizations. Customers and suppliers take the initiative to participate in long-term public welfare donation, which will help improve the overall social atmosphere and help social welfare organizations operate. Obtained 27 boxes of daily necessities to help the homeless and the elders living alone in northern Taiwan. 12 social welfare organizations received a total of NT\$1.2 million in donations. They can use the money freely in their own projects. Eight sheltered workshops and social enterprises received additional orders worth of about NT\$350,000 for festive days. Vulnerable elders and children who need help received free anti-COVID-19 materials to reduce their health risks. 120 seniors in nursing home in Singapore received care gifts. The disadvantaged in Singapore received food worth more than S\$3,000.
Care for Elderly Living Alone 	<ul style="list-style-type: none"> Volunteers regularly organized care activities for the elders in the community. In response to the Boys' Brigade Share-a-Gift event in Singapore, 120 gifts worth about S\$3,600 were raised. VS1 volunteers then donated to the elders in Singapore's nursing homes. Cooperate with Willing Hearts, a Singaporean charity, and participate in its charity meal delivery event. VS1 volunteers distributed food worth more than S\$3,000, calculated based on purchasing fees and meals making efforts. 		

VIS' Five Principles for Public Welfare and Charity	Concrete Measures in 2022	Impact on Business	Impact on Society
<p>Diverse Empowerment</p> 	<ul style="list-style-type: none"> Sponsored Tsing Hua University's the Sunrise Program, provided scholarships and female mentors, and sponsored three disadvantaged female students to study. Sponsored Yang Ming Chiao Tung University's Ukrainian Student Scholarship Program and supported two Ukrainian students to study in Taiwan. Cooperated with National Taitung Junior College to offer a Micro-credit Course on Semiconductor Manufacturing and Equipment. Provided scholarships, faculty members, and internship opportunities to promote the idea of educational equality in rural areas. Sponsored Junyi Academy to hold four cloud-based training courses during the winter break. More than 4,147 teachers participated in the training. Sponsored Junyi Academy to deepen the trainings for teachers from Miaoli's 96 local schools. Co-organized education volunteers training lectures with Junyi Academy. More than 100 people participated. Donated second-hand laptops to Tainan's rural elementary schools (Dongshan Elementary School) to help children in remote areas learn in a variety of ways. Cooperated with ASUS in the Computers for "Refurbished Computer and Digital Training Program". Since 2009, a total of 8,432 computers, screens and other electronic products have been donated to disadvantaged groups to bridge the digital gaps. With the theme of "Empowerment for the Disadvantaged", we held a semiconductor career lecture with the Boyo Social Welfare Foundation. More than 130 disadvantaged families and middle school students from remote areas and aboriginal areas of Hsinchu County participated. Organized the Blue Sky Home Fun Club to provide semiconductor career lectures for teenagers in need. Cooperated with five colleges and universities including National Tsing Hua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University on ten projects. Cooperated with social welfare organizations to recruit people with disabilities, and provided job counseling and design for them in cooperation with the employment center. 	<ul style="list-style-type: none"> Establish long-term and stable employees recruitment channels. Improve job seekers' professional quality, reduce gap between what is learned and what is needed that may arise after recruitment, and shorten new employees' learning period. Help increase the willingness of women and potential job seekers to apply and accept offers. Promote the identification with the corporate brand by women and employees who care about gender equality. Respond to the major issues of corporate sustainability of the year which stakeholders are concerned with (Ranked No. 9 issue concern: talent recruitment and retention). Improve the way non-enterprise opinion groups (such as academic institutions, NGOs, media, etc.) perceive VIS and increase VIS' publicity. Understand the latest situation and trends of the industry, enhance industrial technology development, research and innovation capabilities, so as to enhance the sustainable competitiveness of VIS. 	<ul style="list-style-type: none"> Three disadvantaged female students from National Tsing Hua University have life care and career guidance. They can attend school with peace of mind. Two Ukrainian students from National Yang Ming Chiao Tung University are able to continue their studies in Taiwan despite the Russian-Ukrainian War. 194 students from National Taitung Junior College have semiconductor faculty members and have access to educational resources and special open internship opportunities. This mitigates the problem of educational differences due to the remoteness of the school. 1,492 students from Taitung College received scholarships, which help them stay in school despite their families' unfavorable economic conditions and the remoteness of their residence. 4,147 faculty members participated in cloud-based learning to bring digital learning resources to students. Faculty members from 96 schools in Miaoli participated in digital learning faculty training seminars to bring digital learning resources to rural students. Dongshan Elementary School in a remote township in Tainan received ten second-hand laptops, which can be used by teachers and students for diverse learning. Electronic products such as computers and screens were distributed to disadvantaged groups to bridge the digital gap. About 130 middle students with underprivileged, remote-area, and aboriginal backgrounds from Boyo Social Welfare Foundation in Hsinchu County gained semiconductor science knowledge and career information. About 20 teenagers in need of education and family care from Blue Sky Home gained semiconductor science knowledge and career information. Academic research institutes such as National Tsing Hua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University received research funding to enhance the overall industrial technology and development potential. People with disabilities receive fair wages and job opportunities.

VIS' Five Principles for Public Welfare and Charity	Concrete Measures in 2022	Impact on Business	Impact on Society
Sustainability Initiatives 	<ul style="list-style-type: none"> A total of five factories in Taiwan and Singapore turned off the lights for one hour to implement the promoted initiative. Support local agriculture, order 600 boxes of sugar-apples for VIS' employees and ten social welfare organizations. Sponsored the Focus Taiwan: Jennifer Shen's talk radio program. The host Jennifer Shen combined the theme of the program with the sustainable development goals of the United Nations through her expertise in journalism. A total of 52 episodes were produced and broadcasted in 2022, advocating for at least 13 sustainable development goals of the United Nations. 	<ul style="list-style-type: none"> Help customers pass ESG reviews. Help meet the evaluation requirements of the stock exchange (the top 5% companies with the best performance for nine consecutive years in the corporate governance evaluation of companies listed in the stock market regardless of their classification). Participate in the evaluation of sustainable constituent stocks to increase investors' willingness in green investment (selected as constituent stocks of S&P Global Dow Jones Sustainability Index - World Index, Dow Jones Sustainability Index - Emerging Market Index constituent stocks, and Taiwan Index Company's Taiwan Sustainability Index constituent stock). Apply for awards to improve brand value (won the Silver Award of the 4th National Enterprise Environmental Protection Award, an excellent adoption organization of the Ministry of Economic Affairs' Water Conservancy Administration's Maintenance Effects of Green and Beautified Waterfront Land, an excellent adoption organization of Air Quality Purification Areas for four consecutive years, A-grade evaluation of CDP Carbon Footprint Disclosure Project). Enhance the identification of potential job seekers with VIS' name. Improve how non-enterprise opinion groups (such as the government, environmental protection groups, community residents, media, etc.) perceive VIS and increase VIS' popularity. Help stakeholders (including customers and suppliers) understand VIS' sustainable philosophy and actions. Reduce operational risks caused by environmental issues. 	<ul style="list-style-type: none"> Farmers can have a stable source of income because their products are promoted and supported by enterprises. Sponsored the Focus Taiwan: Jennifer Shen's talk radio program. In 2022, a total of 52 episodes were produced and broadcast, advocating for at least 13 UN sustainable development goals. The program's audience reached 1.312 million people. Local residents have two green public spaces as their daily rest places, with a total area of 4.9 hectares. Qianjia Park can clean 5 metric tons of carbon dioxide and 1 metric ton of suspended particles every year by its own natural mechanisms. The Park has the function of purifying the air. The Kezihu and the Hsinchu Science Park's flood detention pond have been maintained for a long time. Their ecosystem has been successfully restored. The biodiversity of the water area has been increased as well through releasing 2,500 to 3,000 firefly larvae into the wild every year. Employees worked as environmental volunteers for 2,026 hours per year, and 1,271 students and community residents participated in environmental education activities. Because of promises made by VIS, biodiversity and forest ecology in statutory ecological protection areas and biodiversity sensitive areas at home and abroad are protected.
Environmental Conservation 	<ul style="list-style-type: none"> Planting trees and changing landscape for the Cherry Blossom Park in Hsinchu City to create a beautiful city view for residents to be close to water, cherry blossoms, and fireflies. Adopted Qianjia Park, the largest air quality purification area in Hsinchu City. VIS has been recognized as an excellent adoption organization of air quality purification areas by the Environmental Protection Administration for four consecutive years. Adopt Kezihu and Hsinchu Science Park's flood detention pond, release 2,500 to 3,000 firefly larvae in the wild. Employees worked as environmental volunteers for 2,026 hours. Additionally, there were 1,271 students and community residents participated in environmental education activities. Establish a Biodiversity Commitment Statement and make a promise not to engage in development and operation activities in domestic and foreign legal ecological protection areas and sensitive areas of biodiversity. VIS also took protection measures to reduce the impact on biodiversity and forest ecology. 		

7.1 Social Welfare

7.1.1 Care for Disadvantaged Groups

Year-end Charity Donation Campaign

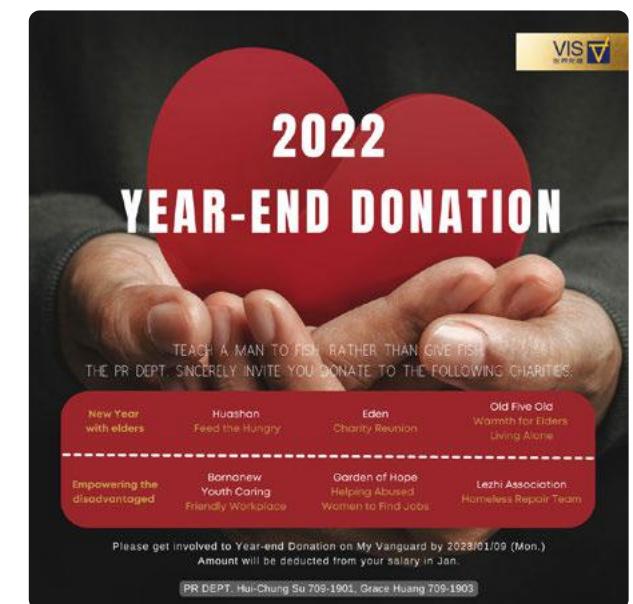
VIS has held an internal charity donation campaign since 2015. Over the years, in addition to continuing to carry out the fundraising "Spending the New Year with the Elderly" project with Huashan Social Welfare Foundation, Eden Social Welfare Foundation and Old Five Old Foundation, in recent years VIS has set annual themes and expanded the search for social welfare groups, invited stakeholders such as employees, suppliers, and customers to participate in donation events.

In 2021, VIS' theme was "Caring for High-Risk School Dropouts" and make donations to Boyo Social Welfare Foundation, Reyuan Boxing Team, and Taiwan Vineyard Arts Association. With the help of donations, these organizations had some good news about the success of the youth which they have been helping. For example, the Reyuan Boxing Team won 9 gold, 4 silver, and 5 bronze medals in the National Middle Schools Athletic Games in July 2022, with a total of 18 medals. Among the medal winners, Su Ching-Wen became a national athlete participating in the International Boxing Invitational Tournament in Bulgaria in September, 2022 and won her first world gold medal. In 2022, in addition to VIS' continuous funding to organizations, VIS' suppliers and customers who participated in the 2021 event will also take the initiative to continue funding these groups.

In 2022, VIS adhered to its original intention of "Provide Resources to Bring Light to Unattended Places" and selected "Empowerment for the Disadvantaged" as the event theme. VIS visited three social welfare organizations: the Garden of Hope Foundation which helps women who suffer from domestic violence to become self-reliant, Bornanew Youth Caring Association which guides young people who were under legal behavioral discipline programs or have highly unfavorable family conditions to find their way, and Lezhi Charity Association which organizes repair teams to help the elders who live alone repair their houses. VIS filmed annual CSR videos for these groups for the public to learn more about their stories and what services these groups have been providing.

With the enthusiastic response of VIS' employees, the total amount of donations at the end of 2022 exceeded NT\$4.37 million. There were a total of 4,274 person-times, an increase of about 19% compared to 2021. Owing to the addition of electronic declaration function this year, based on an estimation of 3,728 person-times (about 87%), social welfare organizations have saved NT\$100,000 postage expenses.

Education is the foundation for the smooth running of society and the hope for national progress. We have selected education-related topics for fundraising activities for two consecutive years. This year's theme, " Empowerment for



VIS has held Year-end Charity Donation Campaign since 2015

the Disadvantaged," provides us opportunities to help the disadvantaged and even an entire family for their long-term happiness. We hope that our help generates multiplied positive impact in that kindness will continue to be present and influential in society. As VIS' Chairman Leuh Fang states in the annual CSR video: "friends of homeless individuals, teenagers who are either under legal discipline programs or lost family support, and women who are aspired to be independent are all like everyone else. They all hope to work hard and live well every day just like us. Let us help them to fulfill this ordinary wish." In 2023, VIS will continue to deepen their professionalism, seek innovation, and at the same time participate in social activities to fulfill its corporate social responsibilities.

In 2022, VIS' Year-end Charity Donation Campaign Raised NT\$4.37 million from Employees, Customers, and Suppliers

Themes	Public Welfare Organizations and Dedicated Projects
Spending the New Year with the Elderly	Huashan Social Welfare Foundation Have A Full Meal Eden Social Welfare Foundation Reunion Dinner Five Old Five Foundation Embracing Being Old Love Never Expires
Empowerment for the Disadvantaged	Garden of Hope Foundation Career Support for Women Under Domestic Violence Bornanew Youth Caring Association Friendly Workplace Lezhi Charity Association Repair Team
Total	NT\$4,370,758



VIS' 2022 CSR video was made in hope of changing the public's stereotypes of rehabilitated teenagers, homeless individuals, and women who have been abused



VIS' Chairman Leuh Fang invites employees to support groups that provide assistance to the disadvantaged

212

Year-end Charity Donation Campaign Plus Activity: Sending Love Home in Winter – Material Donation Event

In addition to the support of charity funds, VIS also launched a materials donation event in various wafer factories in Taiwan for a social welfare group, Lezhi Charity Association's Lezhi Repair Team, at the end of 2022 to help provide daily necessities, a service that the Association provides, to the elders who live alone. In just one week, 27 boxes of materials were raised, including warm packs, cleaning products, and toilet products among others. They were sent to Lezhi Charity Association by arranged vehicles before the Lunar New Year. VIS hoped that these materials will deliver warm care to the disadvantaged in the cold winter.



VIS' employees sent 27 boxes of supplies to Lezhi Charity Association before the Lunar New Year, to deliver warm care to the disadvantaged during the spring festival

VIS Long-term Donation

Since 2015, VIS has allocated annual donations to social welfare organizations with which it has developed long-term relationships. So far, twenty social welfare organizations have benefited from financial support. In 2022, VIS will donate NT\$1.2 million to 12 social welfare groups, including those near VIS' factory area: Ren'ai Children's Home, Blue Sky Home, SOS Children's Villages, and Lohas Preschool. It is also dedicated to art courses in rural Eastern Taiwan provided by Taiwan Vineyard Arts Association to support children in remote rural areas in Taiwan to be familiar with art and culture such as music and painting.

Order Instead of Donate: Celebrating the Festival with Social Welfare Groups

Since 2021, to support and encourage the development of social welfare organizations and social enterprises, VIS has launched the "Order Instead of Donate" campaign during the festival season to encourage employees and departments to prioritize the ordering of gift boxes from these organizations. The orders increased five times and revenues tripled in 2022. VIS worked with more than ten social welfare organizations in this event.



VIS implemented the "Order Instead of Donate" campaign, which received support and praise from our employees

7.1.2 Care for Elderly Living Alone

Voluntary Colleagues Care for the Elders in the Community On a Long-term Basis

VIS' volunteers have been caring for the elders in the local community on a long-term basis. They regularly organize the "Dining with the Elders" event every month. In addition to providing meals, they also care about the elders' physical and mental health, understand their needs, and aid and provide daily necessities for the elders who live alone. During COVID-19, to protect the elders' health, we have sent masks and other disease prevention materials to the elders to continuously provide care to them.



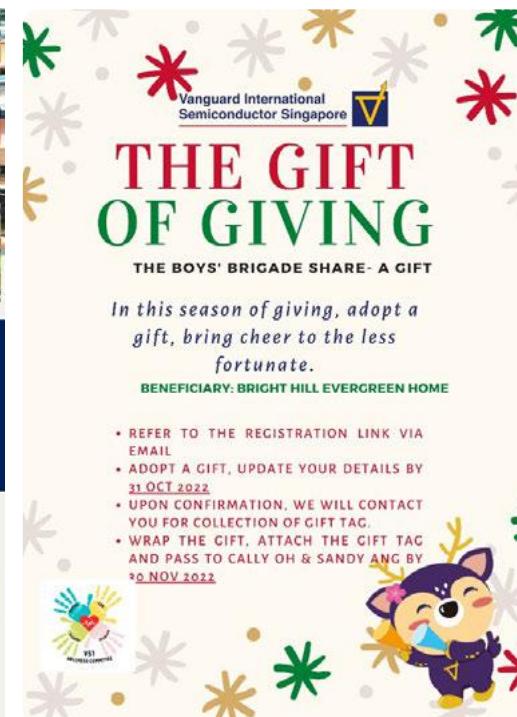
VIS delivering masks to elders in Baoshan community

Singapore Subsidiary's Exclusive Public Welfare Activities

In 2022, Singapore subsidiary VS1 participated in the Boys' Brigade Share-a-Gift event in Singapore. This is the second year for VS1 to be a participant. The Gift of Giving event held within VIS fundraised 120 gifts. VS1 volunteers then delivered these gifts to the nursing home in Singapore. In addition, the year of 2022 was the first year that VS1 cooperated with Willing Hearts, a Singaporean charity organization for a charity meal delivery event. From materials purchasing to meal preparation, a total of 26 VS1 volunteers were participating in the event.



VIS' Singapore Subsidiary expanded participation in charity activities this year



7.1.3 Diverse Empowerment

Encourage Women to Join the Technology Industry – National Tsing Hua University's Sunrise Program

VIS has sponsored Tsinghua University's Sunrise Program since 2016, providing each economically disadvantaged student with a scholarship, hoping to shorten the gap in educational resources caused by economic disparity, so that disadvantaged students can study with peace of mind. From 2021 onward, to encourage female students to work in the high-tech industry, we have designated sponsorship for three female students studying in different departments and had female supervisors as their mentors to provide one-to-one assistance for students in their studies, life, and career development. Regular gatherings are held to understand students' situation.



VIS supervisors having dinner with female students from National Tsing Hua University's Sunrise Program

Education Without Borders – National Yang Ming Chiao Tung University Scholarship Program for Ukrainian Students

In 2022, the Russian-Ukrainian War interrupted many Ukrainian students' studies. Based on the spirit of education without borders and humanitarian assistance, VIS participated in the Ukrainian students scholarship program initiated by National Yang Ming Chiao Tung University and sponsored two Ukrainian students enrolled in the special program for four consecutive years since 2022. Sponsorship include their school and living expenses to ensure that they can live comfortably during their studies in Taiwan.

Expand Opportunities to Rural Areas – National Taitung Junior College

To meet the needs of future growth and cultivate equipment talents as early as possible, VIS has cooperated with National Taitung Junior College to offer a Micro-credit Course on Semiconductor Manufacturing and Equipment since 2021. To implement the idea of equal rights to education, VIS has sent our internal lecturers to teach and provided scholarships and summer internship opportunities to the students from Taitung Junior College.

Eliminating Education Gaps: Enriching Children's Learning Resources — Junyi Academy

VIS sponsored Junyi Academy to hold several cloud-based training courses in the winter break of 2022. More than 4,147 teachers participated in the training. In terms of deepening training for faculty members in Miaoli, ninety six schools in the Miaoli area benefited from the courses.



Junyi Academy volunteers brought tablets and VIS employees showed them how to operate the educational platform interface. More than 100 people participated

In addition, to improve employees' willingness and skills to serve as educational volunteers, VIS cooperates with Junyi Academy to hold training seminars for educational volunteers within VIS. VIS employees, voluntary partners, and external cooperation organizations (the World Community Service Association, SOS Children's Villages, Blue Sky Home, and others) were invited to participate in the activity. In addition to employees and voluntary partners who are concerned about education issues, Amanda Huang, Chief Financial Officer and Vice Chairman of the Corporate Sustainability Committee, Ching-Ying Lee, Director of the Volunteers Club, and Vincent Li, Director of Human Resources also attended the event. The total number of participants (including online) on the day of the event exceeded 100.

Equal Rights to Education: Donating Second-Hand Laptops — Tainan Dongshan Elementary School

To implement the idea of equal rights to education, VIS donated second-hand laptops to Tainan's rural elementary school — Dongshan Elementary School in 2022, to help children in remote areas to learn in a variety of ways.

In addition, VIS has cooperated with ASUS in the Computers for "Refurbished Computer and Digital Training Program". Since 2009, a total of 8,432 computers, screens, and other electronic products have been donated to disadvantaged groups to bridge the digital gap.



Director Ching-Ying Lee (left) of the Volunteer Club personally delivers second-hand laptops to Dongshan Elementary School, and receives a certificate of appreciation from the school's principal, Chin-Wei Chao (right)

Empowerment for the Disadvantaged — Semiconductor Career Lectures

VIS has known many educational groups which provide services for the disadvantaged since the Year-end Charity Donation Campaign in 2021. VIS has discovered that the common problem among students is a narrow understanding of their career opportunities. Students do not have multiple channels to understand and make a good career planning for themselves. Therefore, VIS integrated internal recruitment resources in 2022 and organized semiconductor career lectures to encourage disadvantaged students to understand the semiconductor industry and aim their career goals in the industry.

The first career lecture was held in cooperation with Boyo Social Welfare Foundation, an organization participating in the 2021 Year-end Charity Donation Campaign. More than 130 middle school students from Hsinchu County participated in the lecture physically and online, including those in the remote areas such as Jianshi and Wufeng. Students had positive feedback and asked many questions. According to the questionnaire survey after the event, more than 80% of the students believed that the content of the lecture gave them a better understanding of the semiconductor industry, and the lecture also helped them understand their future career choices.

We also planned this lecture as part of the Blue Sky Home Fun Club activities held by the Volunteer Club. The activity was led by the President of the Volunteer Club, Ching-Ying Lee. We went to the Blue Sky Home, which VIS donated to at the Year-end Charity Donation Campaign in 2019, for a year-end care visit. The activities on that day included semiconductor science knowledge activities, future guidance event, and interactive games among others. Delicious meals and stationery gifts were prepared. Everyone had a wonderful dinner time together.

Summer Internship and Industry-University Cooperation

VIS has summer internship opportunities, which is a long-term practice, and cooperates with National Tsing Hua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University to sponsor Taiwan Semiconductor Industry Association's semiconductor industry-university awards and industry-university fund. It is hoped that these measures will bring in academic research energy to enhance VIS' competitiveness. At the same time, they will also provide opportunities for college students to understand the actual operations of the semiconductor industry and cultivate future semiconductor talents.

Persons with Disabilities

Since 2009, VIS has employed masseurs with disabilities. In 2020, new positions such as factory cleaning and document management were added. In 2022, new campus recruitment representative positions were added to actively create high-quality and diverse job opportunities. In addition to being guided by senior employees, local employment service stations are also invited to carry out design for individual case work, to pay a visit to these employees, and provide counseling services to help them adapt to work environment.



VIS' first semiconductor career lecture was at the Boyo Social Welfare Foundation's Zhudong Center



VIS' Volunteer Club organized the Blue Sky Home Fun Club activities, which were lively and joyful

7.1.4 Sustainability Initiatives

Earth Hour lights-off initiative

VIS has participated in the Earth Hour initiative to turn off lights for three consecutive years. In 2022, so long as it did not affect production or factory safety, it simultaneously turned off unnecessary lights inside and outside the five factories in Taiwan and Singapore, saving a total of 161.85 watt of electricity and reducing carbon emissions by 82.38165 kg. In addition, VIS will continue to devote ourselves to energy saving and carbon reduction in our daily operations. We do our best for the sustainability of the earth.

Region	Power Savings (Watts)	Carbon Emissions (kg)
Taiwan	116.45	59.27305
Singapore	45.4	23.1086
Total	161.85	82.38165

Note: Calculated in accordance with the electricity carbon emission coefficient in 2021 obtained from the Ministry of Economic Affairs' Bureau of Energy. Carbon emission per kWh of electricity is 0.509 kg.



VIS has participated in the Earth Hour lights off initiative for three consecutive years

Spreads Love and Support Agriculture Through a Distribution of Sugar-apples

In 2022, due to the impact of extreme weather, Taiwan's atemoya had a production surplus, which affected farmers' income. To advocate for the UN sustainable development goals to eradicate hunger (SDG 2. Zero Hunger), support sustainable agriculture, and take action to help local farmers, VIS purchased 600 boxes of sugar-apples and sent them directly to the fabs in Hsinchu and Taoyuan and ten social welfare organizations. After receiving the sugar-apples, the Garden of Hope Foundation stated that "for social workers and social welfare organizations, fruit donations are relatively rare, because the fruit doesn't keep for long. We all know that fruit has many nutrients that children need for healthy growth. We will distribute the fruit to those we have been serving as soon as possible. We would like to send our appreciation to VIS."

Owing to extreme weather, war, and other factors, the global agricultural market has often faced with price instability in recent years. VIS hopes to use this event to bring more supporters to help local farmers, employees, and the disadvantaged.



VIS purchased sugar-apples and sent them directly from the place of production to ten social welfare organizations

Focus Taiwan: Jennifer Shen's talk

To actively advocate for the UN sustainable goals, VIS has donated NT\$2 million every year to IC Broadcasting Company Limited since 2015. Currently, the Focus Taiwan: Jennifer Shen's talk radio program is hosted by Jennifer Shen. Jennifer's expertise in journalism has combined program themes with the UN sustainable development goals. In 2022, a total of 52 episodes were produced and broadcast. Professionals from different fields were invited to discuss current important issues of sustainability that Taiwan and the world are concerned about. The program has advocated for at least 13 United Nations sustainable development goals.

In addition to over-the-air broadcasting, each episode is also released on the podcast platforms such as Voice of IC Voice website, Apple Podcast, Google Podcast, Spotify, and others. Episodes are available for listeners to listen to at times convenient to them. This helps expand the program's influence and reach 1.312 million listeners. It also drives the discussion and attention in the industry on global sustainability issues.



VIS' Chairman Leuh Fang (left) and Jennifer Shen (right), the host of the Focus Taiwan: Jennifer Shen's talk program

In 2022, Focus Taiwan: Jennifer Shen's Talk Advocated for 13 UN SDGs

UN SDGs Advocated For	Themes	Guests
	Customized Charity Food Boxes! Former DOD Spokesman Delivered Hope for the Disadvantaged	Lo Shao-ho, President of Andrew Charity Association
	Elders Live Alone and Grandchildren Came to Help A Global Pioneer! Detect COVID-19 in 3 minutes	Sun Shih-shan, one of the founders of Silver Gate for Elders Chu Chia-jung, Developer of COVID-19 Detection Chip, CEO of Molsentech Electronic Testing
	Spread of COVID-19! Be Alert for Severe Symptoms and Sequelae! The Forefront of Taiwan's Health Care! Healing people, Curing Diseases, and Healing Mental Illness. Home medical Care Shortens the Distance.	Lee Wei-chiang, Vice President of Taipei Veteran General Hospital Huang Sheng-chien, Former President of Taipei City Hospital
	Accurate Prediction and Quick Response. Medical Care AI Team Modern Computer Program Knowledge. Cross-Field Digital Talents Lecture Based on Thousand Talents Program	Wu Chieh-liang, Vice President of Taichung Veterans General Hospital Kung Ling-chieh, Professor of National Taiwan University's Information Management Department
	Start from AI! Science and Technology Education Now to Cultivate Young Talents	Wang Yung-ho, President of Hon Hai Education Foundation
	Interview with Academician Lin Pen-chien from Academia Sinica - Semiconductor Trends and Talent Cultivation - Part 1	Lin Pen-chien, Dean of National Tsing Hua University's College of Semiconductor Research and Academician from Academia Sinica
	Interview with Academician Lin Pen-chien from Academia Sinica - Semiconductor Trends and Talent Cultivation - Part 2	Lin Pen-chien, Dean of National Tsing Hua University's College of Semiconductor Research and Academician from Academia Sinica
	Dream Maker: Creating a Dream of Local Innovation and Education	Lai Chen-min, Founder of Dream Maker
	Tablets for Students, A New Look for Future Classrooms	Kuo Po-chen, President of National Taichung University of Education and Executive Secretary of Digital Learning Advanced Project for Middle Schools and Elementary Schools Office
	The First Taiwanese to Win American Institute of Architects Award. A Women architect's Career Journey	Grace Cheung, Architect of X RANGE
	Women Power! Working Together to Resolve the Formosa Satellite 5 Crisis	Liu Hsiao-ching, Director of Taiwan Space Agency's Ground Development Department
	From Being Unpopular to Popular, the Infinite Possibilities of AI Natural Language Processing	Chen Yun-nung, Associate Professor of National Taiwan University's Department of Computer Science and Information Engineering
	From Heritage to High-Quality Home Decoration, Connecting Design Expertise of Two Generations	Chang Shu-chen, President of No. 30



VIS has sponsored the Voice of IC program since 2015, to attract ideas and carry out Sustainability Initiatives

UN SDGs Advocated For	Themes	Guests
6 CLEAN WATER AND SANITATION	Remembering Drought That Occurred Once in A Hundred Years and Learn How to Save Water Worth of the Capacity of a Shimen Reservoir	Lee Chia-jung, General Manager of Taiwan Water Corporation
7 AFFORDABLE AND CLEAN ENERGY	Environmental Protection and Innovation, Connecting People with Tea	Huang Wei-cheng, Co-Founder and President of CircuPlus
8 DECENT WORK AND ECONOMIC GROWTH	Solving Energy Poverty, Energy Saving to Help the Disadvantaged	Hu Te-chi, Co-Founder of DOMI Earth Social Enterprise
10 REDUCED INEQUALITIES	Incoming Era of Green Electricity. Keys to Transformation and Future Prospect	Wen Li-chi, Director of Chung-hua Institute for Economic Research's the Center for Green Economy
11 SUSTAINABLE CITIES AND COMMUNITIES	2050 Net-Zero Carbon Emissions Roadmap: 9% to 12% Hydrogen Energy Decryption	Perng Tsong-pyng, Seminar Faculty Member of National Tsing Hua University
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Green Electricity Will Be Expensive? Green Electricity Subscription and New Energy Development	Huang Wei-che, Founder and President of Kiwi New Energy Inc., A Green Energy Innovative Enterprise
13 CLIMATE ACTION	New Momentum for Taiwanese Enterprises! New Venture investment and Industrial Innovation	Huang Jih-tsan, Founder and President of Taiwan Renaissance Platform
14 LIFE BELOW WATER	Entrepreneurship and Innovation Go hand-in-Hand. Avoids Investment Land Mines	Tseng Cheng-chung, President of National Taiwan University's Corporate Accelerator Program
15 LIFE ON LAND	From USR to NPO, Firmly Guard Every Hope	Hsiao Chun-yu (Ah-Q), Founder of Twilight Box
	Young People Design Taiwan Architecture, Cross-Field Green Architect Acclaimed in Europe	Tseng Sheng-kai, National Yang Ming Chiao Tung University's Transdisciplinary Design Innovation Shop
	No Underestimation. Civic Action Regardless of Age Contributes to the Reduction of Plastic Products	Wang Hsuan-ju, Civic Committee Member of the Open Government Action Plan
	Increasing Delivery Waste. Work Together to Be Friendly to the Environment	Huang Chih-yang, Co-Founder of RE-THINK
	Re Fashion — Shishang Wardrobe New Choice	Chen Hsuan-hui (Hannah), Co-Founder of Twenty Three
	Carbon Reduction for Electric Vehicles? Amazing Development Potential	Lin Fen-hui, Research Manager of DIGITIMES Research
	Electric Vehicles and Carbon Reduction: Another View	Cheng Jung-ho, Honorary Professor National Taiwan University's Department of Mechanical Engineering and Expert of Electric Vehicle
	Enzyme Fertilizers' Miraculous Effects, Rebalance People and Land	Yang Chiu-chung, Academician of Academia Sinica and Professor of National Chung Hsing University
	Cherish Food, Reduce Carbon Emission, and Increase Revenue. A Good Food Revolution Based on Technology	Yeh Po-chun, Founder of Tasteme App
	Low-Carbon Travel and Sustainable Urban and Rural areas in Mountain Hills: Writer Liu Ko-hsiang	Writer Liu Ko-hsiang
	Taiwan's First Polar Research Station Under Climate Change	Ni Chun-Fa, National Central University's Graduate Institute of Applied Geology
	Urgent Marine Conservation, A Missing Piece of Taiwan's Marine Conservation	Chung Meng-hsun, Project Director of Green Peace
	ESG-Companies Alliance for An Innovative Technology Future of Agriculture, Forestry, Fishery and Animal Husbandry	Tseng Kuo-tung, Sustainability Development Director of WPG Holdings and President of Yosun Industrial Corp.
	Firefly Tourism Boom. Experts on the Protection of Ecology	Dr. Wu Chia-hsiung, National Taiwan University's Department of Entomology

7.2 Environmental Conservation

7.2.1 Building Green Landscape in the Community

VIS has adopted and maintained the Cherry Blossom Park in Hsinchu City since 2019. It has planted Formosan cherry blossoms and ring-capped oaks, commonly known as "Ko su" in Hakkanese, in the park, which have become the main scene of the Park. To make the Cherry Blossom Park a highlight in the surrounding ecology and landscape of the Hsinchu Science Park, VIS is actively carrying out a renovation plan to promote the characteristics of the park. It plans to plant Shin-sumizome cherry blossoms and Showa cherry blossoms, erects the existing mountain cherry blossoms and ring-capped oaks, and plant grass and flowers along with making landscapes. In addition, together with the bank of Kezihu and Hsinchu Science Park's flood detention pond adopted by VIS, the 1.09 hectare-area of Cherry Blossom Park and its surrounding areas are built into a habitat of fireflies and an ecological park with cherry blossoms.

In 2022, VIS further transformed the ecological environment of the park by planting a total of 37 new Showa cherry blossom trees and Shin-sumizome cherry blossom trees, transplanting and erecting the existing 62 Formosa cherry blossom trees and ring-capped oaks, replanting grass to increase the green coverage area, and redoing the 327 meter-long granite trail. At the same time, the trail line was adjusted to meet public walking patterns. Climbing plants were planted at the pavilion to make the surrounding area full of greenery. In addition, a landscaping artwork - a petal swing, was also set up at the entrance of the park, so that people walking in the belt-shaped cherry blossom park get to see beautiful scenes created with hard work and care when they look up. Together with the event of releasing fireflies by the flood detention pond every April, the Cherry Blossom Park in the East District of Hsinchu City, which is adjacent to Zhudong Township, has fireflies, waters, and cherry blossoms. This makes Hsinchu City an urban park, where residents can "be close to water, enjoy cherry blossoms during the day, and enjoy fireflies at night". The park is also an ecological gem of greenery in the East District of Hsinchu City.



Cherry Blossom Park Petal Swing Landscape Art

7.2.2 Environmental Education

VIS started a four-year firefly restoration plan in 2020. It is estimated that between 2020 and 2023, 2,000 to 2,500 firefly larvae will be released into the wild every year. Since clean and unpolluted water and no strong lighting environment at night are required, VIS selected the flood detention pond next to the Cherry Blossom Park around the No. 2 wafer fab as the place to restore firefly ecology. In addition to adopting and maintaining the surrounding areas of the Cherry Blossom Park in Hsinchu City and the Bureau of Science and Technology Management's flood detention pond, VIS also cooperates with firefly expert Dr. Wu Chia-Hsiung to conduct an initial environmental and ecological survey and to optimize the habitat environment for fireflies. VIS has successfully created the scene of fireflies' glowing fluorescent dots at night in recent years and brought the ecological education course about beetles to the campus of Erchong Elementary School and Shuangsi Elementary School in Hsinchu County to share knowledge with school children.



Children from Erchong Elementary School all raise their hands to answer questions about beetles

Biodiversity

VIS has a biodiversity commitment and adheres to the goal of harmonious coexistence with the environment and creation of sustainable values. We promise not to engage in development and operation activities in domestic or foreign legally-protected ecological areas and biodiversity-sensitive areas, and to take protection measures to reduce the impact on biodiversity and forest ecology. Meanwhile, VIS continues to cultivate trees in the fab environs, and works to increase greenspace areas. In terms of its biological restoration plan, VIS has adopted the Hsinchu Science Park Management Administration's flood detention pond since 2019. In 2020, after a series of ecological and water quality investigations and with the assistance of a professional team, VIS began to create a habitat for fireflies that also works as an environmental barometer. With the efforts of the team, from 2020 to 2022 a total of 4,500 fireflies were released into the wild. In 2023, VIS will continue to carry out restoration operations in the hope of providing a more suitable habitat for fireflies by optimizing the firefly restoration base. VIS' successful environmental restoration result is also the first successful case of outdoor firefly habitat restoration in the high-tech industry.



VIS Volunteers place firefly larvae in a habitat (the detention pond area next to Cherry Blossom Park)

Appendix



Appendix 1 About This Report

The core of this Report lies in the corporate sustainability strategies adopted by Vanguard International Semiconductor Corporation (VIS for short), which is structured based on dimensions of corporate governance, customer relations, happy workplace, environmental protection, social engagement, etc. to disclose VIS' viewpoints and response actions when facing material issues in the process of sustainability development.

Period of Report

The main time frame of this Report's data and content is 2022 (2022/01/01 to 2022/12/31).

Parameters and Scope of this Report

The disclosure scope of this Report focuses on VIS' operating activities, which are mainly carried out in Taiwan and Singapore (some data includes VIS business activities in both Shanghai and US subsidiaries). For sections involving different scope, explanation shall be given in the Report. All financial figures in this Report are presented in New Taiwan Dollars (NT\$). Units conventionally used in international practices have been adopted for the measurement of environmental safety and social engagement.

Reporting Principles

This Report was written based on GRI Standards 2021 released by the Global Reporting Initiative (GRI), TPEx's "Rules Governing the Preparation and Filing of Sustainability Reports by TPEx Listed Companies", and AA1000 Accountability Principles (AA1000AP). In addition, the framework of Task Force on Climate-Related Financial Disclosures (TCFD) initiated by the Financial Stability Board (FSB) and the SASB (Sustainability Accounting Standards Board) Standards were also adopted as the principles for reporting.

Report Management

Data of this Report was collected from reports written by the Company's various departments assigned by VIS Corporate Sustainability Committee Taskforce, the correctness and completeness of which was then reviewed by relevant department leaders before the data was compiled and composed into the report by the Public Relations Department. The Report was finally reviewed and the entailed strategic goals and directions for sustainability development as well as the management guidelines for material issues were confirmed by the board of directors, Chairman of Corporate Sustainability Committee, and senior managerial personnel of various departments. This years for this report's sustainability targets are presented in accordance with the latest Sustainability Committee approvals.

Report Assurance

The 2022 Sustainability Report was compiled based on GRI Standards 2021, which has been assured by DNV Business Assurance Co., Ltd., confirming that it complies with "GRI Standards" and AA1000 Assurance Standard: v3 - Type 2 moderate level assurance, and encompasses relevant sustainability guidelines such as "Task Force on Climate-Related Financial Disclosures (TCFD)" framework, "Sustainability Accounting Standards Board (SASB)" standards, etc. Please refer to Appendix 5 for the assurance report.

Release Schedule of Report

VIS published its first Corporate Sustainability Report in 2015, and will continue the report publication on a yearly basis in the future.

Current release: Published in June, 2023

Previous release: Published in June, 2022

Next release: Published in June, 2024

Contact Information

For continued communication with stakeholders, we sincerely welcome you to contact us and offer your valuable opinions.

Responsible Unit: VIS Corporate Sustainability Committee

Contact: Hui-chung Su, Public Relations Department

Address: 123, Park Ave. 3, Hsinchu Science Park, Hsinchu, Taiwan 30077, R.O.C.

Company Website: www.vis.com.tw

E-mail: hcsuc@vis.com.tw

Tel: 03-577-0355 Ext. 1901

Appendix 2 GRI Content Index Table

Statement of Use VIS has followed the GRI Standards to report relevant content of the period from January 1, 2022 to December 31, 2022.

GRI 1 Standards GRI 1: Basic 2021

Applicable GRI Sector Standards N/A

General Disclosures

GRI Standard	Disclosure Content	Corresponding Report Section	Page No.	Note
GRI 2: General Disclosures 2021	The Organization and its Reporting Practices			
	2-1 Organizational details	1.1 Company Profile Appendix 1 About this Report	10 223	
	2-2 Entities included in the organization's sustainability reporting	Appendix 1 About this Report	223	The scope of this report is primarily based on the production bases in Taiwan and Singapore. Since the Shanghai and US subsidiaries are not production plants, their activity data is relatively small. In this report, the data only partly covers the Shanghai and US subsidiaries.
	2-3 Reporting period, frequency and contact point	Appendix 1 About this Report	224	
	2-4 Restatements of information	Appendix 1 About this Report	223	Not applicable this year
	2-5 External assurance	Appendix 1 About this Report Appendix 5 AA1000 Assurance Statement	224 236	
	Activities and Workers			
	2-6 Activities, value chain and other business relationships	1.1 Company Profile 5.1 Types of Supply Chain	10 138	
	2-7 Employees	6.1 Talent Recruitment and Retention	157	VIS has no non-guaranteed-hours employees.
	2-8 Workers who are not employees	6.1 Talent Recruitment and Retention	158	
	Governance			
	2-9 Governance structure and composition	2.2 Corporate Sustainability Management 3.1 Corporate Governance	19 58	
	2-10 Nomination and selection of the highest governance body	3.1 Corporate Governance	59	

GRI Standard	Disclosure Content	Corresponding Report Section	Page No.	Note
GRI 2: General Disclosures 2021	2-11 Chair of the highest governance body	3.1 Corporate Governance	63	
	2-12 Role of the highest governance body in overseeing the management of impacts	3.1 Corporate Governance 3.2 Risk Management	59 69	
	2-13 Delegation of responsibility for managing impacts	2.2 Corporate Sustainability Management	19	
	2-14 Role of the highest governance body in sustainability reporting	Appendix 1 About this Report	223	
	2-15 Conflicts of interest	3.1 Corporate Governance	67	
	2-16 Communication of critical concerns	2.2 Corporate Sustainability Management 3.1 Corporate Governance	19 64	
	2-17 Collective knowledge of the highest governance body	3.1 Corporate Governance	66	
	2-18 Evaluation of the performance of the highest governance body	3.1 Corporate Governance	64	
	2-19 Remuneration policies	3.1 Corporate Governance 6.1 Talent Recruitment and Retention	65 163	Some information was not disclosed by the Company for the time being as it was subject to specific confidentiality provisions.
	2-20 Process to determine remuneration	3.1 Corporate Governance 6.1 Talent Recruitment and Retention	65 163	The Company's governance unit did not seek opinions from stakeholders and incorporate the opinions into remuneration-related considerations.
2-21 Annual total compensation ratio	-	-	-	The Company did not disclose sensitive information subject to specific confidentiality provisions.
Strategy, Policies and Practices				
2-22 Statement on sustainable development strategy	Letter from Chairman		3	
2-23 Policy commitments	6.3 Human Rights		172	
2-24 Embedding policy commitments	6.3 Human Rights		172	
2-25 Processes to remediate negative impacts	6.3 Human Rights		172	
2-26 Mechanisms for seeking advice and raising concerns	6.3 Human Rights		172	
2-27 Compliance with laws and regulations	3.3 Ethics and Transparency		83	
2-28 Membership associations	2.3 Materiality Analysis and Stakeholder Communication		47	

GRI Standard	Disclosure Content	Corresponding Report Section	Page No.	Note
GRI 2: General Disclosures 2021	Stakeholder Engagement			
	2-29 Approach to stakeholder engagement	2.3 Materiality Analysis and Stakeholder Communication	40	
	2-30 Collective bargaining agreements	-	-	The company has labor representatives, holds quarterly labor-management meetings, and holds Board of Directors communication meetings at least twice a year. All employees can participate. Employee coverage percentage for these meetings is 100%.

Major Topics Disclosure

GRI Standard	Disclosure Content	Corresponding Report Section	Page No.	Note
Material Topics				
GRI 3: Material Topics 2021	3-1 Process to determine material topics	2.3 Materiality Analysis and Stakeholder Communication	21	
	3-2 List of material topics	2.3 Materiality Analysis and Stakeholder Communication	22	
Customer Relations Management				
GRI 3: Material Topics 2021	3-3 Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.5 Quality and Customer Service	25 93	
Information Security and Privacy Protection				
GRI 3: Material Topics 2021	3-3 Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.2 Risk Management 3.3 Integrity and Transparency	26 77 83	
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	3.3 Ethics and Transparency	84	
Product Safety and Quality				
GRI 3: Material Topics 2021	3-3 Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.5 Quality and Customer Service	27 93	

GRI Standard	Disclosure Content		Corresponding Report Section	Page No.	Note
Economic Performance					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 1.2 Financial Performance	28 12	
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	1.2 Financial Performance	13	
	201-2	Financial implications and other risks and opportunities due to climate change	4.1 Climate Change and Energy Management	100	
	201-3	Defined benefit plan obligations and other retirement plans	6.1 Talent Recruitment and Retention	165	
	201-4	Financial assistance received from government	1.3 Tax Policy	16	
Supplier Sustainability Management					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 5. Responsible Supply Chain	29 136	
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	5.2 Sustainable Supply Chain Management Strategy	140	
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	5.3 Supplier Management Mechanism	143	
	308-2	Negative environmental impacts in the supply chain and actions taken	5.3 Supplier Management Mechanism	141	
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	5.3 Supplier Management Mechanism	143	
	414-2	Negative social impacts in the supply chain and actions taken	5.3 Supplier Management Mechanism	141	
Corporate Governance					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.1 Corporate Governance	30 58	
Legal and Regulatory Compliance					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.3 Integrity and Transparency	30 82	

GRI Standard	Disclosure Content		Corresponding Report Section	Page No.	Note
Ethical Corporate Management					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.3 Integrity and Transparency	30 80	
Talent Recruitment and Retention					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 6.1 Talent Recruitment and Retention	31 154	
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	6.1 Talent Recruitment and Retention	160	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.1 Talent Recruitment and Retention	165	
	401-3	Parental leave	6.1 Talent Recruitment and Retention	166	
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	3.1 Corporate Governance 6.1 Talent Recruitment and Retention	62 158	
	405-2	Ratio of basic salary and remuneration of women to men	6.1 Talent Recruitment and Retention	164	
Innovation and R&D					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.4 Innovation Management	32 85	
Climate Change and Energy Management					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 4.1 Climate Change and Energy Management	33 100	
GRI 302: Energy 2016	302-1	Energy consumption within the organization	4.1 Climate Change and Energy Management	113	
	302-3	Energy intensity	4.1 Climate Change and Energy Management	113	
	302-4	Reduction of energy consumption	4.1 Climate Change and Energy Management	113	

GRI Standard	Disclosure Content		Corresponding Report Section	Page No.	Note
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	4.1 Climate Change and Energy Management	114	
	305-2	Energy indirect (Scope 2) GHG emissions	4.1 Climate Change and Energy Management	114	
	305-3	Other indirect (Scope 3) GHG emissions	4.1 Climate Change and Energy Management	116	
	305-4	GHG emissions intensity	4.1 Climate Change and Energy Management	115	
	305-6	Emissions of ozone-depleting substances (ODS)	-	-	VIS did not use ODS during the reporting period.
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	4.4 Air Pollution Control	133	
Risk Control and Management					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 3.2 Risk Management	35 68	
Waste Management					
GRI 3: Material Topics 2021	3-3	Management of material topics	2.3 Materiality Analysis and Stakeholder Communication 4.3 Waste Management	37 127	
GRI 306: Waste 2020	306-2	Management of significant waste-related impacts	4.3 Waste Management	128	
	306-3	Waste generated	4.3 Waste Management	130	

General Topics Disclosure

GRI Standard	Disclosure Content		Corresponding Report Section	Page No.	Note
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	4.2 Water Resource Management	120	
	303-2	Management of water discharge-related impacts	4.2 Water Resource Management	121	
	303-3	Water withdrawal	4.2 Water Resource Management	122	
	303-4	Water discharge	4.2 Water Resource Management	125	
	303-5	Water consumption	4.2 Water Resource Management	125	
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	6.5 Occupational Safety and Health	187	
	403-2	Hazard identification, risk assessment, and incident investigation	6.5 Occupational Safety and Health	190	
	403-3	Occupational health services	6.4 Workplace Health Management	180	
	403-4	Worker participation, consultation, and communication on occupational health and safety	6.5 Occupational Safety and Health	195	
	403-5	Worker training on occupational health and safety	6.5 Occupational Safety and Health	198	
	403-6	Promotion of worker health	6.4 Workplace Health Management	180	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6.5 Occupational Safety and Health	190	
	403-8	Workers covered by an occupational health and safety management system	6.5 Occupational Safety and Health	196	
	403-9	Work-related injuries	6.5 Occupational Safety and Health	197	
	403-10	Work-related ill health		-	There was no work-related ill health cases as defined by regulations occurring in the Company during the reporting period.
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	6.2 Human Resource Development	169	
GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	5.3 Supplier Management Mechanism 6.3 Human Rights	142 177	
GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	5.3 Supplier Management Mechanism 6.3 Human Rights	142 174	
GRI 407: Freedom of Association and Group Negotiation	407-1	Operating sites and suppliers that may be faced with the risks of freedom of association and group negotiation	6.3 Human Rights	175	During the reporting period, the company did not have any suppliers that had the risk of violating freedom of association.

Appendix 3 SASB (Sustainability Accounting Standards Board) Index Table

According to the industry classifications found on SASB official website, VIS has selected its applicable metrics from the 11 sectors and 77 industries contained in the SASB Materiality Map for disclosures:

Sector: Technology & Communications

Industry: Semiconductors

Topic	Code	Metric for Disclosure	Category	Description and Explanation
Greenhouse Gas Emissions	TC-SC-110a.1	Scope 1 GHG emissions	Quantitative	VIS' 2022 Scope 1 GHG emissions were 341,018.5741 metric tons CO ₂ e.
		Total PFCs emissions	Quantitative	VIS' 2022 total perfluorocarbon emissions were 334,533.1677 metric tons CO ₂ e.
	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	Qualitative	VIS' GHG reduction target in 2025 is 25% lower than the 2015 level of GHG emissions per unit wafer area. VIS' Scope 1 GHG emission sources include: direct emissions from diesel fuel for power generators, natural gas, etc. used in fabs; mobile emissions from fuel used for company vehicles, etc.; and F-gases from fugitive emissions. In 2005, VIS signed the "Memorandum of Cooperation for the Reduction of PFCs Emissions" with TSIA and the EPA of Executive Yuan.
Energy Management in Manufacturing	TC-SC-130a.1	Total energy consumed	Quantitative	The total energy consumed by VIS in 2022 was 3,501,936 GJ.
		Percentage: Grid electricity	Quantitative	VIS' total grid electricity consumption in 2022 was 3,406,375 GJ, accounting for 97.27% of the total energy consumed.
		Percentage: Renewable energy	Quantitative	VIS' renewable energy consumption in 2022 was 254 GJ, accounting for 0.01% of the total energy consumed.
Water Management	TC-SC-140a.1	Total water withdrawn	Quantitative	VIS' total water withdrawal in 2022 was 7,112.190 m ³ .
		Percentage of water withdrawal in regions with high or extremely high baseline water stress	Quantitative	Since locations of VIS' operations are not within regions with high or extremely high baseline water stress, the percentage of water withdrawal in regions with high or extremely high baseline water stress was 0%.
		Total water consumed	Quantitative	VIS' total water consumption in 2022 was 2,200.440 m ³ .
		Percentage of water consumption in regions with high or extremely high baseline water stress	Quantitative	Since locations of VIS' operations are not within regions with high or extremely high baseline water stress, the percentage of water consumption in regions with high or extremely high baseline water stress was 0%.

Topic	Code	Metric for Disclosure	Category	Description and Explanation										
Waste Management	TC-SC-150a.1	Amount of hazardous waste from manufacturing	Quantitative	The total amount of hazardous waste from VIS' manufacturing in 2022 was 5,068.44 metric tons (t).										
		Percentage of hazardous waste recycled	Quantitative	The total amount of hazardous waste recycled by VIS in 2022 was 5,038.696 metric tons (t), accounting for 99.41% of the total amount of hazardous waste.										
Employee Health & Safety	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards.	Qualitative	In addition to designating senior personnel to conduct safety & health risk and environmental aspect assessments, VIS also demands that relevant EHS implementation programs focusing on high-risk and significant environmental aspects should be proposed for improvement. The risk and environmental safety management departments of fabs in Taiwan also entrust external agencies to perform work environment testing on a biannual basis, and announce the testing results and demand improvement from the units where anomalies are indicated in testing results. For detailed policy and management system information, please refer to 6.5.1 Environmental Safety and Health Policies and Management Systems.										
		Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations. (Unit: NT\$)	Quantitative	VIS was not involved in any monetary losses as a result of legal proceedings associated with employee health and safety violations in 2022.										
Recruiting & Managing a Global & Skilled Workforce	TC-SC-330a.1	Percentage of employees that are foreign nationals	Quantitative	Foreign national employees refer to those who need a work visa to work in the country where they are employed. The statistics of VIS' 2022 foreign national employees are shown in the table below:										
		<table border="1"> <thead> <tr> <th>Location of operations</th> <th>Total foreign national employees</th> <th>Total employees in the location of operations</th> <th>Percentage of foreign nationals in all employees</th> </tr> </thead> <tbody> <tr> <td>Taiwan</td> <td>485</td> <td>5,782</td> <td>8.4%</td> </tr> <tr> <td>Non-Taiwan</td> <td>676</td> <td>859</td> <td>78.7%</td> </tr> </tbody> </table>			Location of operations	Total foreign national employees	Total employees in the location of operations	Percentage of foreign nationals in all employees	Taiwan	485	5,782	8.4%	Non-Taiwan	676
Location of operations	Total foreign national employees	Total employees in the location of operations	Percentage of foreign nationals in all employees											
Taiwan	485	5,782	8.4%											
Non-Taiwan	676	859	78.7%											
		<p>VIS carries out international workforce recruitment and talent mobilization for Taiwan and offshore operating locations by recruiting foreign nationals, relocating employees abroad, etc. Procedures required for work permit, social insurance, taxation, etc. are all completed in accordance with local regulations on the employment of foreign nationals. Moreover, dedicated personnel have been designated to be in charge of all procedural affairs to ensure that the procedures are compliant with local laws and regulations.</p>												
		<p>VIS' offshore workers mainly refer to the employees hired in Taiwan and dispatched to work in offshore operating locations, or hired in Singapore and dispatched to work in offshore operating locations.</p> <p>In 2022, VIS had 21 offshore workers dispatched from Taiwan, accounting for 0.4% of the total employees in Taiwan, and had no offshore workers dispatched from Singapore.</p> <p>Moreover, the deployment of personnel dispatched to offshore locations is reviewed based on local visa regulations, and will be adjusted through measures such as long-term dispatch, short-term business trips, or direct employment as offshore employees in response to local needs and other risks.</p>												

Topic	Code	Metric for Disclosure	Category	Description and Explanation
Product Lifecycle Management	TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances (Unit: %)	Quantitative	In 2022, the percentage of VIS products by revenue that contain IEC 62474 declarable substances was 0%. All VIS products are compliant with requirements of relevant international laws and regulations listed in the IEC 62474 Declarable Substance List (DSL).
	TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	Quantitative	VIS is a foundry service provider providing no end applications or products; thus, no corresponding content can be disclosed.
Material Sourcing	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	Qualitative	In addition to declaring Conflict Minerals Management Policy to suppliers, VIS also demands that the final sources of the minerals used by suppliers must be certified by Responsible Minerals Initiative (RMI) through Responsible Minerals Assurance Process (RMAP). Suppliers' refineries are also required to be certified by RMI or third-party verification/audit agencies to ensure that the minerals used in the Company and the supply chain conform to the requirements of responsible minerals management. For detailed Conflict Minerals Declaration and due diligence information, please refer to 5.4 Responsible Procurement.
Intellectual Property Protection & Competitive Behavior	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations (Unit: NT\$)	Quantitative	VIS was not involved in any monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations in 2022.
Activity Metric	TC-SC-000.A	Total production	Quantitative	The total production of VIS 8-inch wafers in 2022 was 2.75 million pieces.
	TC-SC-000.B	Percentage of production from owned facilities	Quantitative	100% of the 2.75 million 8-inch wafers were produced from VIS-owned facilities in 2022.

SASB Materiality Map: <https://materiality.sasb.org/>

SASB official website: <https://www.sasb.org>

Appendix 4

"Rules Governing the Preparation and Filing of Sustainability Reports by TPEx Listed Companies" required disclosure items and TPEx-listed companies climate-related information reference table

Article 4 of TPEx's "Rules Governing the Preparation and Filing of Sustainability Reports by TPEx Listed Companies"					
Industry	No.	Metric for Disclosure	Category	2022 Disclosure	Note
Semiconductor	1	Total energy consumption, percentage of grid electricity, and renewable energy usage rate	Quantitative	Please refer to TC-SC-130a.1 of SASB Index Table in Appendix 3.	232
	2	Total water withdrawal and total water consumption	Quantitative	Please refer to TC-SC-140a.1 of SASB Index Table in Appendix 3.	232
	3	The weight of hazardous waste from manufacturing, and the recycling percentage	Quantitative	Please refer to TC-SC-150a.1 of SASB Index Table in Appendix 3.	233
	4	Explain the occupational accident categories, number of people being affected, and relevant percentages	Quantitative	In 2022, there were eight VIS employees encountering minor injuries such as cuts, bumps, falling-over, etc. in Taiwan, accounting for 0.012% of total number of employees 68,204 in Taiwan. In Singapore, there were four employee encountering a minor injury, accounting for 0.035% of total number of employees 11,579 in Singapore.	-
	5	Disclosure of product life cycle management: Including weight of scrap products and e-waste, and percentage of recycling	Quantitative	With the aim of achieving sustainable use of resources, VIS makes efforts in converting waste into valuable resources through recycling and reuse. All waste is properly cleared, disposed of or reused with the assistance provided by qualified waste clearance, disposal or reuse service providers. Since VIS is not an end product manufacturer, relevant scrap products are recycled by customers; thus, no scrap product statistics can be disclosed. In addition, VIS has worked with Asus since 2009 to carry out the initiative of "Refurbished Computer and Digital Training Program" by repairing discarded computers and donating the reclaimed computers to digitally underprivileged groups. The reuse rate of recycled computers was 100% in 2022.	-
	6	Description of the risk management associated with the use of critical materials	Qualitative description	Please refer to TC-SC-440a.1 of SASB Index Table in Appendix 3.	234
	7	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Quantitative	Please refer to TC-SC-520a.1 of SASB Index Table in Appendix 3.	234
	8	Production volume of the main product under the company's product category	Quantitative	Please refer to TC-SC-000.A of SASB Index Table in Appendix 3.	234
	9	Risks and opportunities for VIS caused by climate change, and VIS' response measures to such		Please refer to 4.1.1 Climate Change	102

Greenhouse Gas Inventory and Assurance Situation

Basic Information of the Company

- Companies with the capital of more than NT\$10 billion, the iron and steel industry, and the cement industry
- Companies with the capital of more than NT\$5 billion but less than NT\$10 billion
- Companies with the capital of less than NT\$5 billion

According to the regulations of the sustainable development road map of listed companies, which should be disclosed at least:

- | | |
|--|--|
| <input type="checkbox"/> Inventory information of parent company | <input type="checkbox"/> Inventory information of subsidiaries in the consolidated financial report |
| <input type="checkbox"/> Assurance information of parent company | <input checked="" type="checkbox"/> Assurance information of subsidiaries in the consolidated financial report |

Scope 1	Total Emissions (tons CO ₂ e)	Intensity (tons CO ₂ e/per million)	Assurance Agency	Assurance Results
Parent company	234,917	5.1	SGS Taiwan Ltd.	VIS has been verified in accordance with ISO 14064-3:2006 as meeting the requirements of ISO 16064-1:2018
Subsidiaries	106,102	17.1		
Total	341,019	6.6		
Scope 2	Total Emissions (tons CO ₂ e)	Intensity (tons CO ₂ e/per million)	Assurance Agency	Assurance Results
Parent company	495,955	10.9	SGS Taiwan Ltd.	VIS has been verified in accordance with ISO 14064-3:2006 as meeting the requirements of ISO 16064-1:2018
Subsidiaries	74,814	12.0		
Total	570,769	11.0		
Scope 3	Total emissions (tons CO ₂ e): 287,264			

Note: Please refer to VIS website for the verification statement: https://www.vis.com.tw/en/press_document.

Appendix 5 AA1000 Assurance Statement



Independent Assurance Statement

Scope and Approach

Vanguard International Semiconductor Corporation ("VIS" or "the Company") commissioned DNV Business Assurance Co., Ltd. ("DNV" or "we") to undertake independent assurance over the 2022 Sustainability Report ("the Report") for the year ended 31 December 2022.

We performed our work using DNV's assurance methodology VeriSustain™¹, which is based on our professional experience and international assurance best practices, including International Standard on Assurance Engagements 3000 (ISAE 3000) and the Global Reporting Initiative (GRI) Sustainability Reporting Standards.

The Report also incorporated the relevant sustainability reporting guidelines, such as Sustainability Accounting Standards Board (SASB) Sustainability Accounting Standard for the Semiconductors Sustainability Accounting Standard 2018, Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), Rules Governing the Preparation and Filing of Sustainability Reports by TPEx Listed Companies and Climate-Related Information of TWSE/TPEx Listed Companies.

We understand that the reported financial data and information are based on the data from VIS's Annual Report and Accounts, which are subject to a separate independent audit process. The review of financial data taken from the Annual Report and Accounts is not within the scope of our work. In addition, the greenhouse gas emissions data checked during the current assurance engagement is provisional, and the impending results of a separate independent verification shall prevail.

We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our assurance opinion. We are providing the evaluation of reporting principles with a Moderate level of assurance, according to the DNV VeriSustain™ Protocol and Moderate level, Type II assurance according to AA1000 AS v3.

Responsibilities of the Directors of VIS and of the Assurance Providers

The Directors of VIS have sole responsibility for the preparation of the Report. In performing our assurance work, our responsibility is to the management of VIS; however, our statement represents our independent opinion and is intended to inform all of VIS's stakeholders. DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement.

We have performed assurance work, and we have no other contractual relationship with VIS that constitutes a conflict of interest with the current assurance engagement, neither to providing the assurance of environmental and / social data for the company which has been assured.

DNV's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Basis of Our Opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at VIS's HQ and the site level. We undertook the following activities:

- Review of the current sustainability issues that could affect VIS and are of interest to stakeholders.
- Review of VIS's approach to stakeholder engagement and recent outputs.
- Review of information provided to us by VIS on its reporting and management processes relating to the Principles.
- Interviews with selected senior managers responsible for the management of sustainability issues and review of selected evidence to support the issues discussed.
- Site visits to the VIS's HQ in Hsinchu City and data checks with VIS's Taiwan Factory in Hsinchu and Singapore Factory to review processes and systems for preparing site-level sustainability data and the implementation of sustainability strategies.
- Review of supporting evidence for key claims and 2022 data in the Report, as reported information beyond 2022 is not within the scope of the current engagement. Our checking processes were prioritised according to materiality, and we based our prioritisation on the materiality of issues at the consolidated corporate level.

¹ The VeriSustain™ Protocol is available on dnv.com



- Review of the processes for gathering and consolidating the specified performance data and, for a sample, checking the data consolidation. Where financial data had been checked by another third party, we tested the transposition from these sources to the Report.
- An independent assessment of VIS's reporting against the Global Reporting Initiative (GRI) Sustainability Reporting Standards.
- The verification was conducted based only on the Chinese version Report.

Opinion

On the basis of the work undertaken, nothing came to our attention to suggest that the Report does not properly describe VIS's adherence to the Principles. In terms of reliability of the performance data, in accordance with Moderate level assurance requirements, nothing came to our attention to suggest that these data have not been properly collated from the information reported at the operational level, nor that the assumptions used were inappropriate.

Observations

Without affecting our assurance opinion, we also provide the following observations.

- Besides the established processes, continue developing the collection of the Company's sustainability issues and the decision on material topics, developing measurable and longer-term objectives to facilitate continual impact assessment are recommended.

Stakeholder Inclusiveness

The Company has identified the expectations of stakeholders through internal mechanisms in dialogue with different groups of stakeholders. The stakeholder concerns are well identified and documented. The significant sustainability issues identified through this process are reflected in the Report.

Sustainability Context

The Report provides an accurate and fair representation of the level of implementation of related corporate sustainability policies and meets the content requirements of the GRI Standards.

Materiality

The process developed internally has not missed out any significant known material issues, and these issues are fairly covered in the Report. A methodology has been developed to evaluate the priority of these issues.

Completeness

The Report covers performance data against the GRI Standards core indicators that are material within the Company's reporting boundary. The information in the Report includes the Company's most significant initiatives or events that occurred in the reporting period.

Accuracy and Reliability

The Company has developed the data flow for capturing and reporting its sustainability performance. In accordance with Moderate level assurance requirements, we conclude that no systematic errors were detected which causes us to believe that the specified sustainability data and information presented in the Report are not reliable.

Impact

The Company presents the impacts related to its identified material topics by measuring and monitoring impacts through appropriate performance metrics demonstrating outcomes and outputs of its value creation processes. Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Impact.

For and on behalf of DNV Taiwan
Date: 19 June, 2023

Nasa Chen
Lead Verifier
Business Assurance
DNV Taiwan
Statement Number: C606067-2022-AG-TWN-DNV

David Hsieh
District Manager,
Business Assurance
DNV Taiwan