



2021



Vanguard International Semiconductor Corporation

## Sustainability Report





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### Letter from Chairman

## VIS Sustainability Mission of Initiating Low-Carbon Transition

In 2021, mankind's life and survival environment were truly threatened by climate change and COVID-19, and thus, "carbon reduction" and "pandemic prevention" became global movements joined by all governments, enterprises and organizations, and even individuals. Most notably, the 26th UN Climate Change Conference (COP26) closed at the end of 2021, which was the most important climate change related conference after the Paris Agreement in 2015. The conference not only kept the global warming threshold of 1.5 degrees Celsius, but also encouraged all governments to propose carbon reduction agendas and aggressive carbon reduction paths.

VIS was more than aware of this sustainability topic, and fully understood that the company must embark on low-carbon transition to achieve corporate and environmental sustainability. Also, with a responsible attitude, VIS shall devise a roadmap to gradually move from compliance towards commitment, in aim to ultimately achieve the net-zero target by 2050.

Therefore, VIS started with restructuring its organization as the first step of low-carbon transition. At the end of 2021, VIS established "Energy Conservation and Carbon Reduction Committee" to shift from "energy conservation and carbon reduction," which had been practiced for years, to the more aggressive target of "zero emissions." In terms of organization, "Energy Conservation and Carbon Reduction Committee" will also join the existing "Corporate Sustainability Committee" and "Risk Management Committee" to regularly report on the three topics of "carbon asset management, energy conservation and carbon reduction, and low-carbon supply chain" to the management team, which will then report to the Board of Directors.

Furthermore, between September 2021 and March 2022, VIS twice issued green bonds, reaching a total amount of NT\$1.7 billion, which was used for development of renewable energy and energy technology, enhancement of energy efficiency and energy saving, and strengthening of pollution prevention. Regarding renewable energy, VIS adheres to the spirit of self-establishment and self-generation, and continues to procure solar PV generation equipment, as well as external renewable energy. By 2023, VIS' renewable energy capacity is projected to reach 8,437 kW, generating approximately 11.3 million kWh of power annually.

Facing climate change, VIS not only focuses on long-term climate initiatives, but also carefully evaluates climate risks and opportunities of the company. Especially, regarding natural disasters caused by extreme weather conditions, water and electricity resources much needed by the semiconductor industry, and carbon tax/fee, VIS tackles these issues with a positive mindset and plans responsive strategy to continually enhance the company's climate-resilience development.

In addition to demonstrating its climate resilience in 2021, VIS also displayed ample resilience in the area of corporate growth: during the pandemic over the past two years, VIS acquired the Singapore fab and Fab 5 to set up capacity for the supply chain and respond to the constantly increasing mid- to long-term demands for capacity of our customers, ensuring the future growing momentum of both VIS and our customers; VIS also achieved an ROE over 30% to generate value for all shareholders. In terms of corporate governance, corporate commitment, and social common good, VIS also continued to firmly march towards our goals.

In the aspect of corporate governance, VIS followed the “Corporate Governance 3.0 – Sustainable Development Roadmap” to amend company by-laws and enhanced the diversity of the Board of Directors, balancing gender, nationality, race, and professional background; also, VIS strengthened the Board’s independence and expanded the scope of its governance. On top of the two functional committees of audit and compensation, VIS added the “Strategy Committee” that helped the company to formulate crucial growth strategy through a forward-looking mindset. The Board of Directors was also given the responsibility of supervising Corporate Sustainability Committee, and providing oversight on further integration of the company’s ESG actions and UN SDGs.

In the area of corporate commitment, with the company achieving growth, VIS also increased the compensation of all domestic and foreign employees by 10% starting from January 1, 2021, and continued to carry out regular annual salary adjustment in April. To protect daily operations and employee health from the impacts of the pandemic, VIS launched various measures of pandemic prevention, such as office zoning and work from home, and initiated preemptive preparation through more rigorous actions prior to the upgrade of the pandemic alert by the government. Remote communication accelerated the company’s digital transformation, and VIS also took advantage of this opportunity to perfect our information protection mechanism. Even though remote communication limited the chances of employees participating in face-to-face activities, VIS continued to encourage employees to maintain a healthy lifestyle by issuing “sports voucher” and opening online sports classes; consequently, VIS was received the recognitions of Sports Administration’s “Taiwan iSports Certification” and Occupational Safety and Health Administration’s Outstanding Healthy Workplace Promotion Entities at the end of 2021.

Moreover, VIS targeted all identified key suppliers and conducted “Sustainability Risk Survey and Assessment;” VIS also audited and provided consultation to those high-risk suppliers to effectively lower and control the ESG risks of the supply chain.

In the aspect of social engagement, VIS continued to reference the community investment evaluation mechanism of London Benchmark Group (LBG) to quantify the company’s social engagement. In 2021, VIS was forced by the pandemic to suspend all volunteering activities that required face-to-face contacts; thus, VIS began considering other

alternative plans for it to exert social influences. These innovative endeavors also increased the company’s social investment by four times compared to the previous year. These included: when the number of confirmed cases Taiwan surged in mid-2021 and PCR testing was in great demand, VIS donated through TSMC Charity Foundation a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch; for Mid-Autumn Festival, we encouraged all business units to “replace donations with orders” and procured handmade Mid-Autumn gift boxes from social enterprises and sheltered workshops; VIS also sponsored the online courses and incubation program for teachers in Miaoli’s remote areas launched by “Junyi Academy,” so that underprivileged children’s learning would not be disrupted by the pandemic. In addition to continued investment of money, manpower, and goods, VIS also devised a mechanism of stakeholder participation, for example: VIS expanded the scope of the year-end charity donation that was held for the seventh consecutive year to invite the supply chain to participate. We introduced customers and suppliers directly to charity groups, and together, provided the most substantial financial support to help the social welfare groups suffering from insufficient incomes caused by the pandemic.

For years, VIS has continually focused on ESG and never stopped its dedication and hard work, winning the recognitions of major international and domestic indexes and awards in 2021. Most notably, VIS participated in the Dow Jones Sustainability Index (DJSI) evaluation for the first time, and was immediately selected as a constituent of DJSI-World; among the 93 global “semiconductor & semiconductor equipment” companies invited, VIS ranked in the top 10%. VIS was also selected as a TIP Taiwan Sustainability Index constituent for the second consecutive year, and received Carbon Disclosure Project (CDP) B-rating. Furthermore, VIS won Top 5% honor in the Corporate Governance Evaluation of TWSE- and TPEX- Listed Companies for the eighth straight year.

Facing the two temporal issues of the COVID-19 pandemic and climate change, mankind’s coping ability shifted from mitigation to adaptation in 2021, attempting to achieve coexistence. As the world gradually moves towards “post-pandemic recovery,” VIS is also prepared to minimize corporate risks through the most responsible framework and content of governance; at the same time, VIS will invest resources and take advantage of the opportunity to explore new frontiers, creating value for all stakeholders. We look forward to the arrival of a better future of co-prosperity when the pandemic is over!

Chairman, Leuh Fang



## Sustainability Focus – Low-Carbon Transition

In November 2021, VIS management team decided in the management meeting to establish “Energy Conservation and Carbon Reduction Committee,” jumpstarting VIS’ low-carbon transition. In terms of organization, “Energy Conservation and Carbon Reduction Committee” will also join the existing “Corporate Sustainability Committee” and “Risk Management Committee” to regularly report on the three topics of “carbon asset management, energy conservation and carbon reduction, and low-carbon supply chain” to the management team, which will then report to the Board of Directors.

From the onset, VIS’ low-carbon transition path sets 100% renewable energy and net zero emissions as 2050 targets, and formulates the roadmap from 2020 onward. The scope of analysis include the four fabs in Taiwan and one overseas fab in Singapore, and VIS pursues feasible methods of carbon reduction in Scope 1 (Note 1), Scope 2 (Note 2), and Scope 3 (Note 3) GHG emissions, while also assessing the possible financial impacts that may be caused by these methods, including rising carbon taxes and electricity fees in respective countries, as well as the annual increase of operational costs.

Note 1: Scope 1 emissions are direct greenhouse (GHG) emissions that occur from sources that are controlled or owned by an organization, such as methane used in the manufacturing process.

Note 2: Scope 2 emissions are indirect GHG emissions, such as those associated with the consumption of electricity.

Note 3: Scope 3 emissions are indirect GHG emissions produced by employees commuting/going on business trips, transportation of raw materials/products, and supply chain producing raw materials.

### Low-Carbon Transition Direction

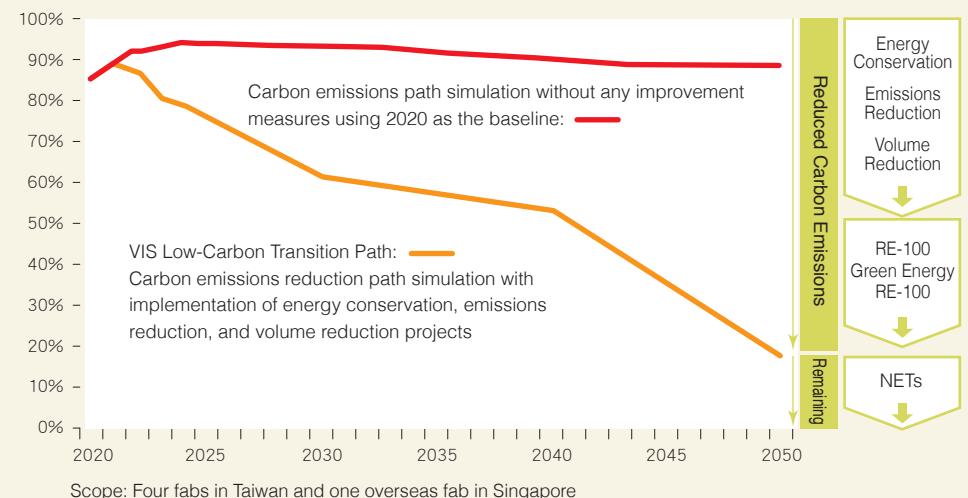
- 2021**
  - Establish Climate Change Management Framework
  - Establish Energy Conservation and Carbon Reduction Committee
  
- 2022**
  - Join Global Initiatives
  - Join RE100, and pledge to use 100% renewable energy by 2050
  - Pledge to achieve net-zero emissions by 2050
  
- 2030**
  - Achieve 85% installation rate of local exhaust equipment
  
- 2050**
  - Use 100% renewable energy
  - Achieve net zero emissions

According to the roadmap to net zero emissions, for Scope 1 and 2 GHG emissions, VIS plans to reduce the volume of GHG used in the manufacturing process, and lower emissions using ventilation and exhaust systems, introducing power-saving technology and low-consumption equipment to enhance energy-saving performances, and procuring green energy; VIS is expected to achieve a certain percentage of the total carbon reduction target. VIS is also evaluating using carbon negative technology, such as carbon capturing, to achieve the rest. As for Scope 3 emissions, VIS continues to promote and provide guidance for low-carbon transition and environmental sustainability transition of its supply chain, maximizing the total carbon reduction driven by VIS.

Moreover, assessment results also show that, from 2020 to 2050, VIS’ implementation of low-carbon transition can significantly lower the company’s electricity and carbon tax costs compared to taking zero action. The benefits of the implementation will gradually show starting in 2025.



### Low-Carbon Transition Path of VIS Business Scope



This roadmap of low-carbon transition path has been reported to the Board of Directors’ Meeting, and the management team will implement the plan targeting 100% renewable energy and net zero emissions by 2050.

## Sustainability Focus – VIS during the Pandemic

When Taiwan's first confirmed case of COVID-19 appeared in January 2020, VIS immediately established "VIS Pandemic Prevention Committee." The committee effectively integrated the company's resources and rapidly execute and promote measures of pandemic prevention to lower the risk of infection within the company, offering employees a safe working environment and maintaining normal operations and productions of the company.

In 2021, with the number of confirmed cases rising rapidly and vaccination rate remaining low, VIS Pandemic Prevention Committee not only steered the company to comply with all pandemic prevention regulations of the "Central Epidemic Command Center (CECC)," but also initiated preemptive preparation through more rigorous actions within the company. The committee regularly convened meetings and adjusted VIS' internal pandemic prevention policy on a rolling basis in response to the latest situation; also, the committee integrated the resources of all units to provide the organization and employees most timely pandemic prevention assistance.

In fact, when the CECC elevated the national pandemic alert to Level 3 on May 19, VIS initiated staff segregation and working from home or offsite for all employees in the non-production areas of fabs in Taiwan, provided that productions and operations remained unaffected, reducing the risk of infection arisen from movements and contacts. In June, VIS also complied with the requirements of CDC and local government and arranged for foreign employees to get rapid tested, making sure that there was no cluster infections of foreign employees in the company. In July, VIS Pandemic Prevention Committee encouraged all employees to get vaccinated to lower the risk of severe symptoms.

The pandemic prevention measures launched by VIS in each stage are listed below:

	Alert Level	Government Policy	VIS Measures
January-May 2021	L1-2	<ul style="list-style-type: none"> <li>First COVID-19 case appeared on January 1, 2020</li> <li>Pandemic alert raised to L2 on January 23, 2020</li> <li>Requisition of masks produced by domestic factories on January 31, 2020</li> <li>Launched name-based rationing of masks on February 12, 2020</li> <li>Announced four key points of "Pandemic New Life Movement" on May 8, 2020           <ol style="list-style-type: none"> <li>Observe social distancing rules, such as 1.5 meters indoor and 1 meter outdoor, checkerboard seating and partitions</li> <li>Realize personal hygiene protection, such as wearing mask, measuring body temperature, providing hand-washing supplies or stations at entrances and indoor areas</li> <li>Establish name-based facility access system, and control of traffic and disinfection of environment</li> <li>Pass fire safety inspection and building public safety inspection</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>On January 21, 2020, first confirmed case of COVID-19 infection was reported at Taoyuan International Airport (on an arrival plane). On the next day (January 22), VIS convened pandemic response meeting and began implementation of phase one pandemic prevention measures, including: daily measurement of body temperature of employees and vendors, forbidding those over 38°C to enter the fabs; investigation into travel histories of employees and vendors; promotion of actions of pandemic prevention, such as wearing and masks and washing hands</li> <li>Depending on the situation, held one to five pandemic prevention meetings weekly for monitoring of pandemic and reporting on tasks; disinfection of working area; implemented social distancing rules in cafeteria, meetings, trainings, employee activities and commuting buses; office area zoning and trial; WFH system establishment and expansion</li> </ul>
May 19, 2021	Raised to L3	<ul style="list-style-type: none"> <li>National alert raised to L3 on May 19, 2021</li> <li>Advance command post set up on June 4, 2021, for the cluster infections incident at two electronics factories in Miaoli.</li> </ul>	<ul style="list-style-type: none"> <li>VIS immediately initiated measures such as office zoning/WFH/fab disinfection/cancellation of employee activities until the lifting of L3 alert to minimize infections within fabs and the impacts on production</li> <li>Completed formulation of BCP procedures, and launched procurement of rapid testing kits for pandemic response.</li> <li>Enhance pandemic control and prevention measures of dormitory of foreign employees; pandemic prevention communication meetings and health education, daily footprint and body temperature recording; weekly rapid testing</li> </ul>
July 27, 2021	Lowered to L2	<ul style="list-style-type: none"> <li>National alert lowered to L on July 27, 2021</li> <li>Continued promotion of vaccination</li> </ul>	<ul style="list-style-type: none"> <li>After L3 alert was lifted, VIS continued to hold regular pandemic prevention meetings and followed the latest announcement of CECC to implement related measures, effectively lowering the risk of infection; VIS also urged employees to get vaccinated to lower the risk of severe symptoms.</li> </ul>
February 24, 2022	Alert Lifted	Government policy shifted towards coexistence with virus	<ul style="list-style-type: none"> <li>Initiated WFH, office zoning/employee segregation, scattered the seats of employees with same tasks, avoided unnecessary gatherings and activities, enhanced disinfection of environment, to lower the risk of pandemic spread within fabs. Also, targeting confirmed cases with minor symptoms, VIS initiated WFH to reduce impacts on operations.</li> </ul>

## Awards and Recognitions



Awards

- Selected as Constituent of S&P Global DJSI – World
- Carbon Disclosure Project (CDP) B-Rating
- TIP Taiwan Sustainability Index
- TCSA Top 50 Sustainable Enterprises: Electronics and IT Manufacturing – Platinum
- TCSA Sustainable Report Award – Platinum
- GCSA Sustainable Report Award – Bronze
- Top 5% honor in the 8th Corporate Governance Evaluation of TWSE- and TPEX-Listed Companies
- “twA+/twA-1” Rating and Outlook of “Stable” from Taiwan Ratings
- No. 28 in CommonWealth “Top Corporate Citizens”
- EPA’s “ROC Enterprises Environmental Protection Award – Silver Award”
- EPA’s “Excellent Air Quality Purification Areas”
- OSHA’s “Outstanding Enterprise of Occupational Safety and Health”
- WRA’s “Outstanding Enterprise of Waterfront Land Adoption and Maintenance”  
2021 MOE Silver Medal
- MOHW’s “Accredited Healthy Workplace” Health Promotion Badge
- Enterprise Anti-COVID Alliance – Gold
- First place in Hsinchu County Environmental Protection Bureau’s “Private Enterprises and Organizations with Excellent Performances in Green Procurement”
- Global Views Monthly Taiwan iSport Certification
- Fab 1’s Sulfuric Acid Recycling Model Recognized by “BS 8001 Circular Economy Guidance Program” as the Most Optimal Business Model Innovation



### Certification

	ISO 14001 Environmental Management	ISO 45001 Occupational Safety and Health Management System <small>(Originally OHSAS 18001)</small>	SONY Green Partner Certification
First Certified Date:	1997.12.12	2003.02.26	2003.06.19
Latest Renewal Date:	2021.01.18	2021.01.18	2019.12.24
Expiry Date:	2024.01.17	2024.01.17	2022.03.31
	TOSHMS Certification		ISO 14046 Product Water Footprint Verification
First Certified Date:	2010.05.26	2012.12.16	2016.09.04
Latest Renewal Date:	2021.01.18	2021.05.04	2020.11.11
Expiry Date:	2024.01.17	--	2022.11.10
	ISO 14067 Product Carbon Footprint Verification		Cleaner Production Assessment System of the Green Factory Label (Fab 1, 2)
First Certified Date:	2016.09.04	2017.12.08	2021.08.01
Latest Renewal Date:	2020.11.16	2020.11.14	2021.08.01
Expiry Date:	2022.09.20	2023.11.08	2024.07.03



1

Annual Consolidated  
Revenue NT\$

**43.95** Billion

Earnings per Share NT\$

**7.14**

Return on Equity

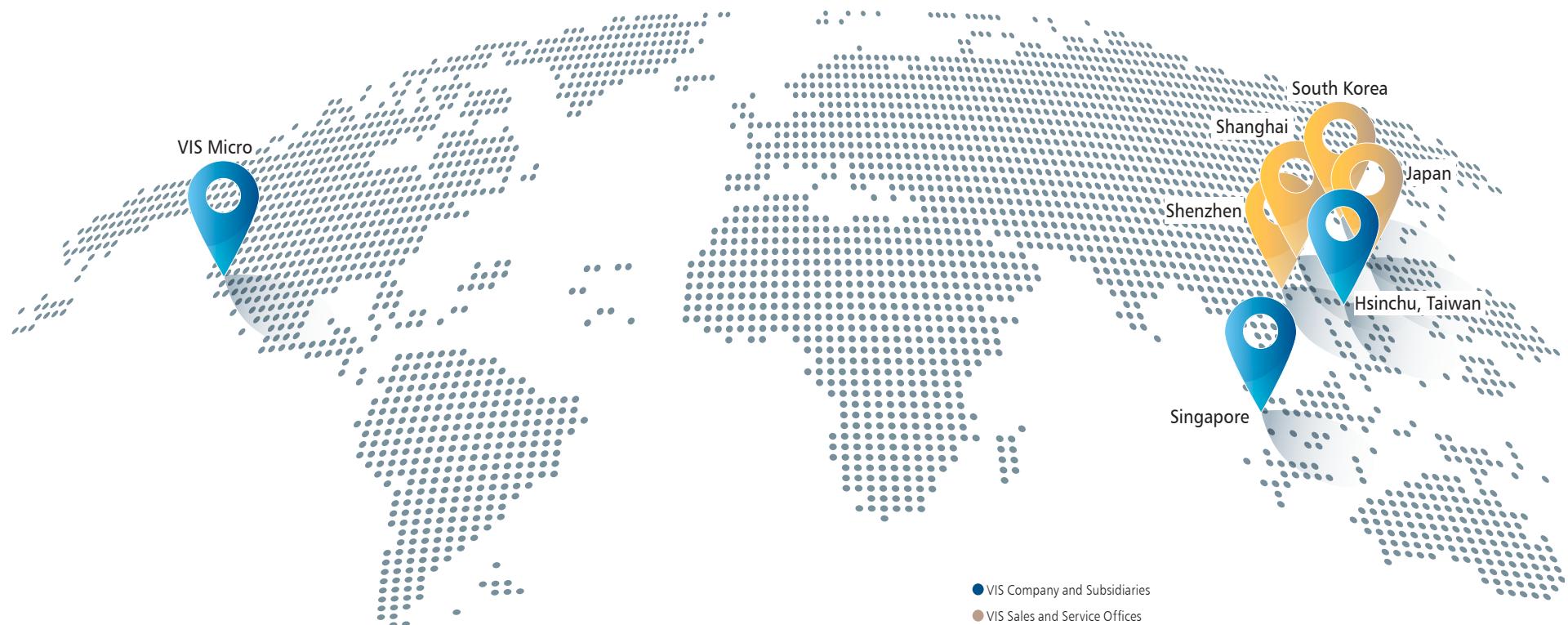
**36.5%**

## About VIS

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

## 1.1 Company Profile

As a leading specialty IC foundry service provider, Vanguard International Semiconductor Corporation (VIS) upholds “customer service-oriented” business philosophy to offer its customers cost-effective solutions and high value-added services. VIS headquarters is located in Hsinchu Science Park, Taiwan. VIS currently has five 8-inch fabs, among which four are located in Taiwan and one in Singapore. In 2021, VIS has approximately 6,333 employees. To better serve its worldwide customers, VIS has established subordinate companies in the U.S. and Singapore, and sales and service offices in main worldwide IC clusters in addition to Taiwan Headquarters.



VIS production of display driver ICs, power management ICs, and discrete components have exhibited distinctive operational performances. In order to diversify product and market centralization, reduce operating risks, and simultaneously extend its reaches in the high-profit market, in addition to our existing high-voltage analog, BCD process, and ultra-high-voltage processes, VIS will continue to accelerate development projects relating to sensing devices, fingerprint sensor ICs, and high-power management ICs as well as embedded memory platforms. This will enable VIS to adapt to the energy saving and carbon reduction era and to satisfy market demand for automobile electronics and Internet of Things applications.

2021 was a year VIS reached new heights; VIS achieved record highs in consolidated revenue, profit, average gross profit, total output volume, and return on equity. The annual consolidated revenue reached NT\$43.95 billion, an increase of approximately 33% compared to the year before. Net income after tax was approximately NT\$11.82 billion, and earning per share was NT\$7.14, an increase of approximately 87% compared to the previous year; the annual average gross profit increased from 34% in the previous year to 43.6%; return on equity grew to 36.5%, achieving impressive results for their investments.

Facing transportation and communication barriers caused by the global pandemic, VIS still strived for corporate growth. In 2021, VIS expanded again through merger and acquisition, acquiring AUO's Fab L3B and facilities, which became VIS Fab 5 with a monthly capacity of 40,000 8-inch wafers. Through the hard work of all employees and technical assistance of smart manufacturing, the Singapore Fab acquired two years ago realized profit in only the second year since VIS officially took over operation.

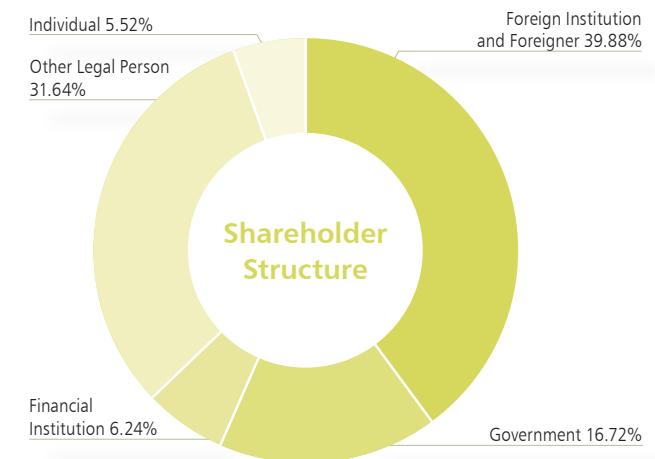


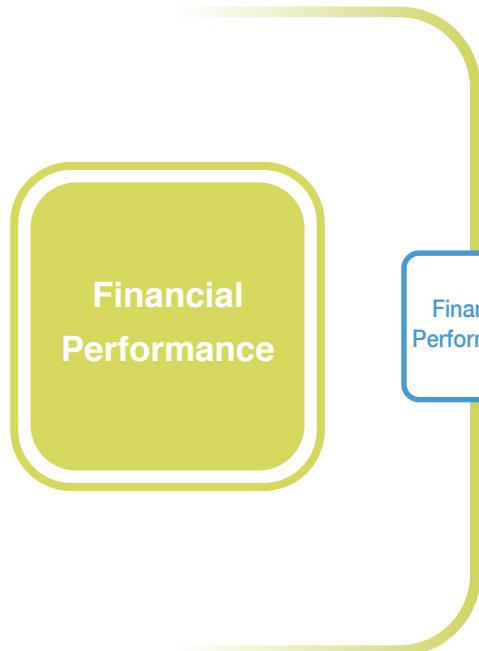
VIS Fab 5

Annual production capacity of VIS in 2021 reached about 2.89 million 8-inch wafers, with shipment amounting to 2.9 million wafers at a capacity utilization rate of 101%. Total capital expenditure was NT\$9.56 billion, approximate 2.7 times more compared to the capex of NT\$3.55 billion in the previous year. VIS continues to actively invest in R&D, advanced processes and device technologies, cultivate new customers, and diversify product portfolio in order to meet customer needs and continuously enhance shareholders' profits. The operational benefits brought by continued expansion of capacity and smart transition, and the company's competitiveness in applications such as power management, display, car electronics, fingerprint sensor, IoT, and MEMS, will become our greatest strengths to continually create values for our customers.

### Shareholder Structure

In 1994, Taiwan Semiconductor Manufacturing Company (TSMC) and 13 other companies jointly invested and founded the Vanguard International Semiconductor Corporation. In March of 1998, VIS became a TPEx listed technology firm. The list of large shareholders included TSMC and the National Development Fund of the Executive Yuan. The current shareholder structure is shown in the chart below:





## 1.2 Financial Performance

### Sustainability Goals

#### Short-Term (Quantified) (2023)

- ROE at least 25%
- CAGR of annual revenue between 7%~12%

#### Mid-Term (Quantified) (2025)

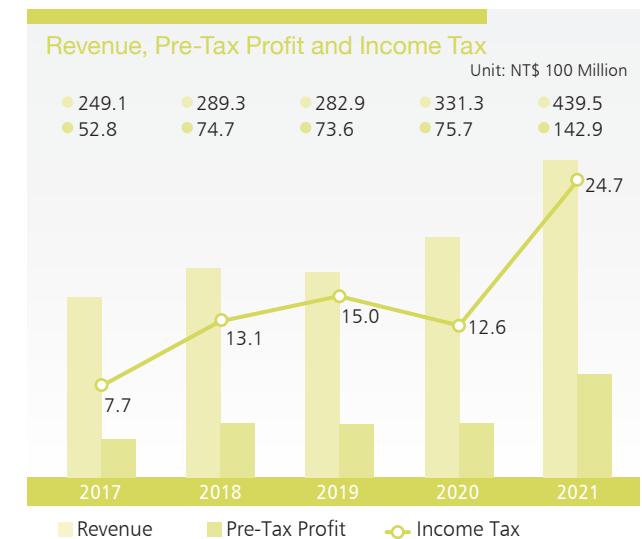
- ROE at least 25%
- CAGR of annual revenue between 7%~12%

#### Long-Term (Quantified) (2025~)

- ROE at least 25%
- CAGR of annual revenue between 7%~12%

Note: The sustainability goals VIS proposed in 2021 include: (1) At least 20% average ROE; (2) CAGR of operating income between 5%-10%. By the end of 2021, the company achieved (1) ROE of 36.5%; (2) 28% of CAGR of operating income from 2017 to 2021, both exceeding the original goals. With favorable factors of rapid growth of 5G smartphones and the arrival of the IoT age, the demand of 8-inch wafers far exceeds the supply, and capacity shortage will continue; VIS will continue to expand capacity in response to customers' demands and grow with them in the future, and therefore, VIS has set the sustainability goals from 2022 to 2026 to be (1) CAGR of annual revenue between 7%-12%; (2) ROE at least 25%.

Owing to our customers' strong demands for 8-inch wafers, the sales increased; coupled with the synergy of enhanced capacity utilization and optimal product portfolio, VIS' consolidated revenue in 2021 reached NT\$43.95 billion, which was an increase of approximately 33% compared to previous year's revenue of NT\$33.13 billion. The company's average gross profit for the year was approximately 43.6%; net income after tax was NT\$11.82 billion, and EPS was NT\$7.14. The return on equity was 36.52%. VIS contributed as many as NT\$2.52 billion in tax.



## 2019-2021 Consolidated Financial Information

Unit: NT\$ Million

Item	Basic Elements	2019	2020	2021
Direct Economic Value Generated (A)	Revenues (Note 1)	28,735	33,282	44,139
Distributed Economic Value (B)	Operating Cost (Note 2)	13,705	16,310	17,009
	Employee Salaries and Welfare (Note 3)	7,631	9,354	12,780
	Payment to Shareholders (Note 4)	5,245	5,245	5,736
	Payment to Government (Note 5)	1,532	1,308	2,518
	Community Investment (Note 6)	6	5	12
Economic Value Retained (A-B)		616	1,060	6,084

Note 1: Revenues include net sales revenue and net nonoperating income and expense.

Note 2: Operating costs = cost of goods sold + operating expenses – employee salaries and welfare - (property tax + stamp tax + vehicle tax + other taxes + community investment)

Note 3: Includes bonus, pension, and labor and health insurances.

Note 4: Cash dividends of the year.

Note 5: Includes income tax, property tax, stamp tax, vehicle tax, and other taxes.

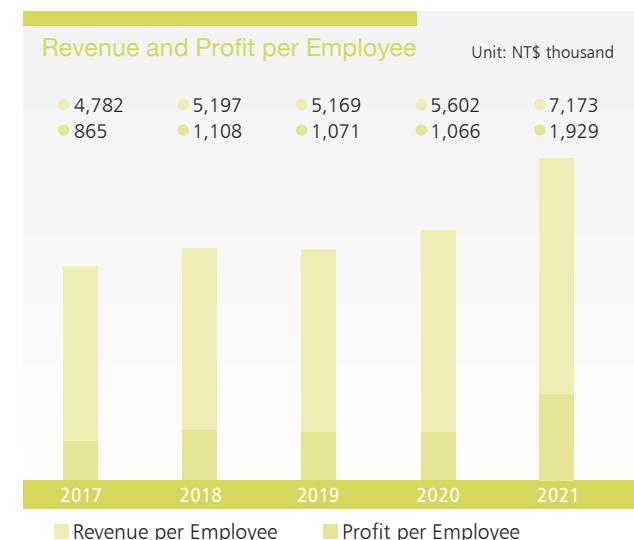
Note 6: Charity expenses donated to government agencies, social welfare groups, and neighborhood charity

The profitability of VIS relies on each and every employee. In 2021, the revenue per employee was NT\$7.17 million, and profit per employee was NT\$1.93 million.

VIS is experiencing steady growth, and since 2005, it has distributed cash dividends every year. Dividends distributed over the past five years are shown below:

Item	2017	2018	2019	2020	2021 (Note)
Distributed dividends (NT\$100 Million)	49.2	52.4	52.4	57.4	73.8
Amount (NT\$)	3.0	3.2	3.2	3.5	4.5

Note: Distributed dividends of 2021 has yet been calculated. The matter will be resolved in the shareholders' meeting in 2022.



In addition to distributing cash dividends to shareholders, VIS will also invest capital expenditures and R&D expense according to the company's strategy. In 2021, VIS acquired AUO's fab and facilities on Lixing Second Road and right-of-use assets for continued expansion of capacity, and proactively conducted R&D and advanced processes and device technology to ensure our competitiveness in global market.

### 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 are as below:

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

Item	Taiwan	Singapore
Company Name	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
2021 Average Number of Employees	5,257	862

#### 2. 2021 Revenue, Income before Income Tax , Income tax and Income Tax Paid for each Tax Jurisdiction in which We Operate

Item	Tax Jurisdiction	2020		2021	
		Amount	%	Amount	%
Revenue	Taiwan	331.3	92	439.5	86
	Singapore		8		14
	Other		0		0
Income before Income Tax	Taiwan	75.7	118	142.9	93
	Singapore		-21		6
	Other		3		1
Current year Income tax Expenses	Taiwan	16.5	100	26.7	100
	Singapore		0		0
	Other		0		0
Income Tax Paid	Taiwan	13.2	100	16.6	100
	Singapore		0		0
	Other		0		0

Note: VIS Singapore operating income turned positive in 2021. As the accumulative loss before 2020 was carryforward to 2021, therefore, VIS SG was no need to pay the corporate income tax after deduction this accumulative loss.

### 3. Consolidated Tax Information

Item	2020	2021	Unit: NT\$100 Million	
			Two Year Average	Rate
Income before Income Tax	75.7	142.9		
Income Taxes Expenses	12.6	24.7		
Effective Tax Rate	17%	17%	17%	
Income Tax Paid	13.2	16.6		
Cash Tax Rate	17%	12%	14%	

VIS' effective tax rate was 17% in 2021 and 2020, 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 2021 was 12% which was 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. 2021 cash payment for tax was attributed to 2020 earning and profit. In addition, as the significant improvement on profit of 2021 in comparison with 2020 result in the low cash effective tax rate in 2021 based on such calculation rule.

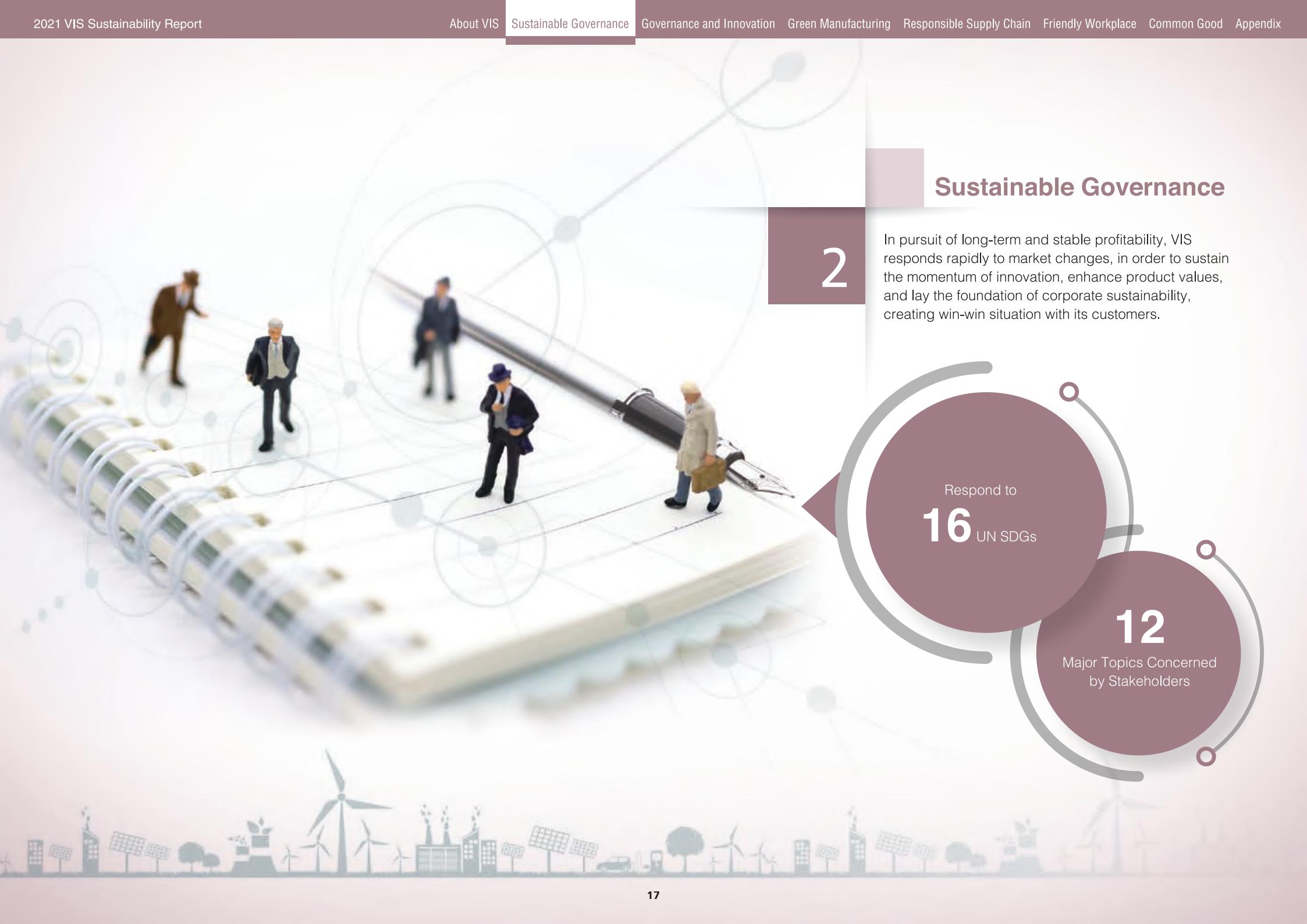
Tax payments made to the government by VIS primarily encompasses corporate income tax, property tax and stamp tax. In 2021, total tax amounted to NT\$2.52 billion; and actual amount paid to the government was NT\$1.71 billion.

Item	2017	2018	2019	Unit: NT\$100 million	
				2020	2021
Tax Expenses (Note)	8.0	13.3	15.3	13.1	25.2

Note: Tax expenses include income tax, property tax, stamp tax, vehicle tax and other taxes.

### 4. Financial Subsidy Received From Government

In 2021, VIS received financial subsidy from Singapore government about NT\$46 million.

A background image featuring a spiral-bound notebook with a grid pattern. A black fountain pen lies across the notebook. Several small, stylized figurines of people in business attire are walking across the notebook's surface. In the bottom foreground, there is a decorative row of icons representing various green technologies like wind turbines, solar panels, and industrial facilities.  
2

## Sustainable Governance

In pursuit of long-term and stable profitability, VIS responds rapidly to market changes, in order to sustain the momentum of innovation, enhance product values, and lay the foundation of corporate sustainability, creating win-win situation with its customers.

A diagram consisting of two overlapping circles. The larger circle is dark red and contains the text "Respond to 16 UN SDGs". The smaller circle is also dark red and contains the text "12 Major Topics Concerned by Stakeholders". Both circles have a thin grey outline and are set against a light grey background.  
16  
UN SDGs  
12  
Major Topics Concerned  
by Stakeholders

## 2.1 VIS Corporate Sustainability Policy

Vanguard International Semiconductor Corporation (VIS) is a leading specialty IC foundry service provider in the world. Providing customers the most competitive and comprehensive solutions and high value-added services are the core value of VIS, as well as the foundation of the company's sustainable development. In pursuit of long-term and stable profitability, VIS responds rapidly to market changes, and works closely with customers to create win-win situation. Also, while safeguarding shareholders' interests, VIS grows together with stakeholders, including employees, suppliers, community and society, and follows the principles of sustainability to thrive with the environment and society.

### Our Vision

Cultivate Sustainable Value

Create Social Common Good

### Our Mission

Practice Corporate Governance

Establish Friendly Workplace

Promote Environmental Sustainability

Realize Social Engagement

### Our Implementation Guidelines

In the area of corporate governance, integrity is the prioritized corporate core value. VIS adheres to corporate governance principles and business ethics, and complies with laws and regulations; while proactively striving for business development and managing risks, VIS also ensures complete disclosure of information, safeguarding and balancing the interests of different stakeholders. Through continued drive for innovation, VIS enhances product value and builds a profitable foundation for long-term and sustainable growth, in order to achieve corporate sustainability.

In terms of environmental sustainability, VIS embraces and insists on the sustainable value of harmonious symbiosis with the environment. VIS continues to be engaged in R&D and green investment, and promotes green manufacturing, clean production, circular economy, and development of green supply chain. VIS strives for maximized efficiencies of energy and resources and rigorously reduces wastes and prevents pollutions to mitigate and adapt to the adverse influences of climate change on the environment.

In the area of friendly workplace, VIS strives to become a people-oriented company, regarding employees as our most important assets. VIS offers its employees competitive compensation and benefits, safe, healthy, challenging but interesting working environment, and education and training, helping all employees to achieve personal growth and fulfill their true potentials.

In terms of social engagement, in order to realize the vision of cultivating sustainable value and creating social common good, VIS proactively invests resources to encourage its employees to be professional and passionate, and join VIS in helping the disadvantaged, supporting education in remote areas, participating in community building, and promoting UN SDGs; VIS also leads by example and drives social engagement of its supply chain, becoming the driving force of our society's advancement.

## 2.2 Corporate Sustainability Management

### 2.2.1 Corporate Sustainability Committee

To implement corporate civic responsibility, and facilitate sustainable development of ESG (environment, society, economy), VIS formulated the company's "Corporate Social Responsibility Policy" in 2012 and founded "Corporate Social Responsibility Committee (CSR Committee)" to build the CRS management system of VIS. In 2020, VIS proactively participated in the "Corporate Governance 3.0 – Sustainable Development Roadmap" promoted by FSC, amending related policy articles to change VIS' Corporate Social Responsibility Policy and Corporate Social Responsibility Committee to "Corporate Sustainability Policy" and "Corporate Sustainability Committee" respectively to follow international trends and respond to practical operational needs.

After the name change, the committee's tasks will focus more on the promotion on ESG, keeping in line with international trends; however, its organizational structure remains the same, where VIS Chairman serves as the Chairperson and CFO as the Vice Chair of the committee, leading the company to formulate corporate sustainability goals and development guidelines. The committee regularly reviews the execution progress of various tasks and collects stakeholders' opinions, reporting to the Board of Directors every six months. The Board of Directors reviews, supervises, and instructs the company's ESG development direction and offers correctional instructions, including: (1) supervision of risks and opportunities of the various topics evaluated and managed by Corporate Sustainability Committee; (2)

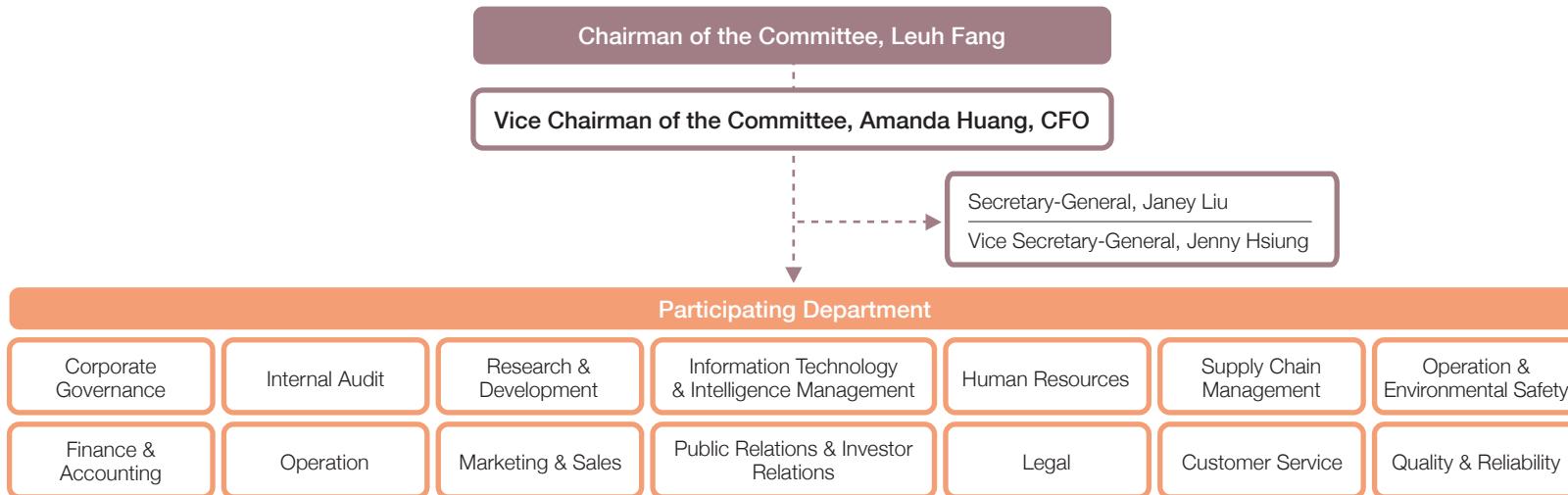
approval of amendments of policies and targets relating to sustainability.

When the amount of a donation is relatively high or when a matter concerns a major event, the matter will be included as a discussion item of the Board of Directors meeting, or an interim meeting will be held for resolution of the matter. In 2021, two ESG related discussion items were included in the Board of Directors meeting for resolution.

VIS Corporate Sustainability Committee also consists of representatives of various divisions of the company, including Corporate Governance, Public Relations & Investor Relations, Human Resources, Legal, Internal Audit, Research & Development, Information Technology & Intelligence Management, Operation, Quality & Reliability, Operation & Environmental Safety, Finance & Accounting, Customer Service, and Marketing & Sales. Each representative plans and implements different corporate sustainability missions based on respective responsibilities.

VIS regularly convenes Corporate Sustainability Committee Meeting every quarter, where each division representative reports on respective progress and future plan. All the committee members brainstorm together to jointly review implementation outcomes and make improvements, continually driving VIS' sustainable development in the areas of economy, society, and environment.

## CSR Committee Organization Chart



### 2.2.2 Highlights of Sustainability Topics Reported to the Board of Directors' Meeting

#### Participating in the DJSI Evaluation for the First Time

In 2021, VIS participated in the Dow Jones Sustainability Indices (DJSI) evaluation for the first time, and was immediately selected as a constituent of DJSI-World index. According to the results of the evaluation, VIS was ranked among the top 10% among the 93 global “semiconductor & semiconductor equipment” companies invited in 2021 in the area of “environment, society, governance” (ESG). Among the 23 criteria, VIS has been recognized for its excellence in Customer Relationship Management, Policy Influence and Product Quality and Recall Management in the Governance & Economic Dimension; Environmental Reporting, and Environmental Policy & Management System in the Environmental Dimension; and Social Reporting in the Social Dimension.

## **Donation of Contactless COVID-19 Testing Station to National Taiwan University Hospital Hsinchu Branch**

The COVID-19 pandemic spread in 2021 triggered a sense of insecurity of citizens, enterprises, and society. Through TSMC Charity Foundation, VIS donated a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch, which helped the hospital to conduct PCR testing and ensure safety and comfort of medical workers during testing. This contactless COVID-19 testing station was located within the NTU Hospital Hsinchu Branch, which was tailored to the hospital's needs. The station benefited all citizens in the Hsinchu area, offering faster and safer PCR testing. VIS also donated pandemic prevention supplies, such as masks/mask zip-lock bags, forehead thermometers, shower towels, and remote teaching laptops, to social welfare groups that care for senior citizens living alone and homeless people, and halfway houses serviced by VIS volunteers, offering senior citizens living alone, homeless people, children of halfway houses, and social workers and domestic caregivers working on the first line sufficient pandemic prevention supplies during the pandemic.

## **Sponsorship for Junyi Academy to Promote Teacher Incubation and Volunteer Empowerment in Miaoli**

To support the idea that "every kid, regardless of background, has an opportunity to be a lifelong learner," VIS donated NT\$1 million to "Junyi Academy" in 2021 to fund the teacher incubation project for 10 schools in remote areas of Miaoli, supporting the teachers in high education demand areas. VIS also promoted volunteer empowerment for enterprises in Hsinchu Science Park, allowing more enterprise volunteers to access the free courses on the platform, accompanying students in remote areas to learn. This project also assisted the international promotion of course videos on Junyi Academy's platform.

## **Issuing NT\$700 Million Green Bond for the First Time**

In September 2021, VIS received approval of TPEx to issue NT\$5 billion of 5-year unsecured corporate bonds. Among which, Bond A, totaling at NT\$4.3 billion with an annual interest rate of 0.57%, will be used on facility expansion and equipment procurement to support capacity expansion and enhance performances; Bond B, totaling at NT\$700 million with an annual interest rate of 0.52%, is a green bond used to develop renewable energy and energy technology, improve energy efficiency, and strengthen pollution prevention and recycling and reuse of wastes.

## 2.2.3 2021 Sustainability Outcomes and Achievements



### Corporate Governance

- Established new functional committee, "Strategy Committee" to oversee and plan the company's major growth strategy and topics.
- Formulated concrete management targets of diversification, and the target number of female Directors is one or over 10%.



### Environmental Sustainability

- Established "Energy Conservation and Carbon Reduction Committee" to make decisions on the assigned energy-saving and carbon reduction targets of each fab, and to review the progress of each fab every quarter.
- Established "Climate Change Communication Platform" under Corporate Sustainability Committee with a scope of three major topics: "Carbon Asset Management," "Energy Conservation and Carbon Reduction," formulating VIS' low-carbon path, and setting the targets of 100% renewable energy and net zero emissions by 2050.
- Renewable Energy Development Act requires major electricity users to install a renewable energy capacity 10% of the contract capacity by 2025. VIS has decided to achieve this target early by 2023, and the sources of green energy will include procurement and self-installed facilities.



### Friendly Workplace

- Strengthen/implement pandemic prevention policy, monitoring the pandemic and adjusting pandemic prevention measures, caring for individual cases (1,060 people), and promoting vaccination
- Proactive health promotion, launching H2U Health Bank+ in April, accumulating downloads by 2,873 employees and enabling them to make inquiries of annual health examination report.
- Promote Healthy Exercising 2.0; a total of 1,981 people used the sports voucher, which could be used at 29 sports facilities and venues.



### Social Engagement

- During the pandemic, VIS donated a contactless COVID-19 testing station and pandemic prevention supplies, and continued to make donations to the 12 social welfare groups that shared long-term partnership with the company.
- Donated to Junyi Academy to fund teacher incubation project in Miaoli and empower science park volunteers.
- Projected to release 2,500 to 3,000 firefly larvae to the wild annually from 2020 to 2023.

## 2.3 Materiality Analysis and Stakeholder Communication

In 2021, following Global Reporting Initiative (GRI) standards and AA1000 Stakeholders Engagement Standards (SES), and referencing other major semiconductor companies' major topics, the CSR Committee discussed and determined 22 Sustainability Topics and compiled a questionnaire survey that was sent to all stakeholders, including investors/shareholders, employees, customers, suppliers/partners, media, public agencies, and society/communities, for ranking of topics. The top 12 topics were chosen as major CSR topics of 2021.

## 2.3.1 Materiality Analysis

### Phase 1 : Identification

Using AA1000 Stakeholder Engagement Standard as the criteria, representatives of different departments in the Corporate Sustainability Committee define "internal or external groups or individuals that have influences on the company or are influenced by the company," based on targets they come into contact with in daily operation, and determining 7 types of stakeholders, including, employees, suppliers, investors, public agencies, customers, media, and community/society, based on frequency of communication and levels of dependency and influence.

<b>Step 1</b>  <b>Selection of Target of Communication</b>	<b>7</b> Categories of Stakeholders	VIS values the opinions of all stakeholders. According to frequency of communication, and levels of dependency and influence, VIS Corporate Sustainability Committee has identified 7 key targets of communication, including employees, suppliers (partners), investors, government agencies, customers, media, and community/society.
<b>Step 2</b>  <b>Collect Sustainability Topics</b>	<b>22</b> Sustainability Topics	Following the topics, product uniqueness, concerned issues of domestic and overseas industries, and global sustainability trends, in the GRI Standards, VIS focused on the company's own operations and business, and identified 22 sustainable topics.

### Phase 2 : Collection and Analysis of Sustainability Topics

Following the topics, product uniqueness, concerned issues of domestic and overseas industries, and global sustainability trends, in the GRI Standards, VIS focused on the company's own operations and business, and identified 22 sustainable topics.

VIS CSR Committee distributed questionnaires both online and offline to 7 types of stakeholders, collecting a total of 442. Through results of the questionnaires, discussions by all departments, and suggestions of external experts, the committee determined the relativity and level of impact of the major topics on the company's operations, and narrowed down to 12 major topics.

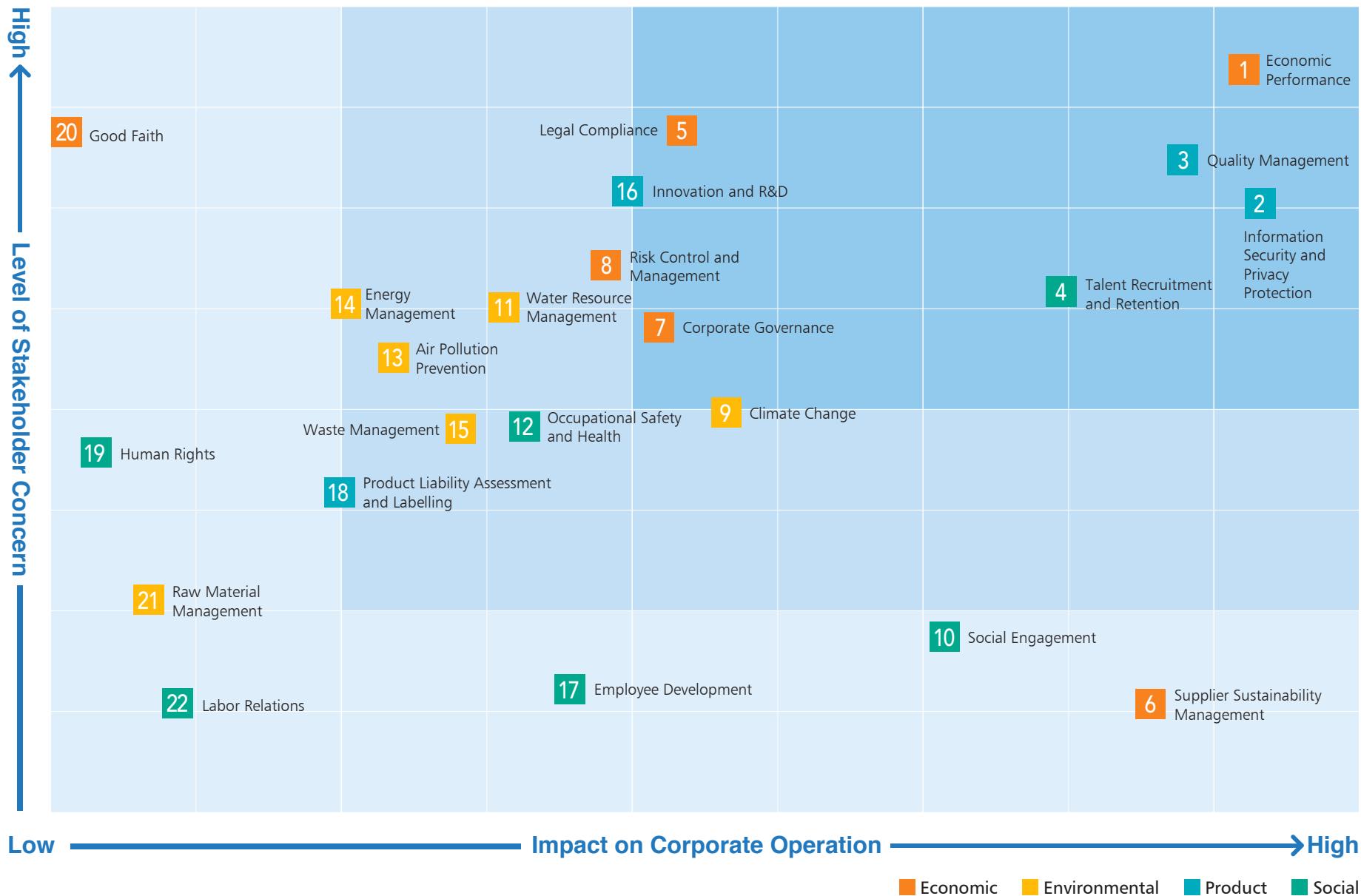
<b>Step 3</b>  <b>Survey Level of Concern</b>	<b>442</b> Questionnaires	Collect stakeholders' concrete responses through distribution of questionnaires, collecting a total of 442 questionnaires.
<b>Step 4</b>  <b>Analysis Impact on Operations</b>	<b>75</b> Executives	VIS CSR Committee invited all executives to participate; through questionnaires, we investigated the impacts on operations in four aspects: economics, products, environment, and society.
<b>Step 5</b>  <b>Matrix of Major Topics</b>	<b>12</b> Topics	Calculate the weights of different stakeholders using the questionnaires of executives for the adjustment of the scores of stakeholder responses, produce matrix of major topics, and conduct meticulous discussion to select 12 topics.

### Phase 3 : Confirmation

Targeting major topics and key items of stakeholders' responses, we review whether the report comprehensively presented the management performance and identification of impacts of the company, and disclose and explain the results in this report.

<b>Step 6</b>  <b>Review and Disclose Content</b>	<b>13</b> Standards	Compare the 12 major topics with 13 GRI Standards, and disclose management guidelines and report requirements based on related regulations. The scope of the disclosure of major topics only covers VIS sites in Taiwan.
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## Major Topics Matrix



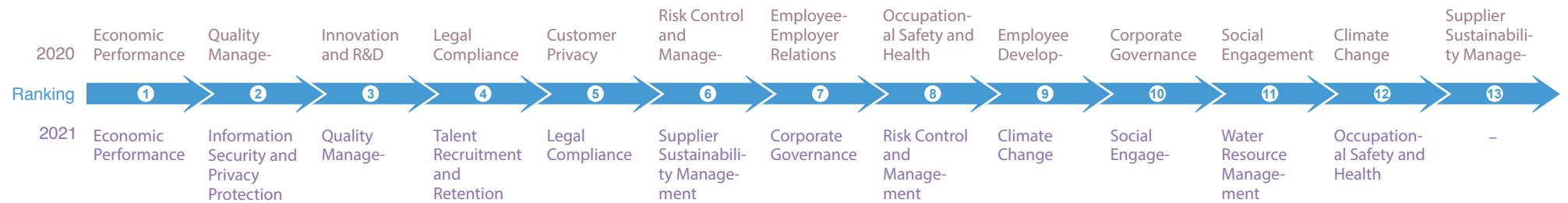
We conducted the survey on all stakeholders using online and offline questionnaires. A total of 442 questionnaires were collected, among which 380 were valid; these included 75 questionnaires collected from executives, among which 72 were valid. To properly listen to employees' opinions, the questionnaires were distributed to employees of different positions, departments, and nationalities, in order to achieve sample representativeness, fully reflecting the thoughts across all levels.

Compared to the previous year, "Water Resource Management" became a new major topic this year, as our environment faced the issues of climate change and water shortage, the importance of water resource management increased significantly.

## 2021 Adjustments to Major Topics

Major Topic	Adjustment	Reason
Information Security and Privacy Protection	Included Information Security	"Customer Privacy" changed to "Information Security and Privacy Protection" to expand the scope to include information security.
Talent Recruitment and Retention	Name	"Employee-Employer Relations" changed to "Talent Recruitment and Retention."

## 2020 and 2021 Major CSR Topics



## Major Topics and VIS Value Chain

Aspect	Major Topics	Influences on Value Chain			Corresponding GRI Standards	Annual Achievements (Chapter/Section)
		Procurement	Manufacturing	Customer Utilization		
Economic	Economic Performance	●	●		Economic Performance (201)	1.2 Financial Performance 4.1 Climate Change and Energy Management
	Legal Compliance	●	●		Environmental Compliance (307), Socioeconomic Compliance (419)	3.3 Ethics and Transparency
	Risk Control and Management	●	●		Set by VIS	3.2 Risk Management
	Corporate Governance	●	●		Set by VIS	3.1 Corporate Governance
	Supplier Sustainability Management	●	●	●	Procurement Practices (204), Supplier EIA (308), Supplier Social Assessment (414)	5. Responsible Supply Chain
Product	Quality Management	●	●	●	Set by VIS	3.5 Quality and Customer Service
	Information Security and Privacy Protection	●	●	●	Customer Privacy (418)	3.2.5 Information Security 3.5 Quality and Customer Service
Environmental	Water Resource Management		●		Water (303)	4.2 Water Resource Management
	Climate Change	●	●	●	Energy (302), Emissions (305)	4.1 Climate Change and Energy Management
Social	Talent Recruitment and Retention	●	●		Employment (401), Diversified and Equal Opportunity (405)	6.1 Talent Recruitment and Retention
	Occupational Health and Safety	●	●		Occupational Health and Safety (403)	6.5 Occupational Safety and Health
	Social Engagement		●	●	Set by VIS	7. Common Good

## 2.3.2 Stakeholder Communication



### Customer 2021

**100%** Customer Satisfaction Survey coverage rate

**95.7%** Overall customer satisfaction at 95.7%, achieving the target of customer satisfaction over 90%

#### Significance to VIS

Customers are our partners, and they are VIS' top priority. VIS continues to uphold the principle of "customers are partners." We regard their competitiveness as our competitiveness, and their success as our success; this position is key to our future growth.

#### Communication Method/Frequency

- Annual Customer Satisfaction Survey/Annually
- Quarterly Business Review/Quarterly
- Customer Visit/Non-Periodic
- VIS-Online Customer Communication System/Non-Periodic

#### Issues of Concern

Economic Performance, Customer Privacy, Quality Management, Innovation and R&D, Legal Compliance

#### Details of Concern

- Domestic and overseas political and economic situations and developments and regulatory changes
- Company technological development agenda and plan
- Company capacity plan and production information
- Smart manufacturing and intelligent management capacity

#### VIS Responses

- In 2021, 100% Customer Satisfaction Survey coverage rate. Overall customer satisfaction at 95.7%, achieving the target of customer satisfaction over 90%
- Introduced tools like RPA, big data intelligence, and AI, to create highly automated decision-making semiconductor production and manufacturing environment, optimizing speed of manufacturing, productivity, and quality.

“

This is an outstanding audit result that shows that Social responsibility is part of your Management System and your daily work. Please keep this high level.

**Dr. Andreas Jantschak,**  
Senior Director EHS & Corporate Social Responsibility,  
Nexperia

“

Thanks to VIS team for helping Leadpower-Semi to develop the new-generation MVSGTMOSFET platform and successfully produce 100V-120V SGT MOSFETs with product performances better than world-class manufacturers, which got approval of customer and entered mass production! Especially, we succeeded in the areas of car power module for 48V DC/DC converter, car LED light module, and GaNPDA adapters.

Special thanks to VIS-TD for outstanding engineering capability, VIS-BD/FTS/CE for great support, VIS-PIE production line for rapid responses, and VIS-Sales for giving us the opportunity despite strained capacity, as well as all partners at VIS that have helped us.

**Jen-Hao Yeh**, Chairman, Leadpower-SEMI



## Employees

2021

**92%** Key talent retention rate of 96%

**408** Received 408 employee feedbacks

### Significance to VIS

Employees are VIS' most important assets. Through various policies and management guidelines, VIS offers open environment of two-way communication to allow talents to continually develop and assume their most suitable roles, further creating a highly efficient, interesting, and challenging working environment.

### Communication Method/Frequency

- Code of Conduct Training/Once a Year
- Quarterly Employee-Employer Meeting/12 Meetings a Year
- President Communication Meeting/At Least Twice a Year
- Supervisors Communication Meeting/At Least Twice a Year
- Employee Feedback Channels/Non-Periodic

### Issues of Concern

Economic Performance, Employee-Employer Relations, Labor Relations, Occupational Safety and Health, Employee Development

### Details of Concern

- Cultivate relations with schools and expand scale of industry-academia collaboration
- Job rotation of employees and recruitment and retention of key talents
- Open and effective employee-employer communication channel
- Compliant, safe, and healthy working environment

### VIS Responses

- Cooperated with National Yang Ming Chiao University (NYCU), for the "AI Wafer Surface Defect Inspection Research Project".
- Cooperated with NYCU, for the "Foundry Short-Term Wafer Start Optimization Project".
- Planned to cooperate with Department of Industrial Engineering, National Yang Ming Chiao Tung University, to establish smart manufacturing and management lab.
- Created challenging and interesting working environment to achieve key talent retention rate of 92%.
- Received 408 employee feedbacks, which have been dealt with adhering to the principle of highest confidentiality.

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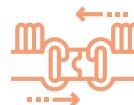
To be part of the VIS HR department has been the opportunity of a lifetime. Working with such dedicated and exceptional people has enriched my life with valuable experiences and connections. Being it my first year with the company. I've been involved in a wide range of work, given the support from management. And the comprehensive education and training program. To help VIS maintain its relevance in its chosen market. I'm glad to be part of VIS!

**Jose-Maria Ocon**, HR Manager

“

I became a founding employee with the nano team, and opted to stay with the company through the wafer foundry transition. People often ask me why did I give up on better jobs? How can I stay with one company for so long? My answer is: my job suits my own strengths and interests, and I enjoy working with my teammates. Executives trust and empower employees, and the company offers comprehensive training, stable compensation and benefits. Every day, it's a new challenge, allowing us to grow with the company. I have chosen the right place to be in the beginning, and I work hard for my company to explore a greater stage!

**Chang Hsien-Tsi**, Design Service Manager



## Suppliers/Partners 2021

**100%** of tier 1 suppliers signed “VIS CSR Policy” and “Supplier Code of Conduct”

**100%** of suppliers signed hazardous substance affidavit and provided hazardous substances risk assessment report

### Significance to VIS

Suppliers are VIS' important operational partners. VIS continues to work with our partners to develop new procedures, enhance quality, formulate EHS regulations, and improve code of conduct, and deepen collaborative ties, realizing sustainability and common good of the supply chain.

### Communication Method/Frequency

- VIS CSR Policy Promotion/Annually
- Supplier Self-Assessment Questionnaire
- Guidance and Audit/Non-Periodic

### Issues of Concern

Risk Control and Management, Legal Compliance, Economic Performance, Innovation and R&D, Quality Management

### Details of Concern

- Monitor related international regulations and trends
- Execute sustainable actions and continued improvement
- Focus on quality of raw materials
- Comply with hazardous substances policy and risk control and management
- Establish effective responsible minerals management mechanism

### VIS Responses

- 100% of tier 1 suppliers signed “VIS CSR Policy” and “Supplier Code of Conduct”.
- 100% of suppliers signed hazardous substance affidavit and provided hazardous substances risk assessment report.
- 100% usage of compliance minerals.

“

Sustainability is at the core of what we do and a driver for growth and value. We implement our corporate purpose – We create chemistry for a sustainable future – by systematically incorporating sustainability into our strategy, business, operations and supply chains. In the future, BASF will keep partnering with Vanguard International Semiconductor Corporations to optimize our contribution to sustainability.

**Kin Wah Chay**, Managing Director of BASF Taiwan

“

Global Wafers Co., Ltd. strives for process optimization, resource recycling and reuse, and waste reduction, joining VIS to build a supply chain of sustainable development.

**Doris Hsu**, Chairwoman, Global Wafers Co., Ltd



## Investors/Shareholders 2021

**200** investors meetings

Achieved positive ROI for investors in **18** consecutive years

### Significance to VIS

VIS also ensures shareholders' best interests while growing business proactively. Through offering investors transparent information of management and governance strategies and financial policy, VIS achieves the target of increasing investors' investment value.

### Communication Method/Frequency

- Annual Meeting of Shareholders/Annually
- Board of Directors' Meeting and Investors Conference/Quarterly
- Business Revenue Announcement/Monthly
- Market Observation Post System/Updated in Real Time
- Company Website/Updated in Real Time

### Issues of Concern

Economic Performance, Legal Compliance, Risk Control and Management

### Details of Concern

- Political and economic situations' influences on company performances
- Market competition and changes
- Financial performances
- VIS' future profitability
- Strategy for stable growth of dividend

### VIS Responses

- Held four investors conferences.
- Held nearly 200 investors meetings to proactively communicate with investors.
- Achieved positive ROI for investors in 18 consecutive years.



Semiconductor is a periodic industry, and through enhancing technical capability and adjusting product portfolio, VIS expands and achieves long-term structural growth, and overcomes volatility of the industry. The brilliant management team also maintains reliable and transparent communication with investors. With rising global awareness of carbon neutrality and sustainable development, the world's demands for high-power semiconductors and sensor components are expected to grow rapidly. VIS can continue to play a greater role in the development of EVs, green energy, and industrial automation.

**Li-Chun Lin, Analyst**, UBS Securities Taipei



## Media

2021

### Significance to VIS

The media are the main channels through which VIS discloses to the public its performances and endeavors. VIS has established spokesperson system and responsible unit for external information disclosure, ensuring consistency and accuracy of information, as well as openness and transparency.

### Communication Method/Frequency

- Press Release/Monthly
- Press Conference/At Least Twice a Year
- Social Gathering with Journalists and Media/At Least Twice a Year
- Compilation of Corporate Sustainability Report/Annually
- Phone and E-mail Responses to Media Inquiry/Non-Periodic
- Market Observation Post System for Clarification of Media Misinformation/Non-Periodic

### Issues of Concern

Social Engagement, Innovation and R&D, Economic Performance

### Details of Concern

- Domestic and overseas political and economic developments
- VIS' recent performances and future outlook
- Concrete achievements and future plan of VIS' corporate sustainability/ESG.
- VIS' major events and awards

### VIS Responses

- Released 16 financial statement related press releases and 4 non-financial statement related press releases.
- Held four investors conferences to explain VIS' recent performances and future outlook.
- Promoted VIS' corporate sustainability/ESG actions.

“

VIS' operations respond to UN SDGs and comply with the company's ESG policy and vision. As the company benefits from the high demand of 8-inch wafers, Chairman Leuh Fang has also paid attention to long-term mutually trusting relations and bilateral communication with shareholders and media, effectively implementing ESG management actions and setting an example of corporate sustainability.

**Marty Tu, Deputy Director,** Technology News Dept., Commercial Times



## Government Agencies/Associations

2021

**42** Participated in 42 meetings and seminars held by related associations

**85** Participated in 85 meetings and seminars held by government agencies

### Significance to VIS

VIS maintains open and effective channels of communication with related government agencies, in order to learn first-hand government policies and regulatory changes; in collaboration with associations it belongs to, VIS makes suggestions for the government to build an industrial environment beneficial to the development of semiconductor.

### Communication Method/Frequency

- Response to Government Demands through Official Correspondence/Immediate Response (Non-Periodic)
- Participation in Face-to-Face Meeting and Seminar Invited by Competent Authority (Non-Periodic)
- Offer experience and suggestions through Allied Association of Science Park Industries (Non-Periodic)
- Provision of Financial Information according to Competent Authority's Regulations (Monthly)

### Issues of Concern

Economic Performance, Legal Compliance, Risk Control and Management, Social Engagement, Corporate Governance

### Details of Concern

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>● Latest COVID-19 regulations introduced by CDC</li> <li>● VIS' compliance with local laws and regulations</li> <li>● Sufficient water and electricity supplies of the semiconductor industry</li> </ul> | <ul style="list-style-type: none"> <li>● Sufficient talent incubation and future manpower of the semiconductor industry</li> <li>● Tax benefits for enterprises and enhancement of investment incentives of the industry</li> </ul> |
|---|---|

### VIS Responses

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>● Participated in 42 meetings and seminars held by related associations.</li> <li>● Participated in 85 meetings and seminars held by government agencies.</li> <li>● Established pandemic prevention committee to comply with the latest COVID-19 regulations and deploy internal pandemic prevention measures</li> <li>● Regularly report related financial information according to regulatory requirements.</li> <li>● Joined TSIA and the Allied Association of Science Park Industries to communicate with EPA, discussing air pollutant emission standards of the semiconductor industry, Climate Change Act, and PFOA investigation.</li> </ul> | <ul style="list-style-type: none"> <li>● Participated in Hsinchu Science and Industrial Park Administration's BS 8001 Circular Economy Guidance Program and achieved the highest Level 4 certification, gradually achieving the goal of zero waste.</li> <li>● Participated in IDB's cleaner production certification (IC manufacturing) and passed system compatibility verification.</li> <li>● Helped Hsinchu Science Park to organize the 2021 HSP Workplace Safety and Environmental Protection Month. Through hiking and cultural guided-tours, VIS helped park employees and family members (approximately 1,500 people) to learn more about the Tongluo Park and Hakka culture.</li> </ul> |
|---|--|



SEMI strives to facilitate overall development of global microelectronics supply chain, and combines the forces of enterprises, governments, and associations, to accelerate Taiwan's development of more complete semiconductor clusters. Thanks to VIS for jointly facilitating discussions on related topics, such as responsible supply chain, smart manufacturing and green manufacturing, through interaction with SEMI Taiwan Committee and member enterprises, proactively participating in activities, including forums regularly organized by SEMI and government initiatives, and enhancing exchange between the industry, academia and government, through sharing of practical experiences, in aim to achieve common prosperity for Taiwan's semiconductor industry.

**Terry Tsao**, Global Chief Marketing Officer & President of Taiwan, SEMI



## Society/Community

2021

Employees volunteered a combined **1,586** hours

### Significance to VIS

The public and neighboring communities are VIS' final targets of communication. To ensure sustainability of the Earth, VIS gathers all types of resources and joins forces with its employees to provide long-term support for disadvantaged groups and proactively invest in community development, setting up incubation of the next-generation talents and giving back to the society through diversified concrete actions.

### Communication Method/Frequency

- Volunteering/At Least Once a Week
- Year-end Charity Donation/Annually
- Invite Social Welfare Organizations to the Company's Family Day/Annually
- Organize Environmental Education Seminar/Non-Periodic
- Communication with Community Residents by Designated Unit/Non-Periodic
- Adoption of Two Parks in the City/Annually

### Issues of Concern

Social Engagement, Legal Compliance

### Details of Concern

- Care for the disadvantaged groups, and promotion of social welfare events and charity projects
- Increase the number of people benefiting from volunteering service and enhance influences
- Dedicate to environmental education and community building, enhance residents' knowledge on environmental sustainability
- Lead the supply chain to jointly participate in activities of corporate sustainability

### VIS Responses

- Through volunteering service and charity donation, VIS continued to launch charity actions targeting five main themes: "care for the disadvantaged," "care for senior citizens living alone," "environmental protection," "support for diverse education," and "sustainability initiatives."
- At least 15 charity groups received funding, benefiting approximately 13,886 disadvantaged people.
- Raised NT\$4,781,358/year for six charity groups.
- Donated 23,220 packs of pandemic supplies to 3,730 senior citizens living alone, homeless people, halfway home children, and social workers and domestic caregivers.
- Organized Wishing Tree to realize dreams for underprivileged children.
- Donated on contactless testing station for the medical professionals and public, worth NT\$5 million.
- Employees volunteered a combined 1,586 hours/year; as many as 1,095 students and local residents participated in environmental education activities.
- Adopted/maintained Hsinchu City's Cherry Blossom Park and Qianjia Park.
- Restored Ke-Tzu-Hu Creek and built water-accessible facilities.
- Generated social value of approximately NT\$34 million.



Thanks to employees at VIS Fab 2 for providing the "Dancing Fireflies" class. All participating teachers and students of Longshan Elementary School were fascinated by the exciting activities. On their way back, the students continued to talk about the activities, from the environmental and ecological visions shared in the presentation, firefly's transformations through its lifecycle, feeding habits, and natural enemies, to indigenous habitats and the significance of restoration; the most precious experience was that our children was inspired by the release of "fireflies" to have a vision of and expectation for "dancing fireflies" in the future. They understand that to achieve this vision, they have to start from environmental actions in daily life, in order to really create such a beautiful scene.

Hsinchu City Longshan Elementary School



Thanks to VIS employees and friendly suppliers for the donation, allowing Boyo Social Welfare Foundation to continually provide stable service of after-school guidance, so that remote area children's education won't be interrupted. Thank you for supporting children from underprivileged families with us, so that all children have the basic skills needed for future development. We will all benefit from this.

Liang-gee Chen, CEO, Boyo Social Welfare Foundation

## Material Issues Management Guidelines

Economic      Product      Environmental      Social



### Significance and Purpose of Management

Through pursuing sound financial performance, VIS ensures that it achieves the goal of corporate sustainability, creating long-term and stable value for the company through revenue growth and increasing profitability.

#### Scope of Impact

VIS, shareholders/investors, employees, customers, suppliers/partners, government agencies/Associations, society/communities

#### Management Method and Assessment Mechanism

- Continue to expand capacity, decentralize production bases and establish diverse product capability.
- Disclose financial information according to international financial reporting standards recognized by FSA
- Regularly hold management review meeting, follow up on business performances, and understand status of operation and supervise progress.
- Convene quarterly Board of Directors' Meeting to ensure that business strategy remains forward-looking and feasible.

#### Responsible Unit

- Management team formed by vice presidents of manufacturing, sales, R&D, administration, and finance, setting business targets and achieve performances based on respective expertise and responsible area.
- Accounting Division reports regularly various financial statistics based on the company's operations to President to follow up on performances, in order to continually create value for the company and enhance shareholders' benefits.

#### 2021 Achievements

- ROE reached 36.5%
- CAGR of net profit over last five years reached 28% (2017-2021)
- CAGR of revenue over last five years reached 15% (2017-2021)
- Among the world's top ten foundry service providers

#### Specific Actions and Performances

- In 2021, VIS expanded Taoyuan fab's capacity by 8,000 wafers/month and Singapore fab's capacity by 4,000 wafers/month, which have generated synergy. In 2021, consolidated revenue grew by 32.7% from the previous year. VIS looks forward to continued profitability and growth, and giving back to shareholders.
- In 2021, VIS acquired AUO's Fab L3B and facilities on Lixing 2nd Road in the park, transaction was completed on January 1, 2022, and the fab has a monthly capacity of 40,000 wafers.



## Legal Compliance

### Scope of Impact

- VIS, shareholders/investors, employees, customers, suppliers/partners, society/communities

### Management Method and Assessment Mechanism

- Regularly make public announcement of information on new/amended laws and regulations
- All units, according to identified relating laws and regulations, conduct regular review in response to changes and formulate compliance report
- Regular tracking of laws and regulations, education and training, and promotion, offering reporting channels, self-inspection, and audit.
- Regularly make public announcement of information on new/amended laws and regulations
- All units, according to identified relating laws and regulations, conducted regular review in response to changes and formulate compliance report
- Complete education and promotion based on nature of business (such as supply chain safety, information security, CSR, anti-harassment, environmental protection, internal control, financial statement compilation and production, document control and destruction, procurement of conflict-free minerals, business ethics, personal information protection, and PIP Policy).
- No major violation (Note)
- No case of unethical conducts.
- Enhance promotion of business code of conduct, and diverse channels for employees to voice opinions
- Provide anti-trust training to employees in sales, customer service, and procurement related units.
- Maintain an open reporting channel of cases of unethical business conducts.

### Responsible Unit

- Legal and corresponding responsible units of related laws and regulations, including: Risk and Environmental Safety Management, Accounting, Audit, Corporate Governance, and Procurement.

### 2021 Achievements

- Regularly make public announcement of information on new/amended laws and regulations
- All units, according to identified relating laws and regulations, conduct regular review in response to changes and formulate compliance report
- Complete education and promotion based on nature of business
- Completed self-check, audit and follow-up improvement
- No major violation (Note)
- No case of unethical conducts
- Provide anti-trust training to employees in sales, customer service, and procurement related units.
- In 2021, VIS organized Corporate Governance Best Practice Principles, CSR, and PIP courses, training a total of 11,508 people in the year, and accumulating 7,230.15 hours of training.

### Specific Actions and Performances

N/A

Note: Any single incident with accumulative fine over NT\$1 million.



#### Scope of Impact

- VIS, employees, shareholders/investors, suppliers/partners, customers

#### Management Method and Assessment Mechanism

Develop long-term cooperation with suppliers to jointly establish and develop stable relationship; encourage suppliers to strive for a business model that is responsible for ESG.

#### Responsible Unit

- Equipment Procurement and Logistics Management Division
- Material Procurement and Supply-Chain Management Division

#### 2021 Achievements

- 100% of suppliers signed "VIS CSR Policy" and "Supplier Code of Conduct."
- 100% suppliers signed hazardous substance affidavit, and provided hazardous substances risk assessment report.
- 100% suppliers performed conflict minerals due diligence and used compliant minerals.

#### Specific Actions and Performances

- **Environment-Low-Carbon Production, Green Manufacturing: Use Low-GWP Value Cleaning Gases**  
IVIS began technical cooperation with gas suppliers, and replaced C<sub>4</sub>F<sub>8</sub> extensively in 2021. C<sub>4</sub>F<sub>8</sub> is a cleaning gas in the manufacturing process with a low GWP value. By changing the gas flow rate, clean time, and clean efficiency, resources utilization efficiency in the manufacturing process is enhanced, successfully reducing GHG emissions in the supply chain. Reduced a total of approximately 15,520 kg CO<sub>2</sub>e.
- **Social-Human Rights Protection, Friendly Workplace: Foreign Employee Human Rights Protection Plan**  
Conducted foreign worker human rights risk assessment targeting brokers. The assessment focuses on related regulations of "Freely Chosen Employment" in RBA Code of Conduct, realizing "No Fee Charged/Paid" and ensuring foreign workers work in a workplace with protected human rights. In 2021, a total of 284 foreign workers benefited from this plan. Related fees have been paid by VIS in full (approximately NT\$511,200).
- **Governance-Responsible Minerals, Sustainable Procurement: Conflict Minerals Due Diligence**  
VIS closely followed latest responsible mining related information released by RMI, and uses CMRT (Conflict Minerals Reporting Template) and CRT (Cobalt Reporting Template) developed by RMI for investigation and reporting. VIS has also carried out due diligence on all mineral forgeries and refineries. 100% of suppliers responded to CMRT or CRT questionnaires, and guaranteed that they did not use conflict minerals.



### Significance and Purpose of Management

VIS establishes corporate governance system following the principles below in addition to compliance with laws and article of incorporation: protect shareholders' interests; enhance Board of Directors' function; fulfil function of Audit Committee; respect stakeholders' interests; increase information transparency.

#### Scope of Impact

VIS, shareholders/investors, government agencies/Associations

#### Management Method and Assessment Mechanism

- VIS has formulated and implemented "Corporate Governance Practice Principles", "Audit Committee Charter", "Organizational Regulations of the Compensation Committee", "Board of Directors Performance Assessment Policy", "CSR Practice Principles", "Ethical Corporate Management Best Practice Principles", "Ethics and Business Conduct", "Guidelines for Reporting and Handling Ethical Conduct Violations", and "Procedures for Handling Material Inside Information".
- Establish the Corporate Governance Department, appoint Chief Corporate Governance Officer and personnel to execute matters relating to corporate governance.

#### Responsible Unit

- Corporate Governance Department

#### 2021 Achievements

- Ranked in top 5% received the highest honor in the Corporate Governance Evaluation of Listed Companies.
- Improvements made in 2021 included setting concrete targets for BOD diversification.
- Established a new functional committee "Strategy Committee"
- Amended Article 3 of Corporate Governance Practice Principles that the appointment, dismissal, performance review, and compensation of internal audit personnel, shall be reported to the Board of Directors meeting or signed by head of internal audit and submitted for Chairman's approval.

#### Specific Actions and Performances

- Maintain top 5% in the Corporate Governance Evaluation of Listed Companies.
- VIS shareholders' meeting will elect an additional independent director; after the election, the number of independent directors will exceed half of the number of Board of Directors; also, over half of the directors are external directors, who will ensure maximized long-term shareholders' interests through supervising the management team independently and impartially, hoping to generate synergy to VIS' diversification of Board of Directors and effectively enhance the independence of directors.



## Scope of Impact

VIS, shareholders/investors, employees, media

## Management Method and Assessment Mechanism

- Operational Level: Promote the Zero Defect policy, confidential information protection policy, information security policy, manufacturing process parameter real-time monitoring system, as well as pandemic prevention measures, and establish basic level reporting and proposal system to ensure minimization of the risk of human error on the operational level, and allow immediate discovery and reporting of abnormalities, preventing escalation of abnormalities.
- First-Line Management Level: VIS has established PDCA (Plan-Do-Check-Act) system of quality control in all regions and areas; VIS has also simultaneously introduced international standards and passed third-party audit and certification, ensuring the effectiveness of the management system.
- Senior Management Level: Comprehensive ERM (enterprise risk management) system, as well as corporate governance and internal audit procedures, ensure effectiveness of corporate governance.
- Board of Directors level: Periodically review results and risk management according to ERM, and corporate governance and internal audit procedures.
- Through comprehensive quality management system, VIS has established its risk management culture of upholding the principle of honesty and the business philosophy of high level of business ethics, and focuses on foundry production and manufacturing, avoiding high-risk and high financial leverage investments, and striving for the enhancement of VIS' overall competitiveness and pursuing sustainability of the company".

## Responsible Unit

- Risk Management Committee

## 2021 Achievements

- Q1: President convened meeting with area executives on 2021/01/11 to complete 2020 company-wide risk items execution review and 2021 risk item and control and management measures formulation.
- Q2: Convenor reported risk management execution results at audit committee meeting and board of directors meeting on 2021/05/03, reporting on the risk environment, risk management key points, risk assessment and responsive measures, and risk control measures and risk management status. The board of directors passed the 18 company-wide risk items identified for 2021.
- Q3: Fab/division executive representatives or executives of divisions directly overseeing the areas reported to area management committee the mid-year risk

management and control progress, including:  
 (1) Execution results of risk management items, risk monitoring, and responsive mechanism.  
 (2) Based on operational changes, adjust risk items or control and management measures.  
 (3) Review results and amendments of risk items and control and management measures.

- Q4: Area Committee Member complete annual area risk review, including:  
 (1) Subordinate units' annual risk management execution results and measures of continued improvement.  
 (2) Risk items and control and management measures that should be continued or added in the following year.

## Specific Actions and Performances

- COVID-19 Prevention BCP  
 (1) VIS Pandemic Prevention Committee established.  
 (2) 2021 Pandemic Prevention Measures:
- Employee health management (body temperature/travel history), promoted wearing masks and washing hands frequently.
- Promoted environment disinfection/cafeteria pandemic prevention measures (social distancing).
- Prepared IT resources for WFH.
- On May 19, 2021, the COVID-10 alert level was raised to 3, and VIS immediately launched office zoning/WFH/fab disinfection/suspension of activities, etc. The control and management measures remained in place until the lifting of Leve-3 alert in aim to lower infection within fabs and risk of impacting production.

- After the lifting of Level-3 alert, VIS continued to hold regular pandemic prevention meeting, and follow CDC's latest announcements to implement related pandemic prevention measures, in aim to maintain effective pandemic control and lower infection risk.
- Water Conservation during Drought BCP  
 Regular water situation follow-up and emergency response meeting, plan and execution of water-saving measures (water source and water truck arrangement and contract signing), exploration of new sources and water saving measures according to response regulations during water stoppage. In 2021, VIS' water conservation/water carrying capacity reached 50% of total water consumption. Established water war room to monitor precipitation and reservoir status to prepare for drought, so that water shortage would not affect fab production. During the water crisis in 2021, the aforementioned measures ensured that VIS production remained unaffected.



## Information Security and Privacy Protection

	<b>Significance and Purpose of Management</b>
Scope of Impact	VIS, customers, employees, suppliers/partners
Management Method and Assessment Mechanism	<ul style="list-style-type: none"> <li>● PIP Committee conducts quarterly performance review and continual improvement</li> <li>● Ensure information security management system's continued compliance with ISO 27001 certification</li> </ul>
Responsible Unit	<ul style="list-style-type: none"> <li>● ITEC</li> <li>● CIM</li> </ul>
2021 Achievements	<ul style="list-style-type: none"> <li>● Completed ISO 27001 ISMS three-year renewal</li> </ul>
Specific Actions and Performances	<ul style="list-style-type: none"> <li>● In 2021, IT &amp; E-Commerce Division established ISMS responsible unit and appointed IS supervisor and personnel to be in charge of related information security management and risk management, ensuring the effectiveness of overall information security protection and management mechanism.</li> <li>● In 2022, BoD approved and set CISO. CISO reports to BoD the information security framework and overall planning and operation of the ISMS.</li> <li>● To learn external information and intelligence, Vis has already participated in the Science Park Information Sharing and Analysis Center (SPISAC) for IS personnel to verify and hand reports, enhancing protection against information security risks, in addition to having vendors provide information.</li> </ul>



### Significance and Purpose of Management

VIS strives to provide excellent services and product quality, becoming the top choice in foundry services of global customers. To ensure customer satisfaction, VIS pays attention to the quality of all products, and proactively target problems and deficiencies to propose effective preventive measures, ensuring the top quality products and best services for customers.

#### Scope of Impact

Employees, suppliers/partners, customers

#### Management Method and Assessment Mechanism

- Through third-party audits and certification, VIS ensures that its quality management system and hazardous substance management system continue to meet the requirements of ISO 9001/IATF 16949 and IECQ QC 080000 standards.
- VIS continues to set and achieve annual improvement targets.

#### Responsible Unit

- Quality and Reliability Division

#### 2021 Achievements

- Pass third-party audits of ISO 9001/IATF 16969 Quality Management System and IECQ QC 080000 Hazardous Substance Process Management System certifications.
- A total of 1,798 improvement proposals by employees and 445 CIT activities were implemented, deriving over NT\$1.149 billion in benefits.

#### Specific Actions and Performances

- Established “Continual Improvement Committee” to formulate short-, mid-, and long-term targets.
- Organized the 18th CIT Forum
- Established CIT Case Management and Experience Sharing Platform.
- Continued to promote high-quality production towards Zero-Defect.



## Climate Change

Economic Product Environmental Social

### Significance and Purpose of Management

To ensure corporate sustainability and fulfil CSR; VIS takes into consideration of risk management, green production, and energy impact, involving all VIS employees in the operation of energy

#### Scope of Impact

VIS, customers, employees

#### Management Method and Assessment Mechanism

- Passed ISO 50001 Energy Management System and ISO14064-1 GHG Inventory third-party audits.
- Continue to formulate, improve, and achieve annual targets.

#### Responsible Unit

- Facility Engineering
- Operation & Environmental Safety

#### 2021 Achievements

- Passed ISO 50001 Energy Management System and ISO 14046-1 GHG Inventory third-party audits and certifications.
- Completed 25 measures of energy conservation, saving 18.49 million kWh and NT\$45.36 million; total investment was approximately NT\$231.67 million.
- Compared to the 2015 level, power consumption per unit area of wafer dropped from 1.01kWh/cm<sup>2</sup> to 0.71 kWh/cm<sup>2</sup>, which was 30% lower.
- GHG emissions per unit area of wafer dropped to 21% lower than the 2015 level.
- Water consumption per unit area of wafer reduced to 17.1% lower than the 2015 level.

#### Specific Actions and Performances

- 2021Y established phase-1 solar PV with a capacity of 270kW, which will begin generation in 2022.
- Procured green power with an installed capacity of 8.167MW.
- Replaced to large energy-saving UPS, enhancing efficiency from 94.4% to 99% and increased PUE by 4.6%.
- Chiller discharge temperature changed from the fixed 6°C to adjustable temperature according to needs, achieving the purpose of energy conservation.
- Process gas changed from C<sub>3</sub>F<sub>8</sub> to C<sub>4</sub>F<sub>8</sub>, enhanced gas utilization rate and reduced PFC emissions; after the replacement of gas, carbon emissions resulted from the process gas in Taiwan area dropped by 23%.



#### Scope of Impact

VIS, customers, employees

#### Management Method and Assessment Mechanism

- Report and monitor water consumption using monthly water balance chart and enhance water recycling rate.
- Commission SGS for water footprint verification once every two years to ensure accuracy of data.

#### Responsible Unit

- Facility Engineering

#### 2021 Achievements

- Water consumption per unit area of wafer reduced more than 17.1% lower than the 2015 level.

#### Specific Actions and Performances

- **Water Conservation during Drought**

During the water crisis in 2021, in addition to searching for new sources and signing contract for water vehicles, VIS also held regular water situation follow-up and emergency response meeting to cooperate with production and water consuming units for the implementation of water-saving measures. As the result, VIS' water conservation/water carrying capacity reached 50% of total water consumption in 2021. During the water crisis in 2021, the aforementioned measures ensured that VIS production remained unaffected. Utilizing the water war room function of the power BI software, VIS monitored precipitation and reservoir status to prepare for drought, so that water shortage would not affect fab production.

- **ISO 46001 Water Efficiency Management Systems**

To achieve good performances in water efficiency and commit to the promise of continuous improvement in water efficiency, VIS plans to systematically improve its water efficiency by introducing of ISO 46001 Water Efficiency Management Systems in 2022.

#### Significance and Purpose of Management

Through water resource risk management and expanded scope of water cycle application, VIS enhance its sustainability of water consumption.



## Scope of Impact

VIS, employees, society/communities, government agencies/Associations

## Management Method and Assessment Mechanism

- Offer benefits and comprehensive leave policies superior to legal requirements,
- Provide employees insurances in compliance with local regulations. In addition to offering all employees labor and national health insurances, VIS also provides group comprehensive insurance policy.
- Regularly conduct "Survey on Corporate Business Philosophy" so that employees recognize with VIS' business philosophy principles and continue to make improvement.
- In the long run, the ideal turnover rate is between 5% to 10%.
- Strive to provide investors above-average ROI, while also offer employees benefits better the industry average.

## Responsible Unit

- HR
- Heads of responsible units

## 2021 Achievements

- Deepen ties with schools and diversify recruitment channels:
  - (1) Conducted six industry-academia collaborations in 2021.
  - (2) The 2021 summer internship program saw participation of 25 students from renowned domestic colleges and universities.

## Specific Actions and Performances

- Continue to host summer internship program, and expectedly expand the program quota and recruit more outstanding students from domestic and overseas to participate in.
- Continue to organize campus job expos and corporate visits.
- Continue to be engaged in industry-academia cooperative projects, and strategically select schools in remote areas to plan long-term collaboration for incubation of entry-level human resource.
- In January 2021, VIS increased the compensation of all domestic and foreign employees by 10%; VIS also carries out regular annual salary adjustment up to 3%.
- Implemented "Employee Care EAP Service," providing employees professional consulting in five major areas of "psychology," "law," "management," "health," and "wealth management," and medical service.
- Launched "New Recruit Care 2.0" program: organized new recruit instructor incubation and diverse care program, helping new employees to quickly get used to the company.
- Filipino colleague Mary Grace Manlangit from VIS Fab1 Manufacturing Division received 2021 National Model Workers recognition



### Significance and Purpose of Management

Gather all types of resources within the company to work with employees for long-term support of the disadvantaged groups and participation in community development, deploying for the next-general talent incubation, giving back to the society through diverse concrete actions, and responding to 2030 UN SDGs.

#### Scope of Impact

VIS, employees, investors/shareholders, society/communities

#### Management Method and Assessment Mechanism

- Through oversight of Corporate Sustainability Committee, VIS formulated development strategy and short-, mid-, and long-term targets, and referenced London Benchmark Group's community investment evaluation mechanism to quantify each project's benefits and effects based on invested time, money, and goods.

#### Responsible Unit

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>Corporate Sustainability Committee</li> <li>PR</li> </ul> | <ul style="list-style-type: none"> <li>Volunteering Program</li> <li>Risk and Environmental Safety Management Department</li> </ul> |
|--|---|

#### 2021 Achievements

- At least 15 charity groups received funding, benefiting approximately 13,886 disadvantaged people.
- Donated 23,220 packs of pandemic supplies to 3,730 senior citizens living alone, homeless people, halfway home children, and social workers and domestic caregivers.
- Helped six charity groups to raise a total fund of NT\$4,781,358.
- Employees volunteered a combined 1,586 hours/year; as many as 1,095 students and local residents participated in environmental education activities.

#### Specific Actions and Performances

- Organized Wishing Tree to realize dreams for underprivileged children.
- Launched "New Year with Elders" fundraising, and invited supply chain to participate in 2021, raising a total of NT\$2,302,999.
- Launched the "Catching the Children Schools Cannot" fundraising and invited supply chain to participate, rising NT\$2,478,359. Also filmed charity videos to help designated social welfare group's promotion.
- Donated pandemic prevention supplies, such as masks, forehead thermometers, and shower towels, to senior citizens living alone, homeless people, children of halfway houses, and social workers and domestic caregivers working on the first line. Donated a total of 23,220 masks/year.
- Donated a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch.
- Donated NT\$1 million to "Junyi Academy" in to fund the teacher incubation project for 10 schools in remote areas of Miaoli, offering students quality online learning resources so they won't be affected by rural-urban gap or the pandemic.
- Sponsored National Tsing Hua University's Sunrise Program, inviting female executives to serve as one-on-one mentors.
- Employees assumed the role of environmental volunteers, and carried out environmental education promotion targeting remote tribal villages, neighbor communities and schools, and the public through promotion, seminars, and activities, accumulating 1,586 hours/year of volunteering, and attracting 1,095 participants.
- Clean and maintain water sources of fabs and surrounding areas to restore ecosystem; launched four-year firefly restoration program to enhance biodiversity of adopted water source areas (Hsinchu Science Park Bureau's flood detention pond and Ke-Tzu-Hu Creek).
- Adopted surrounding public properties for greenification and pest and disease prevention, creating a total of 4.9 hectares of green public spaces (Cherry Blossom Park, Qianjia Park).
- Sponsored radio program "Focus on Taiwan" since 2015, where the host invited experts in different areas to talk about UN SDGs related topics, and guided the audience to monitor global trends and care for the prospects and development of local industries.



## Occupational Safety and Health

### Significance and Purpose of Management

Safeguard occupational safety and health of all employees and contractors, continue to improve working environment, in order to achieve the goals of zero occupational incident and zero injury.

#### Scope of Impact

VIS, employees, suppliers/partners

#### Management Method and Assessment Mechanism

- Each fab reports the implementation result of ESH plans during the monthly ESH Committee meeting. Every quarter, each fab's implementation results of ESH plans are compiled and reported at the company-wide ESH Committee meeting, where President will give feedbacks.

#### Responsible Unit

- Risk and Environmental Safety Management

#### 2021 Achievements

- No major occupational injury or disease.

#### Specific Actions and Performances

- Passed ISO 45001 certification.
- Half facepiece or full facepiece respiratory protective equipment project.
- Fab5 applied for Class-A dangerous workplace review, and is projected to pass the review at the end of May.

### 2.3.3 Foreign and Domestic Associations

VIS has actively and selectively participated in domestic and foreign organizations and associations, or joined their boards as director over the past few years, to contribute to the industry and society. Also, through exchanging and sharing information with member companies of the organizations, VIS strives to make improvements and create win-win situation through “cooperation through competition” with other companies within the industry, jointly achieving common goods for the society, and carrying on the value of sustainability insisted by VIS.

#### VIS Public Affairs Participation and Expenditures

	Unit: NT\$ thousand			
	2018	2019	2020	2021
Lobbying of Interest Groups	–	–	–	–
Contribution to local, regional, or national political activities, organizations, or candidates	–	–	–	–
Expenses for participation in NPOs, such as business associations or think tanks	2,546	4,338	4,107	5,286
Expenses relating to election or referendum	–	–	–	–
Total contribution/expenses of public affairs participation	2,546	4,338	4,107	5,286
Scope of Data	100%	100%	100%	100%

In 2021, VIS participated in 22 domestic and overseas organizations and associations; including initiatives of public policy issues, VIS invested a total of NT\$5,286,035 to focus on issues like industrial development, technological innovation, talent incubation, corporate governance, environmental

sustainability, human rights, and supply chain management (Note); together with our peers in the industry, VIS has promoted public affairs relating to the semiconductor industry in both Taiwan and Singapore, where VIS fabs are located, and participated in the formulation of public policies that benefit industrial and social developments.

VIS has sponsored NT\$5 million to participate in the establishment of “College of Semiconductor Research” at National Tsing Hua University, in aim to incubate semiconductor talents for Taiwan. Moreover, VIS has invested approximately NT\$1,581,000 with a specific focus on the promotion of public policies that benefit industrial and social developments through organizations and associations where VIS serves as director and has significant influences. The organizations and associations are listed below:

#### Taiwan Semiconductor Industry Association (TSIA)

Vanguard International Semiconductor Corporation (VIS) is a founding member of the Taiwan Semiconductor Industry Association (TSIA), and has participated in the association since 1996, jointly promoting a number of industrial policies with other members in the industry. VIS has also served on the Board of Directors and Supervisors since 1996, and is now in the 13th term. In 2021, AIT Director Brent Christensen visited Chair Leuh Fang to exchange opinions on international industrial development.

Note: VIS maintains political neutrality, and does not make political donations in the name of the company; VIS only invests resources to support public affairs or promote public policies that benefit industrial and social developments.

In 2021, the public policies promoted by VIS through its participation in TSIA included:

- Promoted Environmental Protection Administration's (EPA) draft amendment of "Greenhouse Gas Reduction and Management Act"
- Discussed with EPA on "Groundwater Pollution Monitoring Standards" and "Groundwater Pollution Control Standards"
- Promoted EPA's draft amendment of Article 9-1, 14, and Attachment 10-3 of the "Regulations Governing Collection of Soil and Groundwater Pollution Remediation Fees"
- Participated in EPA's "Air Pollutants Control and Emissions Standards of the Semiconductor Industry" amendment meeting

Amount Invested: NT\$922,500; Influence: Board of Directors

### **The Allied Association of Science Park Industries**

VIS has participated in the Allied Association of Science Park Industries since 1996, and has served on the Board of Directors and Supervisors since the fifth term, as well as chair and deputy chair of the functional committees under the association, pushing for the formulation of standards for the industries in the science park and promoting exchange of experience among member enterprises. In 2021, VIS not only served on the association's Board of Directors, but also as deputy chair of the Finance and Accounting Committee, Water and Electricity Supplies Committee-Water Resources, Import/Export Bonding Service Committee, and Public Affairs Committee.

In 2021, the public policies promoted by VIS through its participation in the association included:

- Established the "Electricity Demand-Supply Interactive Platform" and "Water Demand-Supply Interactive Platform" with Taipower and Water Resources Agency to provide companies in the science park stable electricity and develop new water resources and diverse water supply system
- Lobbied for Ministry of Science and Technology (MOST) to allocate budget for the "Science Park Electricity Improvement, Enterprise R&D Innovation Engineering Improvement, and Interdisciplinary Collaboration" project
- To avoid the cluster infection risk of public listed companies holding physical shareholders' meetings, VIS wrote a letter to ask FSC to urge TDCC to launch the online shareholders' meeting platform in mid-July.
- Suggested MOST to fight for the inclusion of pandemic prevention expenditures as business tax deductibles
- Suggested MOST to fight for immediate entry of foreign equipment suppliers' engineering personnel during the pandemic.

Amount Invested: NT\$234,000; Influence: Board of Directors

### **Taiwan M&A and Private Equity Council**

In 2019, VIS joined Taiwan M&A and Private Equity Council and served on its Board of Directors, helping to build a sound investment environment in Taiwan for M&A and private equity, and acting as the channel of communication that bridges Taiwan's private and public sectors. The council makes suggestions to competent authorities every year, and carries out extensive exchange and cooperation with related international organizations.

In 2021, the public policies promoted by VIS through its participation in the council included:

- Promoted National Development Council's "Guidelines for Guidance in Facilitation of Private Equity Fund Investment in Industry"

Amount Invested: NT\$120,000; Influence: Board of Supervisors

### SEMI Taiwan

After participating in SEMI Taiwan's activities for many years, VIS finally became an official member in 2020. In addition to participating in technical forums at the annual SEMICON, VIS also joins other members in advocating industrial policies and making the industry's voice heard by the government. SEMI regularly holds "A Date of Official" Luncheon, setting specific topics and inviting government officials to communicate with senior executives in the industry.

In 2021, the invited officials and respective topics are:

Target of Communication	Topic of Discussion
MOEA, MOL, MOFA,	Assistance with foreign worker entry and work permit extension
MOEA, BOE, Taipower	Corporate energy storage facilities and emergency contingency electricity integration plan
Executive Yuan, MOST, MOE	Promotion of semiconductor talent incubation and establishment of semiconductor institute
Vice Minister Chen Chern-Chyi of Economic Affairs	Restructuring of global supply chain and Taiwan's opportunities
AIT Director Brent Christensen	U.S.-Taiwan economic cooperation

Amount Invested: NT\$304,500; Influence: SEMI Taiwan Power & Compound Semiconductor Committee, Corporate Sustainability Committee

### Domestic and International Associations

Type	Organization	Role
Industrial	Taiwan Semiconductor Industry Association	Director
	The Allied Association for Science Park Industries	Director
	Taiwan M&A and Private Equity Council	Supervisor
	Singapore Business Federation	member
	Singapore Semiconductor Industry Association	Participant
	SEMI SG	Participant
	SEMI Taiwan	Member
	Taiwan IC Industry & Academia Research Alliance	Member
	Chinese Society for Management of Technology	Member
	Taiwan Electrical and Electronic Manufacturers' Association	Member
Social	Chinese National Association of Industry and Commerce, Taiwan	Member
	Electronic Industry Citizenship Coalition	Member
	Responsible Business Alliance	Member
	Pan Wen Yuan Foundation	Director
Social	Friends of the Second Special Police Corps	Standing Committee Member
	WBCSD Global Network Partner	Member

Type	Organization	Role
Professional	The Institute of Internal Auditors-Chinese Taiwan	Member
	Taiwan Union of Nurses Association	Member
	Hsinchu Human Resource Management Association	Member
	Chinese Professional Management Association of Hsinchu	Member
	Chinese Human Resource Management Association	Member
	Taiwan Association of Occupational Health Nurses	Member

## 2.4 Actions for UN SDGs

VIS' corporate sustainability actions will continue to respond to the 17 sustainable development goals set by the United Nations (UN SDGs), which is stipulated in the updated Corporate Sustainability Policy. In 2021, VIS' corporate sustainability actions complied with 16 UN SDGs.

SDGs	Responses in 2021
No Poverty 	<ul style="list-style-type: none"> <li>Donated NT\$100,000/year to each of the 12 social welfare groups that shared long-term partnership with the company.</li> <li>"Christmas Market" activity, inviting six charity groups, including Sunshine Taiwan and Ji-Xian to set up booths in VIS fabs. The event was participated by 22,884 people, and raised NT\$357,079.</li> <li>Chinese New Year Market invited social welfare organizations to sell handmade merchandise in VIS fabs for employees to help charity groups by purchasing Chinese New Year goods.</li> <li>VIS launched corporate memorial merchandise sets for employees to purchase, raising a total of NT\$256,595. The fund was donated to Children Are Us Foundation for the "Companion with Love and Peace of Mind – Family Care for Mentally Challenged Children" project.</li> </ul>

SDGs	Responses in 2021
Zero Hunger 	<ul style="list-style-type: none"> <li>Launched "New Year with Elders" fundraising, and invited supply chain to participate in 2021, raising a total of NT\$2,302,999.</li> <li>VIS' catering supplier was invited to jointly donate lunch boxes to deliver to senior citizens living alone in the two villages, Baoshan and Kehu, around Feb 1 and Feb 2, once a month, and VIS volunteers would visit the senior citizens and dine with them.</li> </ul>
Good Health and Well-being 	<ul style="list-style-type: none"> <li>Donated pandemic prevention supplies, such as masks, forehead thermometers, and shower towels, to senior citizens living alone, homeless people, children of halfway houses, and social workers and domestic caregivers working on the first line. Donated a total of 23,220 masks/year.</li> <li>Donated a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch, which ensured efficiency, safety and comfort of testing. NT\$5 million/station.</li> <li>With the management goals of "Zero Accident and Occupational Disease," VIS constructed safe and healthy working environment.</li> <li>Health examination more frequent than regulatory requirement; examination rate greater than 95% in 2021.</li> </ul>
Quality Education 	<ul style="list-style-type: none"> <li>Launched the "Catching the Children Schools Cannot" fundraising and invited supply chain to participate, rising NT\$2,478,359. Also filmed charity videos to help designated social welfare group's promotion.</li> <li>Donated NT\$1 million to "Junyi Academy" in to fund the teacher incubation project for 10 schools in remote areas of Miaoli, offering students quality online learning resources so they won't be affected by rural-urban gap or the pandemic.</li> <li>Sponsored National Tsing Hua University's Sunrise Program, offering three financially challenged female students a NT\$100,000/year scholarship and inviting female executives to serve as mentors.</li> <li>To close the gap between academia and industry, VIS regularly holds summer internship program. VIS sent employees to Taitung, which suffers insufficient resources, to open special courses on semiconductor and offer internship opportunities and NT\$200,000 special scholarship to National Taitung College.</li> </ul>
Gender Equality 	<ul style="list-style-type: none"> <li>To encourage women to work in the high-tech industry, VIS arranged for female executives to mentor underprivileged female university students, offering them one-on-one assistance in the areas of academics, life, and career development.</li> <li>Balanced gender distribution of employees in fabs in Taiwan: male 50.6% and female 49.4%; number of female executives increased by 1% compared to the year before.</li> <li>The overall compensation will not differ due to gender, and ratio of compensations of basic level employees was nearly 1:1 in 2021.</li> <li>Offered both male and female employees parental leaves in compliance with "Act of Gender Equality in Employment," and "Regulations for Implementing Unpaid Parental Leave for Raising Children."</li> </ul>

SDGs	Responses in 2021	SDGs	Responses in 2021
Clean Water and Sanitation 	<ul style="list-style-type: none"> <li>Water consumption per unit area of wafer reduced from 6.70L in 2015 to 5.55L in 2021, enhancing water saving performance by 17.1%.</li> <li>Waste water per unit area of wafer dropped from 5.08L in 2015 to 3.88L in 2021, enhancing waste water reduction performance by 23.6%.</li> <li>From 2015 to 2021, VIS has accumulated nearly 60 million tons of recycled process water.</li> <li>Clean and maintain water sources of fabs and surrounding areas (Hsinchu Science Park Bureau's flood detention pond and Ke-Tzu-Hu Creek).</li> </ul>	Sustainable Cities and Communities 	<ul style="list-style-type: none"> <li>Adopted surrounding public properties for greenification and pest and disease prevention, creating a total of 4.9 hectares of green public spaces (Cherry Blossom Park, Qianjia Park).</li> </ul>
Affordable and Clean Energy 	<ul style="list-style-type: none"> <li>Install solar PV systems from 2021 to 2022 to reach a capacity of 270kW. Projected renewable energy capacity of 500kW by 2025, generating approximately 550,000 kWh/year.</li> <li>In 2021, VIS complied with the government's energy-saving policy and invested NT\$231.67 million to switch to energy-saving equipment.</li> <li>In 2021, VIS' energy-saving measures saved 18.49 million kWh of electricity, which is a 2.1% energy-saving rate based on the consumption of 2020.</li> <li>Power consumption per unit area of wafer dropped from 1.01kWh/cm<sup>2</sup> in 2015 to 0.71kWh/cm<sup>2</sup> in 2021, which was 30% lower.</li> </ul>	Responsible Consumption and Production 	<ul style="list-style-type: none"> <li>Established "Corporate Sustainability Committee" that formulates various sustainability targets and development guidelines following the "VIS CSR Policy" and regularly convenes quarterly Corporate Sustainability Committee meeting to review and supervise progresses of tasks, reporting to the Board of Directors meeting every six months and publishing CSR report annually to release sustainability related information for stakeholders to read.</li> <li>Established "Energy Conservation and Carbon Reduction Committee" in 2021, which is chaired by regional head of operations and ESH. The scope of communication includes: "carbon asset management," "energy conservation and carbon reduction," and "supply chain management;" fab directors and executives serve as convenors of different topics.</li> <li>Signed the TSIA Convention for Waste Disposal and Reuse by High-Tech Industries and participated in TSIA's auditing activities to reduce the risks of legal violations by waste disposal vendors.</li> <li>VIS products are 100% compliant with related laws and regulations and customers' regulations on hazardous substances, conflict-free minerals, and human rights convention.</li> <li>Passed ISO 50001 Energy Management System and ISO 14064-1 GHG Inventory third-party audits.</li> <li>Completed 25 measures of energy conservation, saving 18.49 million kWh and NT\$45.36 million; total investment was approximately NT\$231.67 million.</li> <li>Saved 18.49 million kWh of power in 2021, a 2.1% energy-saving rate based on the amount in 2020.</li> <li>Power consumption per unit area of wafer dropped from 1.01kWh/cm<sup>2</sup> in 2015 to 0.71 kWh/cm<sup>2</sup> in 2021, which was 30% lower.</li> <li>VOCs emissions per unit area of wafer in 2021 was 7% lower compared to the 2015 level.</li> <li>GHG emissions per unit area of wafer in 2021 dropped to 21% lower than the 2015 level.</li> <li>Water consumption per unit area of wafer in 2021 reduced to 17.1% lower than the 2015 level.</li> <li>Issued NT\$700 million green bond for the first time.</li> </ul>
Decent Work and Economic Growth 	<ul style="list-style-type: none"> <li>ROE reached 36.5%</li> <li>CAGR of net profit over last five years reached 28% (2017-2021)</li> <li>CAGR of revenue over last five years reached 15% (2017-2021)</li> <li>The overall compensation will not differ due to gender, and ratio of compensations of basic level employees was nearly 1:1 in 2021.</li> <li>Cooperated with social welfare organizations to employ persons with disabilities, and worked with the organizations' employment centers for job consulting and design. In 2021, VIS employed a total of 56 persons with disabilities, higher than the 4% stipulated by the government.</li> </ul>	Industrial Innovation and Infrastructure 	<ul style="list-style-type: none"> <li>Allocate 6% of revenue for R&amp;D and technological development.</li> <li>Continued to accelerate development projects relating to sensing devices, fingerprint sensor ICs, and high-power management ICs as well as embedded memory platforms, to satisfy market demand for automobile electronics and Internet of Things applications.</li> <li>Entered long-term academia-industry cooperation with National Tsing Hua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University, and sponsors a total of NT\$9.1 million to the Taiwan Semiconductor Industry Association (TSIA) Award and foundation.</li> <li>Set 2025 power consumption per unit area of wafer at 40% lower than the 2015 level; by 2021, power consumption was at 30% lower than the 2015 level.</li> </ul>
Reduced Inequalities 	<ul style="list-style-type: none"> <li>Cooperated with social welfare organizations to employ persons with disabilities, and worked with the organizations' employment centers for job consulting and design. In 2021, VIS employed a total of 56 persons with disabilities, higher than the 4% stipulated by the government.</li> <li>Implemented "VIS Human Rights Policy" and "RBA Code of Conduct".</li> <li>No human trafficking case in 2021</li> </ul>		

SDGs	Responses in 2021	SDGs	Responses in 2021
Climate Action 	<ul style="list-style-type: none"> <li>Established "Risk Management Committee" to include potential risks and financial impacts caused by climate change into control and management, and be responsible for the identification of climate change risks and execution of climate change control plans.</li> <li>Introduced TCFD framework to identify climate risks and opportunities.</li> <li>Formulated short-, mid-, to long-term sustainable targets for GHG emissions, procurement of renewable energy, reduction of power consumption. GHG emissions per unit area of wafer in 2021 dropped to 21% lower than the 2015 level.</li> <li>Passed ISO 50001 Energy Management System and ISO 14064-1 GHG Inventory third-party audits.</li> <li>Completed 25 measures of energy conservation, saving 18.49 million kWh and NT\$45.36 million; total investment was approximately NT\$231.67 million.</li> <li>Saved 18.49 million kWh of power in 2021, a 2.1% energy-saving rate based on the amount in 2020.</li> <li>Power consumption per unit area of wafer dropped from 1.01kWh/cm<sup>2</sup> in 2015 to 0.71kWh/cm<sup>2</sup> in 2021, which was 30% lower.</li> <li>Continue to increase output of power-management products, which is beneficial to the overall energy saving and carbon reduction of all green end products.</li> <li>Employees assumed the role of environmental volunteers, and carried out environmental education promotion targeting remote tribal villages, neighbor communities and schools, and the public through promotion, seminars, and activities, accumulating 1,586 hours/year of volunteering in 2021.</li> </ul>	Partnerships for the Goals 	<ul style="list-style-type: none"> <li>VIS demands all suppliers to comply with the "RBA Code of Conduct" for the formulation and implementation of related human rights policy and ask all supply chain partners to follow the same standards.</li> <li>100% of first-tier suppliers signed VIS CSR Policy.</li> <li>100% of suppliers signed hazardous substance affidavit and provided hazardous substances risk assessment report.</li> <li>Conducted due diligence on all suppliers, achieving 100% usage of compliance minerals.</li> <li>Signed the TSIA Convention for Waste Disposal and Reuse by High-Tech Industries. In 2021, a total of 30 waste disposal and reuse vendors participated in audit proactively.</li> <li>Launched "New Year with Elders" fundraising, and invited supply chain to participate in 2021, raising a total of NT\$2,302,999.</li> <li>Launched the "Catching the Children Schools Cannot" fundraising and invited supply chain to participate, rising NT\$2,478,359.</li> </ul>
Life on Land 	<ul style="list-style-type: none"> <li>Clean and maintain water sources of fabs and surrounding areas to restore ecosystem; launched four-year firefly restoration program to enhance biodiversity of adopted water source areas (Hsinchu Science Park Bureau's flood detention pond and Ke-Tzu-Hu Creek).</li> <li>Invited students of ErChong Elementary School and Shuangxi Elementary School near Hsinchu Science Park to release fireflies into the wild. The students were also introduced to "beetles."</li> <li>Employees volunteered a combined 1,586 hours/year; as many as 1,095 students and local residents participated in environmental education activities in 2021.</li> </ul>		
Peace, Justice, and Strong Institution 	<ul style="list-style-type: none"> <li>Complying with international human rights conventions and policies, VIS conducted human rights risk assessment and formulated mitigation measures for human rights topics; the results of the assessment showed that VIS was not exposed to high-level human rights risks.</li> <li>No child labors, and asked all suppliers to not hire child labors.</li> <li>No conflict minerals, and asked all suppliers to not use conflict minerals.</li> <li>Completed all investigations on maternity protection and sexual harassment cases.</li> <li>To show respect for "diverse family," VIS also offers employees in same-sex marital relationships the right to apply for unpaid parental leave when they adopt the children of their spouses.</li> </ul>		

# 3

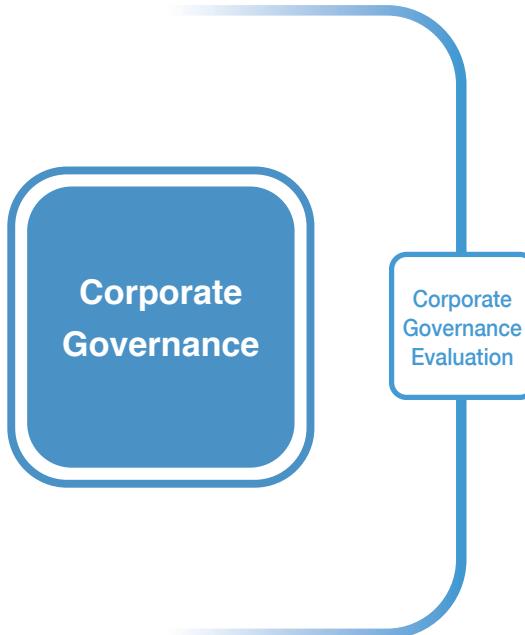
## Governance and Innovation

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.

Allocate  
**6%**  
of Revenue for R&D

Overall Customer Satisfaction  
**95.7%**





## 3.1 Corporate Governance

### Sustainability Goals

#### Short-Term (Quantified) (2023)

- Rank in the top 5% and received the highest honor in the Corporate Governance Evaluation of Listed Companies

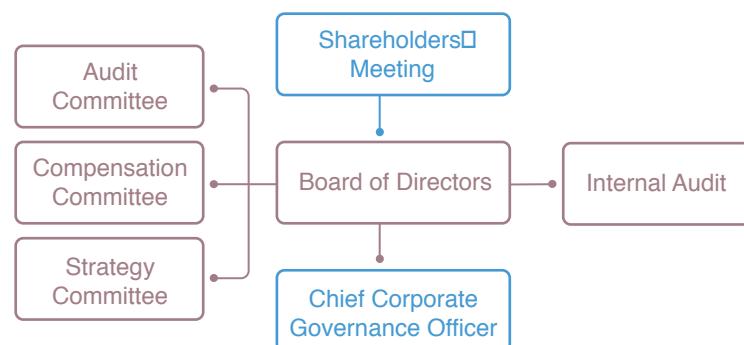
#### Mid-Term (Quantified) (2025)

- Rank in the top 5% and received the highest honor in the Corporate Governance Evaluation of Listed Companies

#### Long-Term (Quantified) (2025~)

- Rank in the top 5% and received the highest honor in the Corporate Governance Evaluation of Listed Companies

### 3.1.1 Corporate Governance Structure



The Board of Directors is the company's highest level of governing body, instructing company strategy and supervising the management. To better implement corporate governance and strengthen management of the Board of Directors, Audit Committee, Compensation Committee, and Strategy Committee have been established under the Board of Directors to help the board perform its duty of oversight. On April 29, 2019, the Board passed the appointment of Chief Corporate Governance Officer. Decisions related to economic, environmental, and social issues shall be made by "Corporate Sustainability Committee," which reports to the Board of Directors every six months; also, the Board reviews, supervises, and instructs the development direction of various ESG targets, and gives feedback, including (1) supervising various topic risks and opportunities assessed and managed by Corporate Sustainability Committee; (2) approving formulation of policies and targets relating to sustainability topics.

VIS has garnered much recognition for its efforts in corporate governance, and has ranked in the top 5% and received the highest honor in the Corporate Governance Evaluation of Listed Companies conducted by Taiwan Stock Exchange Corporation and Taipei Exchange in eight consecutive years.

### **3.1.2 Composition of the Highest Level Governing Body**

VIS insists on operational transparency and cares about shareholders' equity. We also believe that a sound and efficient Board of Directors is an underlying requirement for optimal corporate governance.

#### **Organization of the Board of Directors**

For the election of the Directors and Independent Directors, the company adopted the nomination system, and has formulated the "Rules Governing the Election of Directors" (refer to VIS website: [https://www.vis.com.tw/tc/cg\\_major](https://www.vis.com.tw/tc/cg_major)). Shareholders with over 1% of total issued stocks and Board of Directors are responsible for nomination, and the Board will then consider the candidates' professional knowledge and experience, as well as the diversity and independence requirements of the organization of the Board of Directors, and evaluate the diversity of Directors and independence of Independent Directors, to review and propose a list of qualified candidates. Shareholders will vote in Shareholders' Meeting, and elected Directors serve a three-year term. VIS elected the seven Directors (including 3 independent) of the 10th term of Board of Directors in the 2021 Shareholders' Meeting, and added another Independent Director in 2022 Shareholders' Meeting; thus, the current Board of Directors is composed of eight outstanding individuals with extensive experience in industrial and academic fields, among which,

four are independent, they are as follows: Kenneth Kin, former Senior Vice President of Taiwan Semiconductor Manufacturing Company; Benson W.C. Liu, Chairman of Taiwan Corporate Governance Association; Chintay Shih, former Chairman of Institute for Information Industrial; and Mr. Liang-gee Chen, former Minister of Ministry of Science and Technology. Among the other four Directors, three are representatives of juristic persons, they are: TSMC Representative Leuh Fang (Chairman of VIS), TSMC Representative F.C. Tseng (Vice Chairman of VIS), Representative of the National Development Fund, Executive Yuan, Lai-shou Su, and one is the natural person director, former CEO of Deloitte Taiwan Edward Y. Way.

#### **Operations of Board of Directors**

The Board of Directors is the company's highest level of governing body and the primary business decision-maker. The duties of the Board of Directors include the appointment and directing of corporate executives; supervising business performance; resolving on important matters preventing conflict of interest; ensuring the company's compliance with laws, Articles of Incorporation, the resolutions adopted in shareholders' meetings.

The Board of Directors Meeting is held at least once per quarter, and five times a year, to listen to reports by the management team and evaluate development strategies and other proposals submitted by the management teams. VIS held a total of 9 board meetings in 2021, and all Independent Directors attended in person.

## 2021 and 2022 Board Election, Addition, and Term

Name	Date of First Appointment	This Term	Continued Tenure (Year)
TSMC Representative: Leuh Fang	2015.06.08	2021.08.13-2024.08.12	7
TSMC Representative: F.C. Tseng	2013.01.23	2021.08.13-2024.08.12	9
The National Development Fund, Executive Yuan Representative: Lai-Shou Su	2017.07.01	2021.08.13-2024.08.12	5
Edward Y. Way	2010.05.26	2021.08.13-2024.08.12	12
Chintay Shih (Note 1)	2012.06.12	2021.08.13-2024.08.12	10
Benson W.C. Liu (Note 1)	2012.06.12	2021.08.13-2024.08.12	10
Kenneth Kin (Note 1)	2012.06.12	2021.08.13-2024.08.12	10
Liang-Gee Chen	2022.06.14	2022.06.14-2024.08.12	-
Average Terms	7.9 Years		

Note 1: Reasons for Independent Director to serve over three terms:

1. Dr. Chintay Shih has rich experience and expertise in the semiconductor industry, and has visionary insights regarding the industry's development. VIS needs to rely on his expertise to enhance the quality and comprehensiveness of the Board's decisions.
2. Mr. Benson W.C. Liu specializes in management, finance, and corporate governance, and VIS needs his professional knowledge and independent judgement to help enhance the Board's function of oversight and deepen corporate governance.
3. Dr. Kenneth Kin has extensive experience in semiconductor marketing, global operations, and brand management, and VIS relies on his insight and experience to guide the future direction of the company's development, and offer strategic instructions to the company's product development.

Note 2: During the 2021 shareholders meeting, President Leuh Fang was elected as a new Board of Director and was also elected as the Chairman. All the members of the Board of Directors are male over the age of 50. Please refer to VIS' Annual Report or website for details on education and work experience of VIS directors and their positions at other companies.

## 2021 Board of Directors' Operations

VIS held 9 Board of Directors' Meetings, and the attendances of directors are tabulated below:

Title	Name	Attended in Person	Attended by a Representative	Attendance Rate (%)
Chairman	TSMC Representative: Leuh Fang	9	0	100%
Vice Chairman	TSMC Representative: F.C. Tseng	7	2	78%
Director	Representative of the National Development Fund, Executive Yuan: Lai-Shou Su	9	0	100%
Director	Edward Y. Way	9	0	100%
Independent Director	Benson W.C. Liu	9	0	100%
Independent Director	Chintay Shih	9	0	100%
Independent Director	Kenneth Kin	9	0	100%
Average Attendance Rate				97%

## Board of Directors Diversity, Professionalism, and Independence

Corporate Governance Practice Principles of VIS prescribes that the Board must comprise of diverse members. According to the diversity policy, Board members who also serve as managerial officers of the company should not exceed more than one third of the board members and they should have different professional backgrounds and work experience. They should possess

the knowledge, skills, and experience necessary for performing their duties. Moreover, to bridge with international ESG sustainable development, VIS expanded the definition of Board diversity in 2021 to include diversity of nationality and race, hoping to inch closer to the development trends in the international capital market. In 2022, it is newly added that the proportion of female directors is advised to be at least one third of the seats of the Board of Directors, and that of independent directors is advised not be less than one third of the seats of the Board of Directors to strengthen diversity and independence of the Board members of the Company.

Also, VIS elected the 10th term of Board of Directors at the 2021 Shareholders' Meeting and an additional Independent Director at the 2022 Shareholders' Meeting to achieve the target and meet the requirement of Board diversity. Among Board members, Chairman Leuh Fang, Vice Chairman F.C. Tseng, Independent Director Kenneth Kin, Independent Director Chintay Shih, and Independent Director Liang-gee Chen all have related experience of information technology, whereas Independent Director Benson W.C. Liu, Director Edward Y. Way, and Director Lai-shou Su have related experience in the areas of financials, corporate governance, and social welfare.

Position	Director Name	Nationality	Gender	Age	GICS Global Industry Classification Standards
Chairman	TSMC Representative: Leuh Fang	R.O.C.	M	61-70	Information Technology
Vice Chairman	TSMC Representative: F.C. Tseng	R.O.C.	M	71-80	Information Technology
Director	Representative of the National Development Fund, Executive Yuan: Lai-Shou Su	R.O.C.	M	61-70	Financials
Director	Edward Y. Way	R.O.C.	M	71-80	Financials
Independent Director	Benson W.C. Liu	R.O.C.	M	71-80	Financials
Independent Director	Kenneth Kin	R.O.C.	M	71-80	Information Technology
Independent Director	Chintay Shih	R.O.C.	M	71-80	Information Technology
Independent Director	Liang-Gee Chen	R.O.C.	M	61-70	Information Technology

To achieve the ideal goals of corporate governance, the Board of Directors shall be equipped with abilities of leadership, decision-making, management, international market perspective, industry knowledge, financial management and analysis, operational judgement, risk management/treatment, and sustainable governance.

Name \ Items of Diversity	Leadership	Decision-Making	Management	International Market Perspective	Industry Knowledge	Financial Management and Analysis	Operational Judgement	Risk Management/Treatment	Sustainable Governance
Name									
Leuh Fang	V	V	V	V	V	V	V	V	V
F.C. Tseng	V	V	V	V	V		V	V	V
Lai-Shou Su	V	V	V	V		V		V	V
Edward Y. Way	V	V	V	V		V	V	V	V
Benson W.C. Liu	V	V	V	V		V	V	V	V
Kenneth Kin	V	V	V	V	V		V	V	V
Chintay Shih	V	V	V	V	V		V	V	V
Liang-Gee Chen	V	V	V	V	V			V	V

At the same time, VIS has also set concrete management targets in the current phase. To achieve the concrete management targets, VIS invited professional ESG lecturer to share with the seven Board members international development trend of ESG and practical cases of corporate development on December 10, 2021. VIS will continue to examine the requirements of diversity, strengthen its Board diversity, and set appropriate targets.

### Concrete Management Targets of Diversification

1. VIS pays attention to gender equality on the Board, and the target number of female Directors is one or over 10%.
2. Gradually add Board members with professional expertise in the areas of corporate governance, environmental sustainability, corporate social responsibility, and law, to better supervise and instruct the company's responses to international development trends of ESG.

In terms of professionalism, the current eight Board members include four Independent Directors (50% of the Board), and their professional qualifications and experience cover areas like semiconductor knowledge and technology, business management, marketing, financials and accounting, and corporate governance, and they are equipped with the necessary knowledge, skills, and experience to perform their duties.

In the aspect of independence, VIS Board members are in no violation of paragraphs 3 and 4 of Article 26-3, Securities and Exchange Act—that is, none of the Board members are in a spousal relationship or a familiar relationship within the second degree of kinship. The current Chairman, Mr. Leuh Fang, joined the management team and served as the President in 2009, while also holding important managerial positions in VIS subsidiaries; in 2015, Chairman Fang was elected by shareholders as a Board member and

took over as the Chairman. Chairman Fang is a successful case of VIS' Board member succession plant, as he has dedicated his efforts to setting the company's direction and strategy and instructing and communicating with the management team. Mr. Fang has extensive experience in the semiconductor industry, and VIS needs his insight to steer the company into the future and enhance company performances.

According to VIS' corporate governance structure, company decisions are made by all Board members, including four Independent Directors. The Article of Incorporation charter clearly defines the authorizations and duties of Chairman and President, and sets forth the organizations of functional committees and their responsibilities. Thus, the President must report to the Board of Directors' Meeting every quarter the company's operations, business performances, and financial status, and accept the supervision and instruction of other Board members. Therefore, the Board of Directors and the management team are fully independent.

In general, other than Chairman Leuh Fang, all the other seven board members do not hold a position in the company, and seven out of eight Board members are not VIS employees—that is, over half of the Board members do not concurrently serve as an employee or manager. At the same time, over half of the Board members are external directors, and are able to independently and justly supervise the management team, achieving real independence. The Board of Directors and the management team each exercise responsibilities of decision-making, supervision, and management, to ensure maximized interests of long-term shareholders. VIS looks forward to bring a new look to the Board through diversification, and effectively enhance the Board of Directors' independence.

### Disclosure of Professional Qualifications of Directors and Supervisors and Independence of Independent Directors

Qualification Name	Professional Qualification and Experience	Independence	Number of Serve as an Independent. Director of Public Companies
Leuh Fang	Chairman Fang graduated with a MS degree in Materials Science and Engineering from University of Washington, and has extensive semiconductor knowledge and skills. Chairman Fang has worked in the industry for nearly 40 years, and has served as TSMC fab director, and SSMC Vice President, accumulating extensive experience of semiconductor operations and management. Chairman Fang joined VIS in 2009 and served as the president, and was elected as chairman in 2015; during this time, number of VIS fabs rapidly increased to five, and revenue increased from NT\$12.7 billion in 2009 to 44 billion. Chairman Fang received the fellowship honor of the Annual Conference of the Chinese Society for Management of Technology in 2020. Chairman Fang has professional knowledge and experience in the areas of leadership, decision-making, management, operational judgement, and business.	Chairman Fang is the representative of jurisdiction person TSMC, and simultaneously serves as VIS President and director of VIS subsidiaries. He is also one of the top 10 natural person shareholders of the company and is not an Independent Director. Otherwise, Chairman Fang is in compliance with the conditions listed in paragraph 1 of Article 3 of the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by FSC.	0

Qualification Name	Professional Qualification and Experience	Independence	Number of Serve as an Independent. Director of Public Companies
F.C. Tseng	<p>Vice Chairman F.C. Tseng received his Ph.D. in Electrical Engineering from National Cheng Kung University, and professor emeritus at National Chiao Tung University and National Tsing Hua University. He has extensive semiconductor knowledge and skills. Vice Chairman Tseng has worked in the industry for over 40 years, and has served at ERSO for over 10 years. When he worked at TSMC, he served as president, vice CEO, and vice chairman, accumulating not only rich experience in semiconductor operation and management, but has also contributed significantly to the development of the industry in Taiwan.</p> <p>Vice Chairman Tseng is also serving as Chairman of TSMC (China), Chairman of Global Unichip Corp., Director of TSMC, and Chairman of TSMC Education &amp; Culture Foundation.</p> <p>Vice Chairman Tseng has professional knowledge and experience in the areas of leadership, decision-making, management, operational judgement, and business.</p>	<p>Vice Chairman Tseng is a director of TSMC, as well as the representative of jurisdiction person TSMC. He is also one of the top 10 natural person shareholders of the company and is not an Independent Director. Otherwise, Vice Chairman Tseng is in compliance with the conditions listed in paragraph 1 of Article 3 of the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by FSC.</p>	0
Lai-Shou Su	<p>Director Su received his Master of Business Administration from North Texas University and has professional knowledge and skills of business management.</p> <p>Director Su has worked in the financial sector for over 30 years, and represented the National Development Fund on the board of many companies.</p> <p>Director Su is currently the Executive Secretary of National Development Fund, Executive Yuan, Director of Taiwan Aerospace Corp., Investment Review Committee Member of Eminent Venture Capital Corporation, Management Committee Member of the MOE University, College or Junior College Transition or Closure Fund, member of National Guaranteed Credit Committee, and member of National Key Area Industry University Cooperation and Skilled Personnel Training Review Committee.</p> <p>Director Su has professional expertise and experience in the areas of financials, accounting auditing, and business management.</p>	<p>Director Su is the representative of jurisdiction person National Development Fund, which is also a board member of TSMC. He is not an Independent Director. Otherwise, Director Su is in compliance with the conditions listed in paragraph 1 of Article 3 of the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by FSC.</p>	0
Edward Y. Way	<p>Director Way received MBA from University of Georgia, USA, and is a licensed accountant in the U.S. with accounting and financial qualifications, knowledge, and skills. Director Way has worked in accounting for over 30 years, and served as CEO, Deloitte Taiwan, one of the four major accounting firms. Director Way currently serves as Independent Director of Far Eastern Department Stores, Taita Chemical Company, Limited, Representative of Juristic Person Director of MITAC Holdings Corp. and Iron Force Industrial Co., Ltd., and Chairman of YCSC Co., Ltd.</p> <p>Director Way has also served as independent director on the boards of Sercomm and Primax, accumulating sufficient experience in the technology industry.</p> <p>Director Way has extensive knowledge and experience in the areas of financials, accounting and auditing, and business management.</p>	<p>Director Way is a natural person director and also meets the authority's independence requirements. Two years prior to his appointment and during his term, Director Way is in compliance with the conditions listed in Article 3 of the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by FSC; during his time as the director, Director Way has been given the right to participate in decision-making and express his opinions, exercising related duties independently according to Article 14-3 of Securities and Exchange Act.</p>	4

Qualification Name	Professional Qualification and Experience	Independence	Number of Serve as an Independent. Director of Public Companies
Benson W.C. Liu	<p>Director Liu graduated from Department of Accounting, National Soochow University and received MBA from University of Northrop. With expertise knowledge and skills in accounting and management, He has worked in related fields for over 30 years. Director Liu previously worked at Deloitte Taiwan and served as former Chairman &amp; GM, Bristol-Myers Squibb (Taiwan).</p> <p>Director Liu has won the 2nd CPMA Top 10 Managers, and served as chairperson of Chinese Corporate Accountant Association, CPMA, and Taiwan Corporate Governance Association.</p> <p>He is also an independent director of Global Unichip and Advantech.</p> <p>Director Liu has extensive knowledge and experience in the areas of decision-making, business management, financials, accounting and auditing, corporate governance, and business.</p>	<p>Two years prior to the appointment and during their term, the three Independent Directors on the left column are in compliance with the conditions listed in the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by FSC, and Article 14-2 of Securities and Exchange Act; all Independent Directors have been given the right to participate in decision-making and express their opinions, exercising related duties independently according to Article 14-3 of Securities and Exchange Act.</p>	2
Kenneth Kin	<p>Director Kin graduated from Nuclear Engineering, National Tsing Hua University, and received Ph.D. in Nuclear Engineering and Applied Physics from Columbia University. He has engineering, physics, and technology related knowledge and skills, and has worked in R&amp;D and marketing for over 40 years.</p> <p>Director Kin has served as VP of Asia Pacific operations at Motorola Inc., VP of worldwide sales and services for IBM Microelectronics, and Senior Vice President of worldwide sales and marketing for TSMC.</p> <p>Director Kin has also served as Vice Dean and EMBA/MBA CEO, College of Technology Management, National Tsing Hua University, and consulting professor at Shanghai Jiao Tong University, and is currently Chair Professor Emeritus, College of Technology Management, National Tsing Hua University.</p> <p>Director Kin is also Independent Director of eMemory Technology Inc., Independent Director of Global Unichip Corp., and Director of MediaTek Inc.</p> <p>Director Kin has extensive knowledge and experience in the areas of decision-making, management, business, and marketing.</p>		2
Chintay Shih	<p>Director Shih graduated from Electrical Engineering, NTU, and received M.S. in Management Science from Stanford University, and Ph.D. in Electric Engineering from Princeton University, as well as Honorary degree of National Chiao Tung University and National Tsing Hua University, and fellowship of Chinese Society for Management of Technology and Industrial Technology Research Institute.</p> <p>Director Shih has professional knowledge and skills in semiconductor and management and has been engaged in R&amp;D and management for over 40 years.</p> <p>Director Shih has served as President and Chairman of Industrial Technology Research Institute and Chairman of Institute for Information Industry; Dean, College of Technology Management, National Tsing Hua University, and President of CIE and Chairman of TSIA. He is currently Chair Professor Emeritus, College of Technology Management, National Tsing Hua University.</p> <p>Director Shih is also Independent Director of FocalTech Systems, Co. Ltd., Independent Director of Sercomm Corp., Independent Director of TUC, and Supervisor of Ten Incubation Corporation.</p> <p>Director Shih works spans and connects research institutions, academia, and industry, and has extensive knowledge and experience in the areas of decision-making, management, and business.</p>		3

Qualification Name	Professional Qualification and Experience	Independence	Number of Serve as an Independent. Director of Public Companies
Liang-Gee Chen	<p>Director Chen graduated from and received the Ph.D. degrees in electrical engineering from National Cheng Kung University. National Forum Director, Ministry of Education. Received IEEE Fellowship in 2001, and Engineering Sciences award from TWAS in 2010. He became an NAI fellow in 2017.</p> <p>Director Chen has served as Director, Creativity and Entrepreneurship Program, National Taiwan University and Director of the Intel-NTU Connected Context Computing Center, Deputy Dean, College of Electrical Engineering and Computer Science (EECS), National Taiwan University, Executive Vice President for Academics &amp; Research, National Taiwan University, President, National Applied Research Laboratories, and co-head of National Program for Intelligent Electronics. Director Chen has comprehensive semiconductor and IC knowledge, skills, and academic achievements. He also served as Deputy Minister and Minister of Science and Technology, and during his time in office, he bridged domestic and overseas resources and innovative incubation to develop AI program, making significant contribution to Taiwan's technology education and industry development.</p>	<p>Two years prior to the appointment and during his term, Director Chen is in compliance with the conditions listed in the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" promulgated by FSC, and Article 14-2 of Securities and Exchange Act; Director Chen has been given the right to participate in decision-making and express his opinions, exercising related duties independently according to Article 14-3 of Securities and Exchange Act.</p>	1

Note 1: Director Edward Y. Way previously served as chairperson of and United Way is now a director of the organization.

Note 2: A representative director who is not a stakeholder of the company.

## Major Incident Communication Procedure

VIS management team not only makes quarterly reports to the Board of Directors' Meeting on company operations and performances, as well as financial forecasts, but also communicate matters that must be submitted to the Board meeting for resolution according to laws, charters, or authorities' regulations, such as major asset transactions, Loaning of funds, or endorsement and guarantee, through discussion and resolution of Audit Committee, Strategy Committee, and Board of Directors. Moreover, outstanding events in daily operations that might impact the company's management to a certain degree will be communicated by President to Directors through telephone or e-mail depending on the need, listening to their opinions and views. When there are major decisions that have significant impacts on shareholders' interests and rights, and must seek approval of the Board of Directors, the company will hold extraordinary board session for discussion and communication.

VIS has formulated the "Procedures for Handling Material Inside Information," which is also applicable to Board members when it comes to handling of material information and related procedures. Also, when material events occur that will affect normal production of fabs or product delivery, VIS has devised "BCP Guidelines" and "BCP Plan Management Rules" where the management team will establish the risk response team and assign task forces according to responsibilities, launching company-wide responses, procedures, and actions, and reporting to responsible personnel defined by disaster reporting procedures;

finally, President will report to Directors depending on the impacts. When there are material information that must be publicly announced according to "Taipei Exchange Procedures for Verification and Disclosure of Material Information of Companies with TPEx Listed Securities," Directors will be simultaneously informed via e-mail.

## 2021 Material Events

Nature	No. of Cases	Date	Handling Procedure/Execution
Litigation	1	2021.03.17	1. Announced material information and simultaneously informed directors via e-mail on the next day. 2. Reported to Board of Directors on progress on May 3 and August 2, 2021.
Acquisition of Material Assets	1	2021.04.28	1. Convened extraordinary Board session. 2. Announced material information and simultaneously informed directors via e-mail on the day.
Spread of Pandemic	1	2021.05.20	1. Announced material information on suspension of Shareholders' Meeting in June before 8 a.m. the next day, and simultaneously informed directors via e-mail 2. Convened extraordinary Board session on June 18, 2021, to change the date of Shareholders' Meeting to August 13, 2021. Announcement material information on the same day.

## Performance Evaluation of Board of Directors and Functional Committees

VIS has formulated "Board of Directors Performance Assessment Policy," and stipulated that internal evaluation shall be done at least once a year, and external evaluation shall be done once every three years; every Q4, VIS formulates items of annual performance evaluation for the following year, and carries out evaluation at the end of the year, which is combined with

Directors' remunerations. Moreover, when VIS selects or nominates Directors, individual Directors' performance evaluation results shall be used as reference.

The scope of Board of Directors performance evaluation includes: individual Board members, the Board as a whole, and functional committees. The method of evaluation may be one of internal or external evaluation, or both. Internal evaluation includes: Board member self-evaluation, Board of Directors internal self-evaluation, functional committee internal self-evaluation, Compensation Committee review, and resolution by Board of Directors; external evaluation is commissioned to professional external agencies or experts, or carried out through other appropriate methods.

The evaluation of individual Board members and functional committees is done through internal evaluation; performance evaluation of the Board as a whole is conducted through both internal and external methods.

Individual Board Members Performance Evaluation Criteria	Board of Directors and Functional Committee Performance Evaluation Criteria
<ul style="list-style-type: none"> <li>1. Board meeting attendance and continuing education</li> <li>2. Participation in supporting the company's objectives and strategies</li> <li>3. Instructions to and communication with management executives</li> <li>4. Supervision of the execution of business plans and tracking the progress of such execution</li> <li>5. Internal control and avoidance of conflicts of interest</li> </ul>	<ul style="list-style-type: none"> <li>1. Participation in the operation of the company</li> <li>2. Improvement of the quality of the Board of Directors' decision making</li> <li>3. Composition and structure of the Board of Directors</li> <li>4. Election and continuing education of the directors</li> <li>5. Internal Control</li> </ul>

## 2021 Board of Directors Performance Self-Evaluation Results and Improvement Actions

Evaluation Period	January 1 to December 31, 2021
Individual Board Members Internal Evaluation Results	Performances of all directors met expectation
Board of Directors Internal Evaluation Results	Performance of the Board as a whole met expectation
Functional Committees Internal Evaluation Results	Performances of Audit Committee and Compensation Committee met expectation
Board Performance Evaluation Results	The results of Board of Directors performance evaluation have been submitted to and reported at the Board of Directors' Meeting on February 10, 2022.

On October 14, 2019, VIS commissioned Taiwan Corporate Governance Association (TCGA) for the external evaluation, evaluating through questionnaire and onsite visit 38 indices in eight aspects of the Board of Directors: composition, supervision, authorization, oversight, communication and self-discipline, and internal control, risk management and other. TCGA had no business relationship with VIS and was fully independent. The external evaluation report was submitted to the Board of Directors to review the results and improvement suggestions on February 20, 2020.

## External Evaluation Results and Improvement Actions

Evaluation Period	October 1, 2018 to September 30, 2019
Overall Evaluation Results and Improvement Actions	The evaluation report indicated that the Board of Directors' composition had balanced structure and seats of internal and external directors, and met the diversity requirement of professional expertise and industry experience. The Board's operation and communication was smooth and held discussions on specific topics and training courses irregularly, which helped to enhance the efficiency of the Board. VIS established sound risk management mechanism and internal control system to help the Board members keep track of the company's risk management status, lowering the company's operational risks.

The Company has established "Ethics and Business Conduct", "Code of Ethics for Directors", "Ethical Corporate Management Best Practice Principles" and "Proprietary Information Protection Policy", with a view to promoting self-discipline of the Board of Directors and all members of the Company and abiding by business ethics. In addition, the Company's high-performance in corporate governance evaluation represents that the Company has highly implemented corporate governance and that is praiseworthy. And from the planning of various meetings and the provision of information, convenient for directors to grasp important company information in real time, which can prove that the relevant support system of the Board of Directors is quite complete.

The report also provided suggestions on the establishment of an induction course for the newly elected directors, the performance evaluation of the internal audit officer, and the approval level of "Guidelines for Reporting and Handling Ethical Conduct Violations" for the Company to enhance the efficiency of the Board. Based on its suggestions, the Company will plan the induction course for newly-elected directors, the performance of the internal audit officer will be reviewed by the Board of Directors, and the approval level for implementing the "Guidelines for Reporting and Handling Ethical Conduct Violations" will be raised.

VIS regularly conducts external evaluation once every three years, and is projected to recommission competent agencies for the evaluation at the end of 2022. (2021 internal evaluation and 2019 external evaluation results have been disclosed on VIS website: [https://www.vis.com.tw/tc/cg\\_committees?type=compensation\\_committee](https://www.vis.com.tw/tc/cg_committees?type=compensation_committee))

### **Link between Director Performance and Remuneration**

According to Article 29 of VIS Charter, director remuneration shall not be higher than 1% and employee compensation shall be no less than 10% of the year's profit. Director remunerations are approved in accordance with VIS' "Policy, System, Standard and Structure of Director's Performance Evaluation and Compensation" (Note 1) and "Policy, System, Standard and Structure of Management Team's Performance Evaluation and Compensation" (Note 2), and each director will be given reasonable compensation according to the

company's performance and their individual participation in and contribution to the company's operations. Therefore, director's remuneration is closely associated with the company's performance. Related performance evaluation and compensation are all reviewed by Compensation Committee and Board of Directors, and are reviewed and adjusted annually.

### **Diverse Education for Board Members**

To encourage VIS Board members to enhance professional and legal knowledge, nurture their outstanding qualities and decision-making ability, strengthen their experience exchange and interaction, and proactively and effectively implement company governance system, VIS provided Board members information on training courses monthly, and made arrangement for Taiwan Corporate Governance Association to give them training at home in December 2021. All seven directors met the requirement of minimum six hours of training in a year, and the total hours of training in 2021 reached 84 hours. In addition to basic responsibilities and duties of Board members, the courses also included the most important international issues of information security governance practices and sustainability promotion topics.

Notes 1 and 2: These have been disclosed on VIS website: [http://media-vis.todayir.com/20210907093600238723075\\_tc.pdf](http://media-vis.todayir.com/20210907093600238723075_tc.pdf)

## Organization and Operation of Functional Committees

For Board of Directors to effectively fulfill the roles, VIS not only established Audit Committee and Compensation Committee according to laws and regulations, but also set up Strategy Committee on August 13, 2021; each functional committee's composition, meeting frequency, purpose, and operations in 2021 are tabulated below:

	Audit Committee	Compensation Committee	Strategy Committee
Composition	Convener Independent Director Benson W.C. Liu, Independent Director Kenneth Kin, Independent Director Chintay Shih	Convener Independent Director Kenneth Kin, Independent Director Benson W.C. Liu, Independent Director Chintay Shih	Convener Chairman Leuh Fang, Vice Chairman F.C. Tseng, Independent Director Kenneth Kin, Independent Director Chintay Shih
Frequency of Meeting	At least once in each quarter	At least four times a year	At least once a year
Purpose	Enhance the Board's function of oversight, overseeing fair presentation of the Company's financial statement; CPA appointment and dismissal, competency, independence, and performances; effective implementation of internal control; compliance with related laws and regulations; control of existing or potential risks	Assist the Board to formulate overall VIS compensation policy and framework to attract, motivate, reward, and retain outstanding talents.	Effectively help the Board to fulfill its roles and enhance corporate governance to meet the needs of long-term development.
2021 Operations			
No. of Meetings	6	5	3
Average Attendance	100%	100%	100%

### 3.1.3 Internal Audit

VIS has established under the Board of Directors the Internal Audit unit, which carries out various audits in accordance with the annual audit plan approved by the Board of Directors, and regularly reports to the Audit Committee and Board of Directors audit results and improvement outcomes, ensuring the reliability, timeliness, and transparency, of the company's financial, operational, and management information, as well as compliance with related laws and regulations.

All units also conduct periodic self-assessment on the execution of internal control system; when there are major deficiencies or items of improvement, the units shall propose improvement plan and projected completion time, and Internal Audit will follow up on and review the improvement results.

### 3.1.4 Regulations and Avoidance of Conflict of Interest

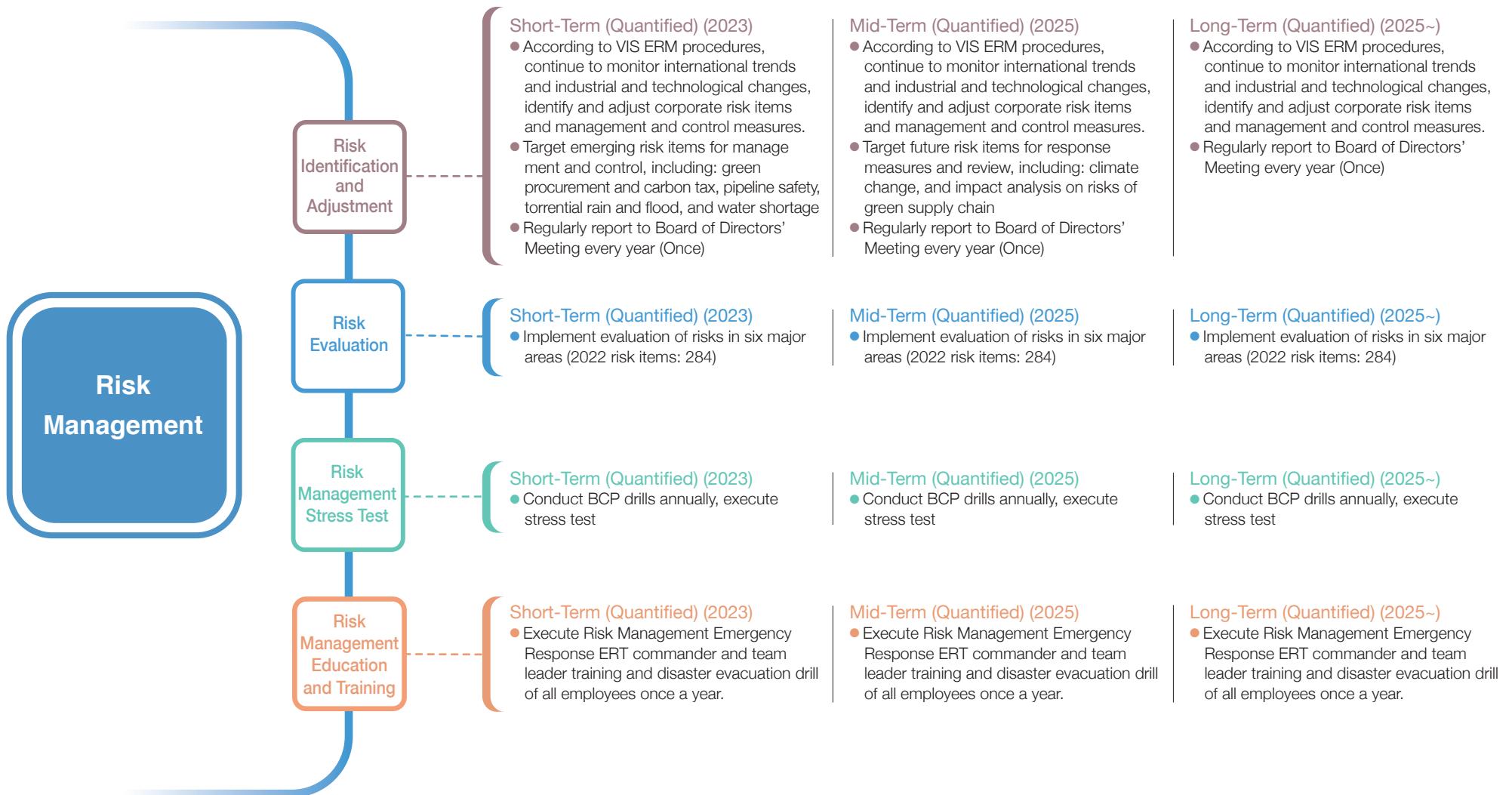
The Company has established provisions related to the prevention of conflict of interest, and has rules and regulations in place to prevent conflict of interest in the Rules of Procedure of Board of Director Meetings and Audit Committee Charter. If any Director or juristic person represented by a Director is a member of the interested party, or a Director's spouse or lineal blood relatives, or companies that have controlling and subordinate relation with a Director, whose involvement with a meeting agenda may have conflict of the company's interests, they may not be present nor participate in any discussion or vote on that item, and may not act as another director's representative to exercise their voting rights. When engaging in activities within the business scope of VIS for him/herself or on behalf of others, the director or general manager shall acquire prior approval at the shareholders or Board of Directors' meetings in accordance with the laws and regulations; any transactions concerning related-parties must be disclosed.

Furthermore, the Company has elected professional and independent directors. Independent directors shall propose business ideas from an objective and fair standpoint based on their expertise and experience while formulating corporate strategies. When discussing any topic with the Board of Directors, opinions of the independent directors must be taken into full consideration. Any reasons for agreeing or disagreeing must be fully documented in meeting minutes, and the conflict of interest prevention principle must be taken into the account to protect the Company's best interests.

VIS discloses in VIS Annual Report the Board members' positions in other companies, including but not limited to serving as directors or independent directors of other companies; list of major shareholders in possession of over 5% of VIS' outstanding stocks or top 10 shareholders, and top 10 shareholders' cross-holdings; moreover, no members of the Board of Directors are involved in cross-holding with the company's key suppliers.

## 3.2 Risk Management

## Sustainability Goals



### 3.2.1 Risk Management System

VIS has established complete risk management system and the Risk Management Committee, proactively implementing risk prevention and loss control. VIS has also incorporated risk management measures into daily internal control operations, and all units are required to periodically conduct self-assessment and participate in education and training, where the Board of Directors and senior executives will evaluate their performances so that risks can be effectively controlled within acceptable range. To implement risk management policy, the Risk Management Committee reports to the Audit Committee and Board of Directors on risk management policy and procedures.

#### Risk Management Organizational Structure



1. Committee Chairman: President; may appoint secretary to assist with tasks.
2. Area Committee Members: The highest executives of all areas and presidents of subsidiaries.
3. Fab/Division Executive Representatives: The highest executives of all fabs/divisions.

4. Risk Management Task Force Project: Area committee Members appoint executives above the division level as area representatives, and a convenor appoints executives above the division level as president.

#### Duties and Responsibilities

1. Formulate risk management policy and procedures, and submit to Board of Directors' Meeting for approval.
2. Report regularly to the Audit Committee and Board of Directors on risk management operation every year.
3. Formulate rules governing risk management.
4. Identify and approve priorities of risk management.
5. Plan, audit, and execute results of risk identification and control and management measures.
6. Supervise improvement of risk management.

#### Risk Management Committee Operations

Procedure	Content
Risk Item Formulation and Control Measures Planning	<ul style="list-style-type: none"> <li>• Carry out risk identification and risk evaluation to confirm risk items.</li> <li>• Formulate risk control measures for effective monitoring and response of risk items.</li> </ul>
Mid-Year Inspection	<p>Area Committee Members carry out subordinate units' mid-year risk control inspection:</p> <ul style="list-style-type: none"> <li>• Implementation outcomes of risk item control measures, risk monitoring and response mechanism.</li> <li>• Adjust risk items or monitoring measures according to changes of operations.</li> <li>• Risk items and control measures review and amendment</li> </ul>
Annual Area Risks Review	<p>Area Committee Members carry out subordinate units' annual area risks review:</p> <ul style="list-style-type: none"> <li>• Outcomes and improvements of each unit's annual risk management implementation.</li> <li>• Risk items and control measures maintained or added in the new year.</li> </ul>

Procedure	Content
Company-wide Annual Risks Review Meeting	<p>Convene Risk Management Committee meeting</p> <ul style="list-style-type: none"> <li>• Review each area's annual implementation outcomes of risk item control</li> <li>• Review each area's annual risk items and control measures in the new year.</li> <li>• Review and formulate company-wide risk items in the new year.</li> </ul>
Audit Committee Meeting, Board of Directors' Meeting	Risk Management Committee regularly reports risk management implementation outcomes annually

### 3.2.2 Risk Identification

VIS' risk identification includes scope of risk management and risk management procedures.

#### Scope of Risk Management

**Strategic Risks:** Including but not limited to risks that have great influences on the company caused by domestic and overseas economic and political factors, technological and industrial changes, and market demand and competition.

**Operational Risks:** Including but not limited to risks that result in losses and damages of the company caused by malpractices of internal operations, systems, or personnel, such as production, R&D, quality management, information security, and talent recruitment, or over-concentration of sales and procurement.

**Financial Risks:** Including but not limited to risks that have significant influences on the company caused by insufficient protection of financial assets and transactions, misrepresentation of financial statement, failure to respond to interest and exchange rate changes timely, inappropriate financing or investment, and nonperformance of contract by customers and suppliers.

**Hazardous Risks:** Including but not limited to risks that result in losses and damages of the company caused by natural disasters, infectious diseases, climate change, stoppage of water and electricity supplies, fire or chemical leakage, and insufficient preventions and responses.

**Compliance Risks:** Including but not limited to risks that damage the reputation or result in losses or damages of the company caused by failure to comply with related laws and regulations, failure to respond to regulatory changes timely, and inappropriate signing and execution of legal documents.

**Other Risks:** Risks not listed in the categories above that are likely to cause significance losses and damages of the company as deemed by the Risk Management Committee.

## Risk Management Procedures

Procedures	Description
Risk Identification	<p>Risk identification is the first step of risk management. According to the scope of risk management, all units shall discuss, analyze, compile, and predict, based on past experience, potential future risks within its business scope and procedure of cross-organizational operation, and identify and categorize these risks as references for further risk evaluation, monitoring, and management.</p> <ol style="list-style-type: none"> <li>1. Business scope and changes, past experience, internal and external resources and demands of each unit.</li> <li>2. Impact on business and change of future trend in response to the company's mid to long-term operation plan.</li> <li>3. Internal control and regulatory amendments and compliance.</li> <li>4. Peer experience and risk case studies.</li> </ol>
Risk Evaluation	<p>Under the current control measures, evaluate the likelihood and influence when a risk occurs; through the process of analysis, "Risk Map" may be used to quantify the frequencies of occurrence and respective level of impact on the company's operation. Other feasible evaluation methods may be devised to measure different types of risks.</p>
Risk Response	<p>Targeting the results of risk evaluation, devise management priority and risk management mechanism according to risk tolerance and cost effectiveness, so that the company's risks can be effectively controlled within acceptable range. Control and management measures include: avoidance (eliminate occurrence conditions: replacement or no execution), reduction (lower the likelihood of occurrence and losses), sharing (risk transfer: insurance, signing of contract), tolerance (tolerate the remaining risks after reduction and sharing of some of the risks).</p>
Risk Monitoring	<p>Various activities of monitoring and control targeting the development and changes of risks.</p>
Risk Report	<p>VIS shall regularly complete risk report, which will be reported to appropriate management levels and properly filed for reference.</p>

### 3.2.3 Risk Items and Responses

#### 1. Emerging Risks: Labor Shortage in the Semiconductor Industry

Item	Description
Risk Description	<ul style="list-style-type: none"> <li>(1) According to "Global 200mm Fab Outlook" released by SEMI, global semiconductor manufacturers are expected to increase 8-inch wafer production to 1.2 million from 2020 to the end of 2024, an increase of 21%.</li> <li>(2) To meet market demand, Taiwan's main fabs have all increased capex while also expanding recruitment.</li> <li>(3) Affected by the pandemic, Taiwanese government suspended issuing working visa, foreign talents (white collar and blue collar) could not enter Taiwan; especially, the manpower needed by the production line relied partially on migrant workers, but VIS could only recruit locally before April 2022.</li> </ul>
Potential Impacts	<ul style="list-style-type: none"> <li>(1) Local labor market had insufficient manpower to support the industry and company development.</li> <li>(2) Semiconductor fabs expanded capacity, creating more job opportunities, and resulting in recruitment competition.</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>(1) Enter campuses and plan academia-industry cooperation for manpower deployment in advance, ensuring sufficient new blood.</li> <li>(2) Care for daily life and organize festivities to enhance cohesion and stability of foreign employees.</li> </ul>
Responses	<p>Launched talent recruitment measures below to lower the impact of labor shortage</p> <ul style="list-style-type: none"> <li>(1) Expand on-campus recruitment from five events in 2020 to over 15 in 2021.</li> <li>(2) Organized summer internship program to recruit nearly 30 students for an early taste of workplace experience.</li> <li>(3) Signed academia-industry cooperation MOU with colleges in 2021.</li> <li>(4) Enhanced domestic recruitment of migrant workers: to overcome the labor gap caused by border restrictions; organized activities to care for migrant workers, such as Christmas party or hometown cooking.</li> <li>(5) Initiated employee referral program: encouraged employees to refer friends to join the company.</li> </ul>

## 2. Emerging Risks: Climate Change-Low-Carbon Transition Risks

Item	Description
Risk Description	<p>From the perspective of national policy, peer competition, or customer expectation, it is necessary for the company to implement low-carbon transition to maintain competitiveness and lower operational costs.</p> <p>(1) Taiwan's carbon tax is in the legislation process, and is projected to be in effect in 2024~2025, which will increase production cost.</p> <p>(2) Taiwanese government and main semiconductor companies in the industry have all joined the net zero emissions initiative, as well as RE100, pledging to use 100% renewable energy by 2050.</p> <p>(3) Main customers in Europe have all participated in net zero emissions and RE100, and they hope that the company can propose carbon reduction targets.</p>
Potential Impacts	<p>VIS has already completed financial impact analysis of low-carbon transition</p> <p>(1) If no actions are taken, operational cost will increase every year due to increased carbon tax and electricity fee. The electricity and carbon tax cost in 2050 is projected to be 3.8 times of 2020.</p> <p>(2) If VIS implemented volume and emissions reduction, energy-saving programs, and green energy procurement, the 2050 electricity and carbon tax cost would be lowered by 40.3%; compared to the 2020 level, the increase would be lowered from 3.79 times to 2.26 times.</p>
Opportunities	<p>(1) In response to the future carbon tax, implement energy-saving and carbon reduction improvement plans to lower the costs of electricity and carbon tax.</p> <p>(2) Implement GHG conversion and use gases with lower emission coefficients to lower carbon emissions, while also lowering cost of using GHG.</p>
Responses	<p>Low-carbon transition implementation plan</p> <p>(1) Operational Aspect (Scope 1 &amp; 2):</p> <ul style="list-style-type: none"> <li>• Reduce PFC gas usage, install PFC gas local scrubber, save power, and procure green energy to reduce most carbon emissions.</li> <li>• Evaluate negative emissions technologies (carbon capturing) and carbon trading, for deduction of the remaining part.</li> </ul> <p>(2) Supply Chain (Scope 3): promote low-carbon and environmental sustainability transition of the supply chain</p>

## 3. COVID-19 Pandemic Risk (Hazardous Risks)

Item	Description
Risk Description	<p>Since the outbreak of COVID-19, the following situations may occur:</p> <p>(1) Infected employees quarantined for treatment and those in close contact also quarantine.</p> <p>(2) Cluster infections in the fabs, and government shuts down operation.</p>
Potential Impacts	<p>(1) Employees got infected and could not work, affecting production.</p> <p>(2) Government shuts down operation, disrupting production.</p>
Opportunities	<p>Enhance the company's pandemic prevention capability and slow down the spread of pandemic within the company. When the pandemic broke out in Taiwan, lower the number of infected employees and minimize the impact resulted from "infected employees receiving treatment (missing work)."</p>
Responses	<p>Immediately after the outbreak of COVID-19, VIS established Pandemic Prevention Committee and launched the following measures to avoid cluster infections in fabs and lower the impacts of the pandemic:</p> <p>(1) Frequent disinfection of public areas and facilities; installed table partitions in dining areas</p> <p>(2) Observe social distancing and wear mask at all times; in addition to new employee training and related courses required by laws, suspend all unnecessary trainings, gatherings and activities</p> <p>(3) Divided employees into groups A and B to alternatively work in office and from home</p> <p>(4) First to launch online meetings, but did not prohibit physical meetings.</p>

## 4. Flood Risk

Item	Description
Risk Description	The drainage system becomes overloaded during torrential rain, leading to floods in some areas.
Potential Impacts	Runoff of torrential rain or rising river water flood into the fabs, stopping machines and leading to disruption of production
Opportunities	Enhance the company's flood-prevention capability and lower the risk of flooding resulted from "typhoon, and torrential rain," and mitigate/avoid impacts on production caused by flood.
Responses	<p>(1) Hardware: flood gates installed to lower the risk of flooding within fabs.</p> <p>(2) Flood Response: VIS has formulated flood response procedures, and completes annual flood gate training, and examination and preparation of flood-prevention facilities before the raining season; convenes flood prevention meeting before each typhoon, initiate flood prevention preparation and manpower backup plan, to lower the risk of flooding in the fabs.</p>

## 5. Compliance Risks

Item	Description
Risk Description	Wastewater discharge does not meet regulatory requirements.
Potential Impacts	Violating laws of environmental protection lead to penalties, such as fines or suspension.
Opportunities	Enhance management and monitoring of legally required ESH items to not only avoid penalties, but also enhance environment-friendliness for a better corporate image.
Responses	Established internal policy, procedures, and implementation plan; tracking laws and regulations, educating, training and promoting to avoid or lower the risks resulted from incompliance. Targeting wastewater discharge, in addition to daily management and monitoring mechanisms, VIS has also adopted real-time monitoring, pumping wastewater for reprocessing when abnormalities occur, avoiding abnormal discharge.

## 6. Singapore Carbon Tax Risk

Item	Description
Risk Description	According to Singapore's regulatory requirement, VIS must start paying carbon tax in 2030 and consequently, the production cost of the company will increase. Also, Singapore plans to increase carbon tax from NT\$105/ton CO <sub>2</sub> e to NT\$1,680/ton CO <sub>2</sub> e in 2028.
Potential Impacts	If VIS makes no improvement, the annual carbon tax is estimated to be over NT\$90 million.
Opportunities	Complete improvement measures of carbon reduction ahead of schedule (GHG reduction, GHG emissions processing), reduce "raw materials costs and carbon tax cost," and enhance production competitiveness.
Responses	Implemented improvement measures to reduce carbon emissions, including: (1) GHG conversion: converted the greenhouse gases used in the process from high carbon emission coefficient gases to low coefficient gases. (2) GHG processing equipment installation: breaking down and removing GHG before emission, lowering GHG emissions. After the improvements are made, it is projected that VIS can lower annual carbon emissions to below the threshold of 25,000 ton CO <sub>2</sub> e, avoiding carbon tax.

## Establishment of Risk Management Culture

### VIS' Risk Management Hierarchy

#### Operational Level

Promote the Zero Defect policy, confidential information protection policy, information security policy, manufacturing process parameter real-time monitoring system, as well as pandemic prevention measures, and establish basic level reporting and proposal system to ensure minimization of the risk of human error on the operational level, and allow immediate discovery and reporting of abnormalities, preventing escalation of abnormalities.

#### First-Line Management Level

VIS has established PDCA (Plan-Do-Check-Act) system of quality control in all regions and areas; VIS has also simultaneously introduced international standards and passed third-party audit and certification, ensuring the effectiveness of the management system.

#### Senior Management Level

Comprehensive ERM (enterprise risk management) system, as well as corporate governance and internal audit procedures, ensure effectiveness of corporate governance.

#### Board of Directors Level

Periodically review results and risk management according to ERM, and corporate governance and internal audit procedures.

Through hierarchical management, coupled with the comprehensive quality management system established through certifications of ISO 9001, IATF 16949, ISO 27001, ISO 14001, ISO 45001, ISO 50001, and QC 080000, VIS has established its risk management culture of "upholding the principle of honesty and the business philosophy of high level of business ethics, focusing on foundry production and manufacturing, avoiding high-risk and high financial leverage investments, and striving for the enhancement of VIS' overall competitiveness and pursuing sustainability of the company."

## Crisis Management Procedure

VIS has established comprehensive procedures of Business Continuity Plan (BCP) to evaluate the degree of influence and loss of emergency events, as well as designated unit to be in charge of communication with stakeholders, lowering the risk of losses caused by misinformation.

## Education and Training

### Results of the Implementation of Risk Related Education and Training in 2021

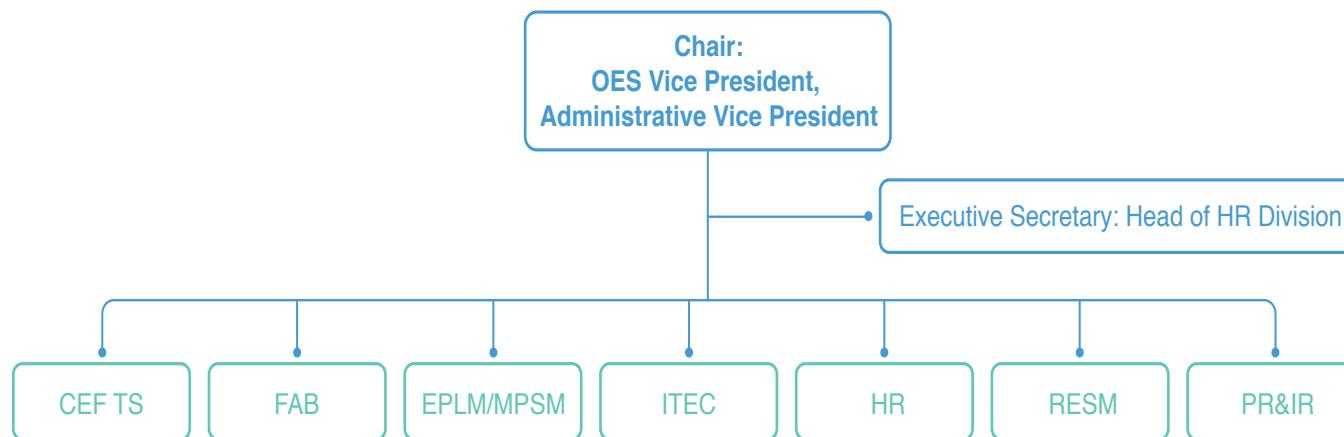
Risk Scope	Content	Number of Sessions	Number of Trainees
Quality Abnormality Risk Control and Management Procedure	ISO 9001 and IATF 16949: Quality Management Systems	E-learning	Target: All Employees Frequency: Once a Year Number of Trainees: 5,278
	Zero Defect Concept and Automotive Quality Awareness	E-learning	Target: All Employees Frequency: Once a Year Number of Trainees: 5,281
Secret Leakage Risk Management and Control	PIP Promotion – Proprietary Information Protection	E-learning	Target: All Employees Frequency: Once a Year Number of Trainees: 5,360
Legal Compliance Risk Control	Promotion of Business Ethics and Code of Conduct	E-learning	Target: All Employees Frequency: Once a Year Number of Trainees: 5,264
Supply Chain Risk Management and Control Procedures	AEO Quality Supply Chain Security (Risk Management Preventing Threats of Supply Chain) Introduction	E-learning	Target: All Employees Frequency: Once a Year Number of Trainees: 5,235

Risk Scope	Content	Number of Sessions	Number of Trainees
EHS Risk Management and Control Procedures	Environmental Management – Introduction to ISO 14000 Family of Standards	E-learning	Target: New Engineers Frequency: One-Off Number of Trainees: 619
	Occupational Health and Safety Assessment Series: Introduction to ISO 45001	E-learning	Target: New Engineers Frequency: One-Off Number of Trainees: 615
	Fab Fire Training (Fire Drill)	6	Target: Indirect Personnel Frequency: Once a Year Number of Trainees: 3,117
	Organic Solutions Operations Supervisors On-Job Training (First Training)	1	Target: One per Shift Frequency: Once every 2 Years Number of Trainees: 24
	Specific Chemical Substances Operations Supervisors On-Job Training (First Training)	1	Target: One per Shift Frequency: Once every 2 Years Number of Trainees: 13
	Commander/ERT Training	6	Target: Fab Supervisors Frequency: Once a Year Number of Trainees: 237
	ERT Basic Training	4 Hr	Target: New Engineers Frequency: One-Off Number of Trainees: 200
	Emergency Evacuation Drill for Direct Production Personnel	1 Hr	Target: Direct Production Personnel Frequency: Semi-Annual Number of Trainees: 4,219
	Unit ERT Drills	0.5 Hr (52 Sessions)	Target: All Personnel in Fab Frequency: Once a Year Number of Trainees: 4,219
	Building Evaluation after Earthquake Drill	1 Hr (3 Sessions)	Target: Operation and Equipment Personnel Frequency: Once a Year Number of Trainees: 48
	Unannounced Gathering Drill	0.5 Hr (12 Sessions)	Target: Operation and Equipment Personnel Frequency: Unannounced Number of Trainees: 590

### 3.2.4 Infectious Diseases Response Mechanism

Since the outbreak of the COVID-19 pandemic, VIS has established Pandemic Prevention Committee. The committee has effectively integrated the company's resources and rapidly executed and promoted measures of pandemic prevention to lower the risk of infection within the fabs, offering employees a safe working environment and maintaining normal operations and productions of the company.

#### Organization of Pandemic Prevention Committee



#### Main Measures of Pandemic Prevention in 2021

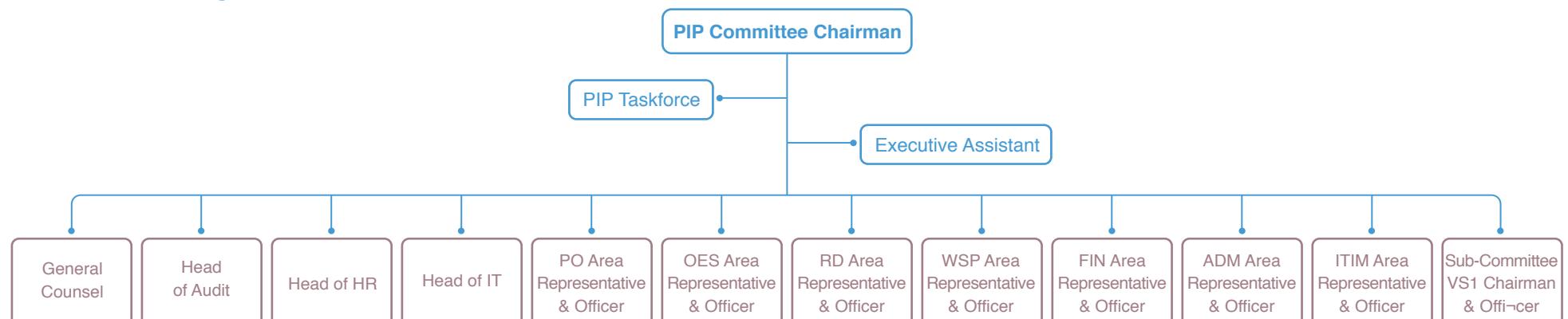
In May 2021, VIS initiated staff segregation for all employees in the non-production areas of fabs in Taiwan. Employees worked from home or offsite, provided that productions and operations remain unaffected. VIS encouraged employees to work from home wherever possible in order to reduce the risk of infection resulted from movement and contact; as for those employees coming in to the office, VIS took into consideration of mutual backup of manpower, and relocated some Fab 1 employees to work offsite at Fab2, ensuring continual operation of the company and minimizing the risk.

- In May 2021, VIS suspended all overseas business trips, as well as facilities and events of company gatherings. Inter-fab communication would be mainly online; VIS also prohibited all guests and visitors from entering the company.
- In June 2021, VIS complied with the requirements of CDC and local government and arranged for foreign employees to get rapid tested, making sure that there was no cluster infections of foreign employees in the company.
- In July, VIS encouraged all employees to get vaccinated to lower the risk of severe symptoms.

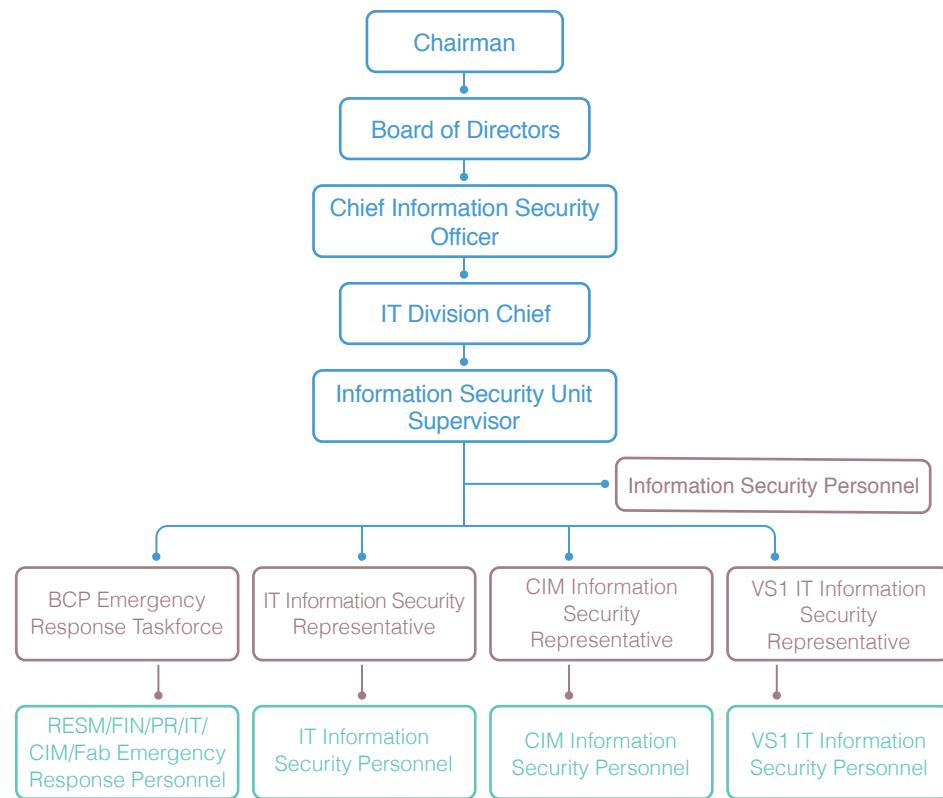
- In August 2021, since the CECC lowered the pandemic alert to level 2 and would gradually loosen up related restrictions, the Committee also lowered the internal pandemic alert level. After being rapid-tested, WFH employees could return to work in offices and fabs starting in mid-August; however, employees continued to take turns to work in the office and be grouped into red and blue teams; employees were allowed to move between different fabs and interact with employees of other fabs, and internal education trainings were allowed; however, eating and drinking remained prohibited in all meeting rooms. Limits on indoor gatherings were raised to no more than 50 people or less than half of the room's capacity, and outdoor gatherings to no more than 100 people. All gatherings must observe social distancing rules of at least 1.5 meters in indoor spaces and 1 meter outdoors.

By the time of this report's publication in June 2022, VIS continues to hold regular pandemic prevention meeting, and implement related measures of pandemic prevention in accordance with the latest public announcements made by Central Epidemic Command Center to maintain effective pandemic prevention and control, lowering the potential risk of infection.

### PIP Committee Organization Chart



## Cyber Security Organizational Structure



## Information Security Management Mechanism

VIS has obtained the ISO/IEC 27001:2013 Certification for Information Security Management System (ISMS) in December 2015, and completed the three-year renewal review in November 2021 for the certificate to remain valid. Also, starting from 2019, VIS has purchased information security risk management insurance to lower the risk of business interruption; the policy covers the entire globe, ensuring the best possible protection for our customers when they access information services, as well as the security of their data.

## Information Service Business Continuity Plan (BCP)

To ensure proper response measures can be taken to restore operational continuity within the shortest time and minimize the impact when information services are hit by major disasters, VIS has formulated the “Business Continuity Plan (BCP)”; information system disaster recovery drills are conducted every year, including at least two recovery drills targeting attacks on information security, in order to enhance response capacity through regular drills. Results of all related drills held in 2021 met the requirements.

## Information Security Protection and Inspection

In response to ever-changing paths of external attacks, VIS has adopted corresponding multilayered defence framework targeting DDoS, APT, and social engineering attacks. VIS also regularly conducts weakness scanning and social engineering exercise, and commissions third-party evaluation agencies for website penetration test and system effectiveness review to ensure effectiveness of information security management.

With the spread of COVID-19 in 2021, the company adopted necessary measures, such as working offsite and WFH, for pandemic prevention reasons and protection of employee health. As many as nearly 600 employees had to work from home due to the pandemic. Moreover, many domestic and overseas enterprises were attacked by hackers using ransomware in recent years, and VIS now demands all employees working from home to enter an additional dynamic password in addition to their existing ID and password when they log into the company's system, achieving two-factor authentication, and enhancing information security protection of remote connection.

### Information Security Promotion and Education and Training

For employees to understand the related actions of the confidential information protection policy, VIS issues monthly promotion and distributes questionnaires to all employees, collecting over 3,400 questionnaires that achieved an accuracy rate of 85%. As for personnel training, all VIS employees must complete education and training courses and pass tests. VIS employees have achieved 100% training completion rate. There were also internal and external professional information security courses for IT personnel to attend.

### Information Classification

VIS conducts classification and control and management of information based on sensitivity and value. VIS controls and manages methods of information transmission, reception, utilization and preservation, while adhering to the Need-to-Know Basis for information disclosure. The classification of information is shown below:



### Information Security Incident Reporting and Handling

VIS has formulated reporting and handling procedures of information security incidents. When an incident of information security occurs, reports will be made according to the isolated scope of influence, and command center will be simultaneously established. The chief commander will assign taskforces to execute system recovery and conduct 8D analysis, as well as taking corrective actions and keeping records after the incident is resolved to avoid recurrence.

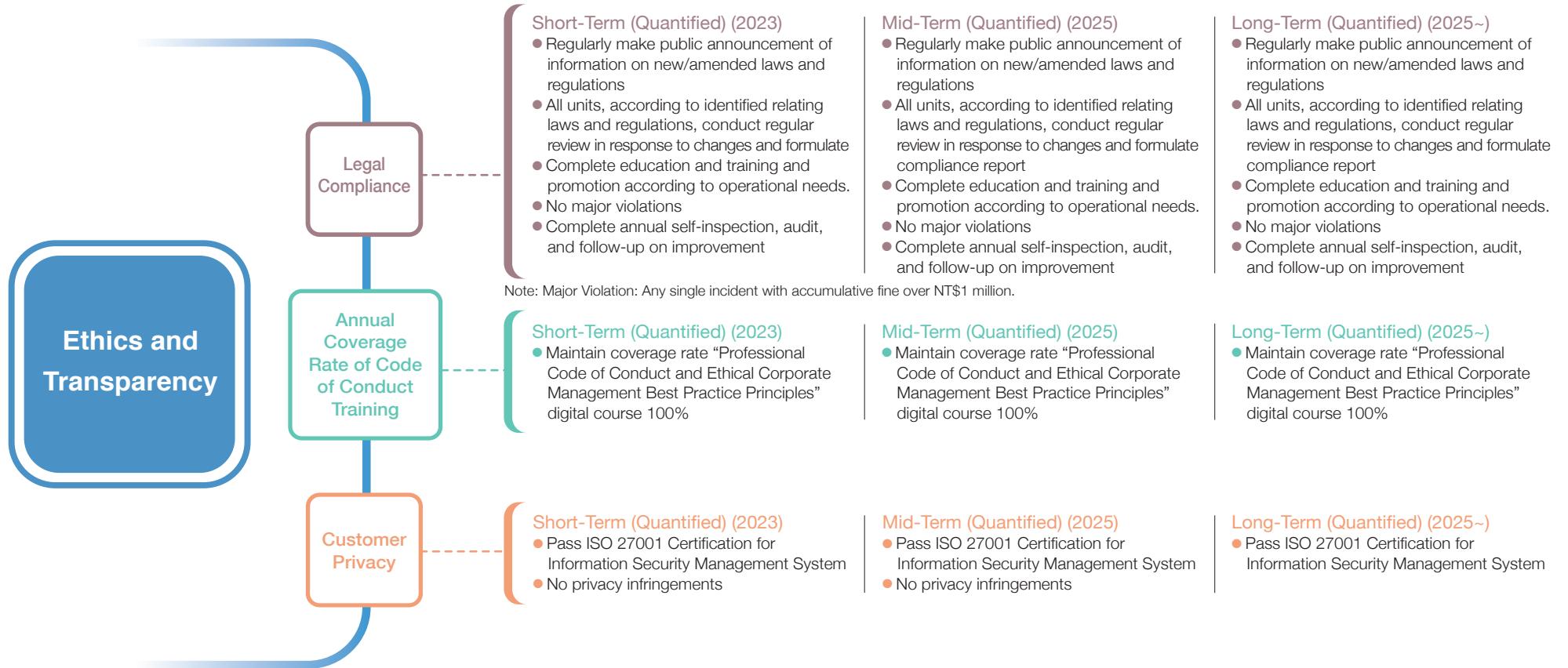
In 2021, VIS no major events of information security.

### Flow of Information Security Incident Reporting and Handling



## 3.3 Ethics and Transparency

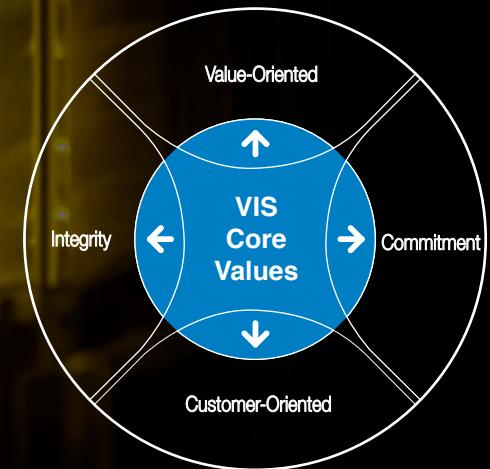
### Sustainability Goals



### Ethical Corporate Management Best Practice Principles

VIS' core values are integrity, customer-oriented, value-oriented, and commitment, and the first article of VIS business philosophy is "upholding ethical business practices, which show how much emphasis VIS puts on integrity.

In light of this, VIS has formulated "Ethical Corporate Management Best Practice Principles" to nurture corporate culture of ethical corporate management and establish sound business model, which is promoted through channels including company website, internal employee training materials, electronic announcement, bulletin board, and promotion videos, proactively building an honest, open, pragmatic, and cooperative working environment.



## Ten Articles of VIS Business Philosophy

- 1 Upholding Ethical Business Practices
- 2 Focusing 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 Establishing an Open Management Style
- 10 Being a Good Corporate Citizen by Contributing and Caring for both Shareholders and Employees

### 3.3.1 Business Ethics and Code of Conduct

The first article of VIS business philosophy is “upholding ethical business practices,” and VIS has also detailed the methods in “Ethics and Business Conduct,” demanding all employees to fully understand and follow Business Ethics and Ethical Corporate Management Best Practice Principles. Also, it is also stipulated in the “Code of Ethics for Directors” that Directors must comply with the principles when performing duties and adhere to the standards of professional behaviors. To establish an ethical corporate culture and sound business model, VIS has also formulated and implemented the “Ethical Corporate Management Best Practice Principles” according to “Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies.”

In “Ethics and Business Conduct,” VIS has also prescribed programs to forestall unethical conduct, and defined in each program procedures, guidelines of behavior, violation punishment, and appeal system; since 2020, all Directors and managers have signed declaration to comply with “Ethics and Business Conduct”; also, during annual declaration of conflict of interests, VIS provides employees education training to ensure compliance with all regulations.

VIS conducts a survey every two years to explore employees’ recognition of the business philosophy. The 2020 survey results revealed that the first article of the business philosophy, “Upholding Ethical Business Practices” received an average score of 4.54 from all employees (5 being the perfect score), which was a 0.02 increase from the 4.52 in 2018. This shows that employees highly recognize the company’s ethical business practices. The implementation of

ethical corporate management will be reported to the Board of Directors at least once a year.

To strengthen ethical corporate management, HR department is responsible to formulate and implement policies, asking Directors, managers, employees, mandataries, and substantial controllers to comply with laws and regulations when performing duties, and conduct commercial activities in a fair and transparent manner based on the principle of ethical management; they may not offer or accept bribes, offer illegal political donations, or improper charity donations or sponsorships; they shall not directly or indirectly offer or accept any unreasonable presents, hospitality or other improper benefits, violate intellectual property rights, engage in unfair competition; they shall prevent preventing the products and services from directly or indirectly damaging the rights and interests, health, and safety of consumers or other stakeholders. VIS will regularly review business-related compliance and submit to Audit Committee, which reports to the Board of Directors every Q3. Also, VIS regularly organizes education training and promotion for Directors, managers, employees, mandataries, and substantial controllers, and combine ethical business policy with performance review and HR policy, establishing clear and effective reporting and reward/penalty systems, including:

- Establish and make public announcement of independent mailboxes for reporting by internal and external personnel.  
Audit Committee Mailbox ([audit\\_committee@vis.com.tw](mailto:audit_committee@vis.com.tw))  
Chairman’s Mailbox ([vis\\_chairman@vis.com.tw](mailto:vis_chairman@vis.com.tw))  
President’s Mailbox ([vis\\_president@vis.com.tw](mailto:vis_president@vis.com.tw))
- Appoint designated personnel or unit to handle the reports.

- After investigation, report to the authority or transfer to judicial agencies when necessary.
- When handling and investigating a report, record and safekeep investigation results and related documents.
- Ensure anonymity of the whistleblower and confidentiality of report.
- Measures protecting whistleblowers from being mistreated.
- When the reported incident is found to be true after investigation, and proper handling resulted in company benefit, a reward may be offered to the whistleblower.

When Audit Committee receives a report of suspected unethical conduct, it may appoint internal or external personnel to form an investigation team as it seems appropriate. Adhering to the principles of impartiality and privacy, the team investigates the facts and submits a closing report to Audit Committee.

In 2021, all three of the above mailboxes did not receive any reports of non-ethical behaviors.

### **Code of Conduct**

VIS Code of Conduct has established provisions related to the prevention of conflict of interest, and has rules and regulations in place to prevent conflict of interest. If any employee has the following situations, he or she must proactively report to the company: employee or close relative is employed by any supplier, customer, or competitor; employees' activities outside the company are in direct competition with VIS business; employee utilizes company resources for activities outside the company, employee has relatives working in the company. Upon receiving the report, HR and senior executives

will jointly discuss how to address the issue and report to the president for approval.

### **Code of Conduct Training and Promotion**

Through diverse channels and formats, VIS continues to promote Professional Code of Conduct and Ethical Corporate Management Best Practice Principles to employees. VIS has also set up the "Professional Code of Conduct and Ethical Corporate Management Best Practice Principles" digital course, which was part of the required annual training of all employees in Taiwan and Singapore, ensuring that all VIS employees have agreed to and understood all related regulations; in 2021, the coverage rate of the "Professional Code of Conduct and Ethical Corporate Management Best Practice Principles" digital course was 100%, and the goal in 2022 is to also achieve 100% coverage rate.

### **3.3.2 Legal and Regulatory Compliance**

VIS firmly believes that, for a company to achieve sustainability, it not only maintain sound economic performances, but also value customer's opinions, satisfy customer's needs, and protect customer's privacy, in order to obtain recognition and long-term support of customers. Thus, VIS has established a Legal Department to deal with legal and IPR affairs and all the other departments are requested to pay close attention to any changes in policies, laws, and regulations that may potentially have a significant impact on VIS' operations, businesses, or finance activities by offering the training courses, tracking amendments to laws and regulations, promoting the said policies and rules, providing channels for filing complaints, conducting legal compliance self-inspections and internal audits to corporate governance with emphasis on business ethics and legal compliance.

## Establishment and Implementation of Policies and Rules

VIS has established policies and rules, according to relevant governmental policies, laws, and regulations on various business activities, including but not limited to, supply chain safety, information security, CSR, anti-sexual harassment, environmental protection, internal control, financial report compilation, document management and destruction, procurement of non-conflict minerals, ethics compliance, personal data protection and PIP policy, and requested all employees to comply with such policies and rules while performing their job functions.

To reinforce the implementation of legal and regulatory compliance and ensure VIS' compliance with relevant policies, laws, and regulations, VIS has also incorporated its internal working principles into its policies and rules.

In order to meet the needs of VIS business development and, at the same time, to improve the spirit of law-abiding and implement regulatory compliance by employees at the same time, VIS will continue to avoid violating anti-trust laws which will be listed as the key of annual legal compliance in 2022, so as to reduce the risk and negative impact of the violation on VIS.

At the same time, VIS provides anti-trust online training courses and requires high-risk departments to regularly review their business execution behaviors, so as to cultivate the discipline of employees to follow anti-trust laws. In 2021, VIS did not have any litigation related to anti-competition, anti-trust, and anti-monopoly.

## Legal Compliance Training

Training is an integral part of legal compliance plan. VIS provides online training courses that focus on Authorized Economic Operator (AEO) and supply chain safety, sexual harassment prevention, intellectual property rights introduction, and etc., enabling its employees to get easy access to legal compliance training courses during office hours. Specific training requirements have also been established based on the job functions of employees. Furthermore, tests are conducted after each course to examine and correct the employee's understanding regarding legal articles, policies, and rules.

In order to enable employees to understand the anti-trust laws in the major business areas of VIS and help employees identify behaviors that may violate anti-trust laws, Legal Department provides anti-trust laws online course for employees to learn such knowledge, and use the learning to promote anti-trust laws compliance. In order to increase the awareness of employees in high-risk business departments on the importance to comply with fair competition and reduce the risk of VIS violating relevant laws and regulations, VIS continues to strengthen the requirements on high-risk business departments to complete anti-trust laws training course in 2022.

## Laws and Regulations Tracking and Policy Promotion

VIS' Legal Department periodically reviews amendments to laws and regulations, and posts the amendment information on VIS' internal website for all departments to evaluate the possible risk and impact of such changes in laws and regulations on VIS, and revise or establish their policies and rules accordingly. VIS also requests all departments to conduct legal compliance self-inspection periodically, which is conducting internal audits to reduce the impact and risks of regulatory violation on VIS.

### Reporting Regulatory Violation

In order to prevent the rights and interests of its customers and employees from being damaged by any regulatory violation, and to protect its corporate image, VIS offers multiple internal and external channels for its employees and third parties to report suspected regulatory violation. VIS adheres to the principle of confidentiality over the identity of such employees and third parties as well as the contents of the reported cases.

VIS did not have any material regulatory violation in 2021, which will also be the target for VIS in 2022.

### 3.3.3 Customer Privacy

To ensure sufficient protection of customer privacy, VIS has formulated management guidelines in compliance with international information security standards and established corporate security prevention measures, implementing the management and protection measures formulated in accordance with the "Proprietary Information Protection Policy (PIP Policy)," "Personal Data Protection Policy," and "Personal Data Protection and Management Rules." VIS continues to obtain ISO 27001 ISMS Certification, ensuring proper protection of customers' information assets to maintain competitive edge of the company and customers.

When transmitting data relating to customers' designs, VIS uses B2B encrypted connection for enhanced protection. All technical documents of customers have been encrypted and saved in the IT system, where document management system carries out access management and records all accesses.

VIS does not use personal information for secondary purposes.

No major violations or privacy infringements took place in 2021.



Adhering to the company's value-oriented core value, VIS develops "More than Moore" wafer fabrication technology; in addition to gradually shrinking process pattern dimension, VIS has developed a wide range of fabrication technologies to help enhancing the performances of customers' products while saving costs. Thus, 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.

### 3.4.1 Green Innovation

The top priority of VIS' green innovation is to assist customers in IC designs to ensure most effective utilization of power for various electronic products and meet the global trend of environmental protection, so that systems of various products, such as computer, communications, consumer, industrial, and car electronics, can meet the high-efficiency, high-performance, and energy-saving demands, or further extend the battery life of mobile devices.

VIS continues to refine a wide range of process technologies, including High Voltage, Ultra High Voltage, Bipolar CMOS DMOS (BCD), Silicon on Insulator (SOI), Discrete, Logic, Mixed-Signal, Analog, High Precision Analog, Embedded Memory, GaN, and MEMS & Sensor; all technology platforms have effectively helped customers to enhance competitiveness in the global market.

In response to global warming resulted from climate change, all countries have proactively launched energy-saving actions, especially energy conservation on the demand end. VIS has long focused on high-voltage technology, continually developing a variety of technology platforms to comprehensively help all types of products and applications to save more energy. The recent paperless trend promoted by the education, retail, and public display industries has become more popularized with the maturing of electronic paper technology. From ESL adopted by industries, e-reader, to driver IC used in industrial display products of IIoT applications, VIS has developed low-energy consumption high-voltage semiconductor processes to meet the paperless demand of the market.

For end products to have greater efficiency, lower energy consumption, and lighter power supply, the evolution of semiconductor processing technology has focused on the development of low-resistance components (such as BCD). VIS also strives to offer customers manufacturing services of high-efficiency power supply management IC by lowering switch resistance and parasitic capacitance. Also, enhancing voltage specification of system can lower current at the same power to reduce cable loss. Design of power supply framework is gradually transitioning from 12V to the power-saving framework of 48V high-voltage system; consequently, power system design needs to respond by incorporating IC components that withstand high voltage. VIS' BCD process specification offers a wide range of choices cover 5V to 200V, allowing customers to optimize power supply management IC design and enhance system efficiency.

Sound energy-saving power system needs MOSFET/IGBT. VIS is also focusing on developing applications of MOSFET in the areas of 5G communication, cloud high-efficiency computing, and DC motor driver. Through continually improved figure of merit, VIS enhances component efficiency. Also, in response to energy-saving demand of EV and industrial motors, VIS strives for R&D of new-general automotive and industrial IGBT.

Also, the energy-saving trend has also spread to the areas of smart home living and IIoT, allowing power consumption of electronic devices to adjustable according to the light source, temperature, and infrared in the environment, such as ambient light sensor that receives external light and adjusts the brightness of screen, as well as infrared sensor that adjusts A/C temperature and airflow automatically according to number of people. These are all applications of smart sensing IC. VIS offers diverse MEMS processes,

covering the fabrication of magnetic, temperature, optical, infrared, and MEMS inertial sensing ICs, keeping pace with the smart energy-saving trend in the market.

Since the technology of traditional silicon components has reached its limit in various areas of application, wide bandgap component technology is obviously the basis of future power electronics. GaN's outstanding material properties can reduce component volume and weight by 60%. Through GaN's properties of high frequency and high power density, VIS can satisfy customers' design demand for new generation products in the future, giving rise to innovative applications in different areas. In the future, electronic products are expected to introduce rapid charging, power-saving server, and LiDAR, and VIS' production of GaN semiconductors will make significant contribution to energy-saving in the applications of EV, data center, and 5G base station.

Through highly integrated components of the above-mentioned processes, it is possible to satisfy the demand of smaller end devices, while supporting a wider range of power; this will help customers to streamline the procedures originally required for PCB design and lower the cost of BOM, leading to effective utilization of resources by the entire industry. VIS has accumulated rich experience and manufacturing capability of the aforementioned electronic components, and has enhanced quality control in related applications through cooperation with leading international companies to meet higher energy-saving standards.



### 3.4.2 Innovation Management Framework

As a foundry service provider, continued innovation of IC manufacturing technology is an important driver that enhances the company's core competitiveness. VIS has developed superior technologies and provided efficient foundry management and high-satisfactory customer integrated services based on its Industry 3.0 capability. Entering the Industry 4.0 era, VIS is developing its VIM<sup>2</sup>—VIS Intelligent Manufacturing & Intelligent Management—to further achieve optimal performances. VIM<sup>2</sup> is a data-driven, system-centric, and highly auto-decision based production, operation, and management

system; it is remarkably productive, and widely applied in quality, cost, cycle-time, people productivity, tool utilization and customer satisfaction, comprehensively enhancing VIS' intelligent system.

Through the integration and coordinated operations of various innovative technologies, including highly automated production process, Robotic Process Automation (RPA), big data analytics, and AI, VIS achieves auto-decision based intelligent production. To achieve this goal faster, VIS enhances employees' abilities of future intelligent manufacturing and management through continued education and training and internal sharing and competition; also, through synergistic cooperation of industry, government and academia, VIS integrates and utilizes R&D energy to achieve mutual help and win-win situation.

From 2020 to 2021, VIS actively promoted digital transition of all business units, achieving the following outcomes:

### Smart Manufacturing

- From 2019 to 2021, VIS applied AI technology for predicitive maintenance of pump, reducing the cost of pump overhaul by approximately NT\$4.5 million.
- In 2020, VIS replaced repetitive manual collection and compilation of data with RPA; all business units developed a total of over 474 RPA processes, saving approximately the manpower of 55.24 people in a year.
- Through innovation of production procedure, VIS reduced cost by approximately NT\$371 million in 2021, among which the reduced costs of

electricity/raw materials/overhaul accounted for 0.72%, 0.56%, and 0.56% of COGS.

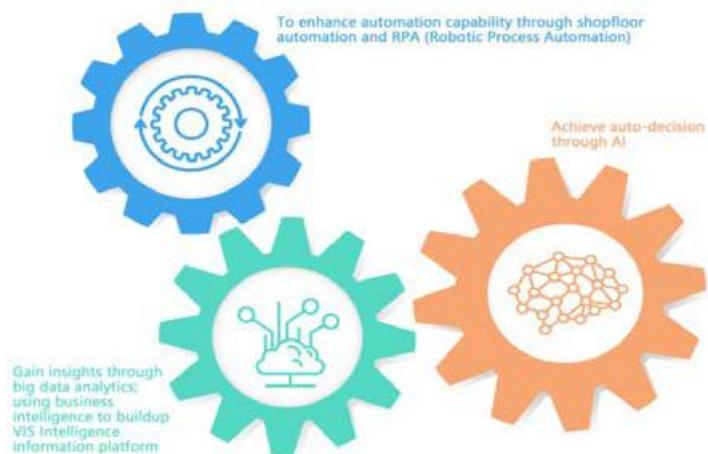
- Established CCTV AI Detection System for occupational safety and auditing, reducing workplace safety accidents and abnormal quality of products caused by human errors.
- VIS utilized big data application to quickly find the differences between equipment to enhance productivity, effectively increasing capacity.
- VIS used new algorithm to calculate the maximum remaining capacity, increasing the company's sales.
- Introduced AI defect detection to reduce defective products and shorten response time.

### Smart Management

- From 2020 to 2021, VIS used BI (business intelligence) tools to establish the Vanguard Intelligence Dashboard for management of semiconductor performances, unifying the company's definition and management method of performance indicators; also, VIS utilized each unit's data-driven analysis and management for the virtual expert system, developing approximately 1,100 BI tools, and saving approximately the manpower of 47.94 people annually.
- From 2020 to 2022, VIS cooperates with National Yang Ming Chiao Tung University to utilize mathematical programming and heuristic algorithm to enhance the efficiency and accuracy of short-term wafer start decision-making and main production scheduling.
- Due to the pandemic in 2021, VIS integrated technologies like VPN, net meeting and instant messaging, to establish the WFH platform, enhancing

employee communication efficiency and quality and ensuring unaffected operational performances.

- From 2021 to 2022, Taiwan headquarters introduced cloud-based HRMS, establishing a uniform platform of global talents and efficiently respond to the changes of labor regulations in different countries.



### 3.4.3 Strengthening Patent Portfolio

VIS continues to invest in innovative R&D and patent deployment to strengthen its intellectual assets.

VIS is a leading “specialty IC foundry service” provider, and continues to offer customers more competitive technology and services. VIS continues to develop diverse and specific process technology to expand application from core technology, including High Voltage, Ultra High Voltage, BCD,

and SOI. VIS continues to invest in R&D of embedded flash, GaN processes, and carries out global patent portfolio according to R&D strategy to ensure comprehensive protection of R&D results.

Since its inception, VIS has obtained nearly 2,000 patents in different countries; in recent years, the number of patents has been increasing steadily. Such achievements keep VIS obtaining leading position in specific technologies and gaining competitive advantage, also offering better and comprehensive protection of the interests of VIS and our customers.

Considering that patent and trade secret protection are important aspects of the management strategy of modern enterprises, VIS offers employees online patent training courses. To enhance the knowledge of R&D personnel on patent and trade secrets infringement, Legal & IP Division held trade secrets protection practice seminars for R&D and related organizations in 2021, which attracted more than 150 colleagues participated in the training, helping employees to further gain concrete ideas on protection of patents and trade secrets, enhancing their awareness and knowledge, to effectively lower operational risks and increase competitiveness.

Looking forward, VIS will focus on its core business, and continue to innovate, and provide related processes and services of power supply management, energy-saving, and green energy and environmental protection, turning innovative achievements into intellectual properties, and avoiding the threat of intellectual property right risks. VIS will continue to strive for corporate sustainability and fulfill “corporate social responsibility.”

### 3.4.4 Cases of Innovation

VIS has developed technological platforms including HV, BCD, UHV, and GaN, manifesting efficient utilization of energy and innovation of energy-saving technology. Through these platforms, the company is able to produce driver IC and power management IC, and wafers with lower energy consumption and higher efficiency. The revenue from HV and power management IC account for a significant share in the company's portfolio. The percentage of revenue of power management IC grew from 49% in 2017 to 58% in 2021, which indicates that the total energy saved by power management IC produced by VIS increased consistently.

Using its HV technology developed over the years as the foundation, VIS has achieved significant results in the area of display driver IC. Using notebook display panel driver IC as an example, shrinking process pattern dimension leads to structural change of component voltage, dropping from 1.8V to 1.5V; this makes notebook panel display driver IC more energy saving. Per estimation, every notebook panel display module can save approximately 0.2W; considering the total number of 8-inch wafers VIS produces, approximately 20,000 kWh of power can be saved annually. Moreover, UHV process platform's energy-saving effect is even more evident in the LED lighting area; if one product saves 5W of power when being used, approximately 5.2 billion kWh of power can be saved in a year considering the company's production of 8-inch wafers. As VIS continues to invest in UHV technology, it has also contributed to the lighting industry's effort of energy saving and carbon reduction.

The global carbon reduction target has had tremendous impact on the car market with European countries promoting EVs. GaN semiconductor plays an important role in the popularization of EVs. With its extremely low internal resistance, GaN can enhance the efficiency by 70% compared to other silicon components in the same category; in the engine power conversion process, GaN allows high battery life but lowers battery volume and weight, allowing EVs to gradually replace traditional ICEVs. Currently, VIS' development of 650V GaN technology is approaching mass-production stage, and it is expected that energy-saving performance will be enhanced in the future in the area of customer design IC. Later on, VIS will introduce the technology to more products, realizing the global energy-saving and carbon reduction targets.

Also, VIS is helping customers to produce ESL controller through UV technology. Replacing one-time use paper price tags with ESL can help the retail industry realize net zero emissions target. Counting all installed ESL in the world, as ESL update price once a day, approximately 30,000 ton CO<sub>2</sub>e can be saved annually for the world.



## 3.5 Quality and Customer Service

### Sustainability Goals

#### Short-Term (Quantified) (2023)

- Pass third-party audits for ISO 9001/IATF 16949: Quality Management Systems and IECQ QC 080000 Hazardous Substance Process Management every year
- Annual continual improvement benefits reach NT\$1.05 billion
- 100% product compliance with zero-hazardous substance related laws and regulations and customer requirements

#### Mid-Term (Quantified) (2025)

- Pass third-party audits for ISO 9001/IATF 16949: Quality Management Systems and IECQ QC 080000 Hazardous Substance Process Management every year
- Annual continual improvement benefits reach NT\$1.1 billion
- 100% product compliance with zero-hazardous substance related laws and regulations and customer requirements

#### Long-Term (Quantified) (2025~)

- Pass third-party audits for ISO 9001/IATF 16949: Quality Management Systems and IECQ QC 080000 Hazardous Substance Process Management every year
- Annual continual improvement benefits reach NT\$1.1 billion
- 100% product compliance with zero-hazardous substance related laws and regulations and customer requirements

#### Short-Term (Quantified) (2023)

- Customer satisfaction over 90%

#### Mid-Term (Quantified) (2025)

- Customer satisfaction over 90%

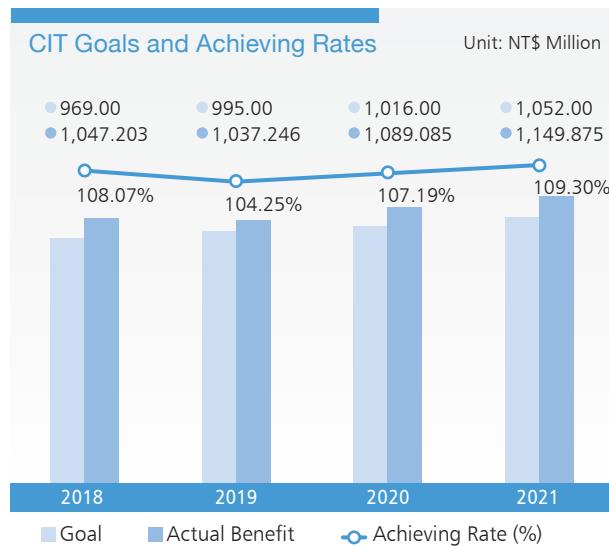
#### Long-Term (Quantified) (2025~)

- Customer satisfaction over 90%

### 3.5.1 Strengthening Quality Culture

VIS is committed to becoming global customers' preferred choice for semiconductor manufacturing by providing services of the highest quality. Our employees are dedicated to achieving their daily objective of exceeding customer expectations by focusing on delivering exceptional services with continuous quality improvement.

VIS continues to make improvements for corporate sustainable operation and offer products with excellent quality. It strengthens the company's quality culture and promotes to the entire supply chain. Also, VIS introduces various innovative methods to elevate quality, and coordinates inter-departmental cooperation to ensure worry-free quality of all the products through meticulous inspection procedures.



Quality is the responsibility of all VIS employees, as well as the principle they adhere to when performing tasks and services. In addition to improving product quality, this principle also further raises customers' level of satisfaction.

To strengthen the company's quality culture, continue enhancing product quality and production efficiency, lower production cost, and improve customer satisfaction, VIS has launched Suggestion System (SS) (Note 1) and Continual Improvement Team (CIT) (Note 2) in all fabs, and organized the company-wide "VIS CIT Conference," aiming to encourage VIS employees to constantly seek improvement and drive inter-departmental learning through measures such as prizes and public recognitions, enhancing employees' problem solving and innovation capabilities and maintaining the company's competitive edge, while achieving the win-win objective of customer satisfaction.

In 2021, a total of 1,798 suggestions and 445 cases by CIT were proposed and implemented, generating a benefit as much as NT\$1.149 billion. Out of the 265 closed CIT cases, 57% (151 cases) were related to product quality improvement. In 2018, VIS launched Best Innovation Award, Teamwork Award, and Best Presentation Award to participating CIT's.

## Enhancing Quality Capability

VIS continues to optimize manufacturing capability, eliminate product flaws and refine manufacturing process control; Quality Reliability Assurance Organization and Operations Organization cooperate to apply advanced statistical method and quality tools to build an immediate defence system to detect abnormalities in advance, preventing influences of quality incidents on customers.

Note 1: Employees identify opportunities of improvement in daily operation, and proactively propose solutions or ideas to executives for implementation, in order to make improvement or solve issues. Scope of suggestions include quality, cost, delivery date, production process, internal/external customer service, workplace safety and environmental protection, fab administration, and facilities.

Note 2: A CIT usually consists of 3 to 10 or even more members. Members are usually employees from different business units, who need to solve a shared problem. Improvement goals include quality, cost, delivery date, service, productivity, production technology, workplace safety and environmental protection, and safety and health.

In addition to meeting customers' demand, achieving customer satisfaction, and creating value for customers, product quality must also strive for environmental sustainability, to ensure ecological stability and sustainable development. To better comply with EU regulations and customers' demand for green products, VIS has introduced the IECQ QC 080000 Hazardous substance Process Management developed by International Electrotechnical Commission Quality Assessment System for Electronic Components, which has been integrated with Quality Management System ISO 9001, to establish hazardous substance management within manufacturing process R&D, raw material procurement, supply chain management, and manufacturing process control. VIS has also earned third-party certification, ensuring that the hazardous substance management system and quality management system continue to comply with the IECQ 080000 and ISO 9001 requirements. Also, all products produced by VIS are randomly sampled and tested by a third- party external lab, to ensure continued compliance with EU laws and regulations, and customer demands.



ISO 9001 Quality Management System Certification



IECQ QC 080000 Hazardous substance Process Management

## Hazardous Substance Management

In accordance with international regulations on hazardous substance, VIS has established a hazardous material management system (QC 080000) to ensure that wafers produced by us and subsequent outsourced processing meet the following international regulations as well as customer requirements for hazardous substance management. This includes:

- EU and China's Restriction of Hazardous Substances Directive (EU & China RoHS): All VIS products meet these regulatory requirements.
- Perfluorooctane Sulfonate (PFOS) Restriction Standards: VIS has fully terminated the use of PFOS in our manufacturing processes in 2010; all of our products are PFOS free.
- Perfluorooctanoic acid (PFOA) and Related Substances Restrictions: VIS is aware that in the future, the use of PFOA and related substances will be restricted by international regulations. In the beginning of 2015, we began a survey of raw materials and worked with our suppliers to develop alternative plans. In 2021, VIS completed the replacement of 100% of PFOA and related substances.
- Halogen-free requirement: all products of VIS comply with the halogen-free requirement.
- EU Registration, Evaluation, Authorization, and Restriction of Chemicals (EU REACH): With respect to the list of hazardous substances specified by EU REACH and the list of Substances of Very High Concern (SVHC), it has been determined that all VIS products are compliant with these requirements.

In addition to these international legislations and customer demands, VIS will continue to monitor potential future legal requirements in order to be prepared for taking effective response measures.

## VIS Hazardous Substance Management Process



## Realizing Quality Application

To provide excellent and reliable product quality, help customers gain market advantage, and ensure consumer and product application safety, avoiding massive recall after mass-production, Quality Reliability Organization helps customers to introduce into product design product reliability requirements during the R&D and product design stages. Also, to help automotive product customers achieve low defect parts per million (DPPM), VIS implemented the automotive product quality improvement project.

### 3.5.2 Precise Response to Customer Needs

#### Customer Satisfaction and Methods for Filing a Complaint

VIS conducts Annual Customer Satisfaction Survey regularly. The survey is conducted by a neutral third-party consulting company, and its objectives are to determine customer satisfaction with the company in terms of our technology, quality, product delivery, and services. We also make sure to properly handle and fully understand all customer feedbacks in order to provide our customers with the best products and services. In 2021, the coverage rate of the Annual Customer Satisfaction Survey was 100%, and the overall customer satisfaction was 95.7%, achieving the target of greater than 90%.

In addition to the Annual Customer Satisfaction Survey, VIS also conducts Quarterly Business Reviews with its key customers. Through face-to-face communication with our company executives, we are able to gain a better understanding of customer needs and their degree of satisfaction. At the same time, VIS's sales and service teams continue to maintain close interactions with our customers to fulfil their needs and enhance service quality.

VIS has also established Guidelines for Handling Customer Complaints, which provides customers with transparent, effective channels to file complaints against our products and services. VIS handles all customer complaints in a fair and timely manner to protect the rights and interests of our customers. In 2021, all customer complaints received were properly handled according to the Guidelines for Handling Customer Complaints, and we have responded to each customer accordingly.

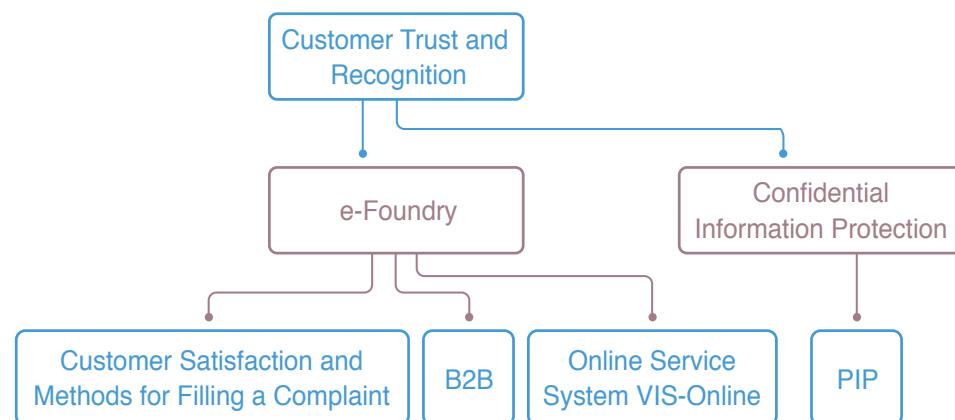


Note: The data includes all fabs in Taiwan and subsidiaries.

VIS has also established a product recall management mechanism, proactively notifying customers to recall products that have been proven to have reliability abnormalities, in order to ensure that the company's defected products will not end up in the hands of end consumers. Improvements will be made for incidents of product recall in accordance with the correction and prevention mechanism, and VIS also follows up and confirms whether the improvements are completed and effective. Through continued improvement of the quality system and daily monitoring, detecting, and preventive measures, VIS aims to discover abnormalities as early as possible to minimize the influences on customers resulted from quality abnormalities. There was no incident of product recall in 2021.

## 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 and product certification.

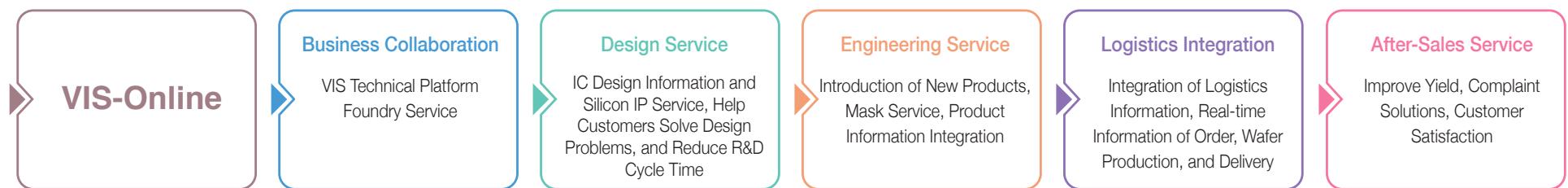


## e-Foundry

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 2021, all customers are satisfied with VIS' support to their requirement.



### 3.5.3 Realization of Confidential Information Protection

Proprietary information, such as trade secrets, are important assets of VIS and its customers, and closely related to the company's competitiveness. When VIS' proprietary information, including but not limited to process recipe, process flow, equipment parameters, product yield rate, customer product related information, and financial information, is improperly leaked or used, it will result in severe impacts on VIS or its customers.

To prevent improper leakage or use of trade secrets and proprietary information, to avoid violation of laws regulations by employees and damage of VIS interests, and maintain competitive advantage of VIS and customers to enable VIS become trustworthy partners of its customers, VIS has formulated "Proprietary Information Protection Policy" ("PIP Policy") in 2003, which clearly prescribes the classification of proprietary information and the reception, transmission, storage, and use of proprietary information. VIS has also established corporate Information Security Management System, and obtained ISO 27001 Information Security Management System (ISMS) Certification in 2015, thoroughly implementing information security policy and management procedures in aim to perfect the protection mechanism.

To ensure in compliance of proprietary information protection, VIS sets up on internal website a proprietary information protection page, offering employees a way to timely access related rules and promotional and educational materials, so that employees can educate themselves at all times. Also, through annual mandatory online courses, various promotions and activities (such as internal website e-poster, call for poster election,

and prize quiz) and physical classes to enhance employees' awareness of and compliance with the protection of VIS trade secrets and proprietary information so that to strengthen the protection of trade secrets and proprietary information. In 2021, all employees completed the online course on "PIP Promotion - Proprietary Information Protection."

In terms of active implementation, in order to ensure normal operation of the proprietary information protection mechanism and timely correct violations, VIS has also established the interdepartmental PIP Committee, which comprises of representatives of Legal, HR, Information Technology and Intelligence Management, Internal Audit, Research & Development, Quality Reliability Assurance, Finance, Accounting , Worldwide Sales & Planning, and Operation & Env. Safety Division. The PIP Committee regularly convenes quarterly meeting to review violations and system loopholes in the previous quarter and make continued reviewed and improvement. When necessary, the committee calls for extraordinary meeting to discuss time-sensitive cases and topics for continued enhancement of protection. When abnormality arises, an investigation taskforce formed by Legal, HR, Information Technology and Intelligence Management and Internal Audit, will immediately investigate the causes of the incident and handle the incident; afterwards, the PIP Committee will review and strengthen the insufficiencies or loopholes of the PIP Policy and mechanism.

In 2021, VIS received no complaints regarding invasion of customer privacy.



4

## 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.

Power Consumption per Unit Area of Wafer Lower than

**30%**

Lower than the 2015 Level

Water Consumption per Unit Area of Wafer

**17.1%**

Lower than the 2015 Level

GHG Emission per Unit Area of Wafer

**21%**

Lower than the 2015 Level

## 4.1 Climate Change and Energy Management

### Sustainability Goals

### Climate Change and Energy Management

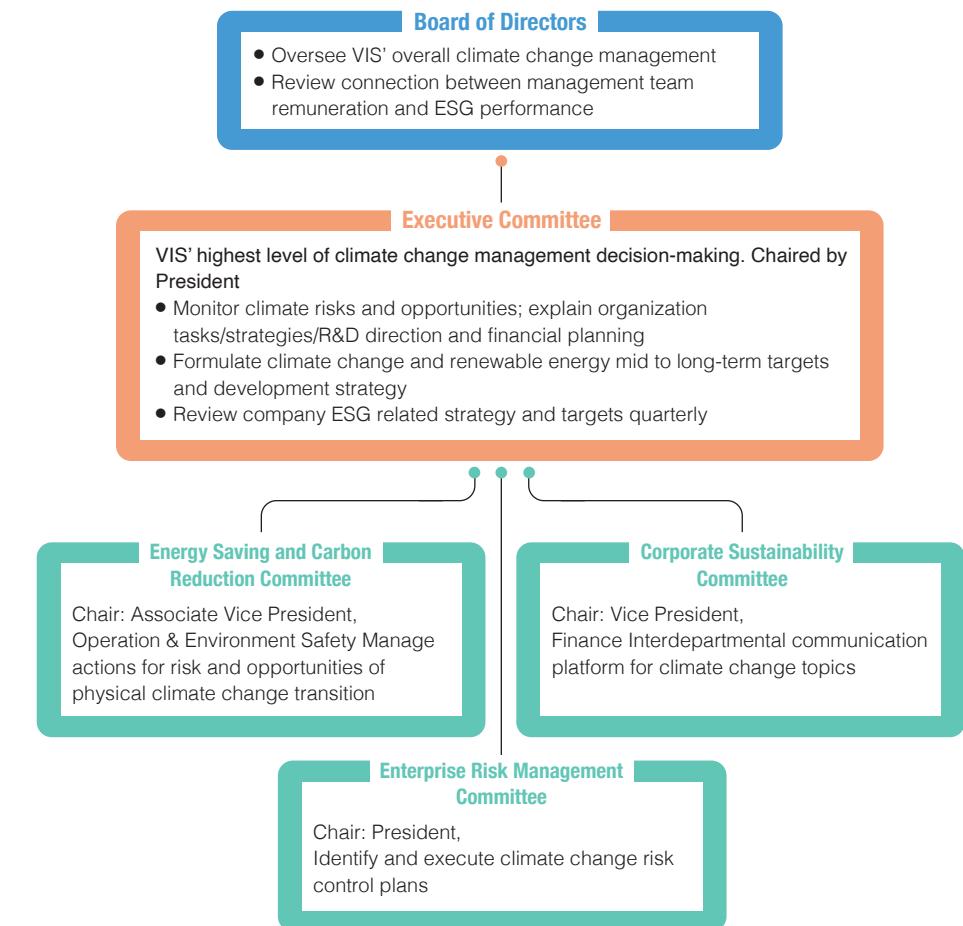


### 4.1.1 Climate Change

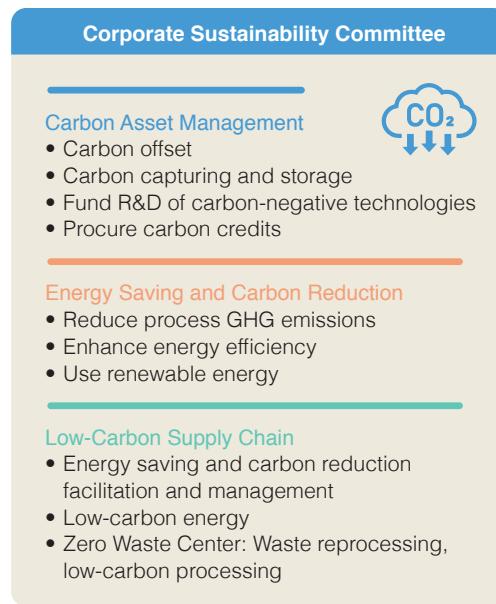
Climate change is a major topic of discussion in the United Nations and among governments, societies, and corporate bodies worldwide. VIS introduced the framework of the Task Force on Climate-related Financial Disclosures Recommendation (TCFD) devised by the Financial Stability Board to identify the risks and opportunities of the company brought by climate change.

### TCFD Disclosure Framework and Management Methods

VIS' climate change governance and management structure is a top-down system consisting of the "Board of Directors," "Executive Committee," and "Operational Committees." "Operational Committees" include existing "Corporate Sustainability Committee" and "Enterprise Risk Management Committee," as well as the additional "Energy Saving and Carbon Reduction Committee," which is chaired by area head of operation & ESH.



## Climate Change Topics Interdepartmental Communication Platform



To enhance effective communication on climate change, "Corporate Sustainability Committee" assumes the role of interdepartmental communication platform, with a scope of three major topics: "Carbon Asset Management," "Energy Saving and Carbon Reduction," and "Supply Chain Management;" fab directors, division heads, and supervisors assume the role of convener for each topic.

Level	VIS Actions
Governance	<ul style="list-style-type: none"> <li>• Corporate Sustainability Committee conducts risk identification, and regularly reports to the Board of Directors' Meeting, where the Board and senior management review the outcomes of risk control and management and offer decisions and instructions.</li> <li>• The management team formulates policy and improvement goals based on the results of the Board's discussion, and assigns to different executive units for adjustment of operations.</li> </ul>
Strategy	<ul style="list-style-type: none"> <li>• Physical Risks: Risks like flood or drought caused by extreme weather Response Strategy: Targeting the substantial risks of climate change to the company's assets, conduct simulation drills and education and training, establish broad and rigorous preventive measures and emergency response plan; when crisis or disaster occurs, immediately propose the most appropriate response and recovery plan to minimize the uncertainties and potential influences of the disaster.</li> <li>• Transition Risks: Climate Change – Low-Carbon Transition Risks Response Strategy: In terms of transition risks, follow the trends of energy-saving technology and energy diversification, departments have devised plans for GHG reduction/GHG emissions elimination/introduction of energy-saving technology and low-consumption equipment/carbon negative technology (carbon capturing) evaluation/supply chain low-carbon and environmental sustainability transition, to gradually lower VIS' carbon emissions.</li> </ul>
Risk Management	<ul style="list-style-type: none"> <li>• According to the TCFD framework, VIS screens and selects topics of climate change risk based on reports of international institutions, analysis data of peers and research on related laws and regulations.</li> <li>• Assess the risk values using the product of the financial or strategical impact level and probability for materiality ranking of risk topics.</li> <li>• Incorporated climate change risks in various operational risk management systems. Risk Management Committee conducts regular identification, evaluation, and management.</li> </ul>
Indicators and Targets	<ul style="list-style-type: none"> <li>• VIS has established evaluation and management targets of related risks and opportunities of climate change, such as GHG reduction, F-GHG reduction.</li> <li>• VIS conducts its GHG inventories by following ISO/CNS 14064-1 standards, the Executive Yuan Environmental Protection Administration (EPA) Greenhouse Gas Validation Guidelines, "Greenhouse Gas Emission Inventory Registration Guidelines," and the WBCSD/WRI GHG Protocol, and has passed SGS third-party external verification</li> </ul>

## Climate Change Risks and Opportunities Identification

In 2021, VIS held "Climate Change Risks and Opportunities Workshop," inviting related organizations of the company to carry out climate change risks and opportunities assessment based on own scope of business, and develop adaptation and mitigation strategies.

## VIS TCFD Analysis Flow

### Collection

Collect and research global climate change trends and cases, domestic and overseas research reports, industry benchmark enterprises' risk assessment, and invite related organizations to participate in "Climate Change Risks and Opportunities Workshop" to explain the tasks of TCFD. Finally, screen and select VIS' material topics of risks and opportunities based on the industry.

### Identification

According to selected topics of risks and opportunities, conduct questionnaire survey, inviting all units of VIS to respond to evaluate the impacts of the risks and opportunities on respective units and frequency of occurrence.

### Assessment

Based on the responses of the units, calculate the average degree of impact and frequency of occurrence of risks and opportunities.

### Prioritizing

Add the values of the two above-mentioned aspects to calculate the final risk and opportunity values; based on the values, prioritize risks and opportunities, producing climate change risks and opportunities matrix.

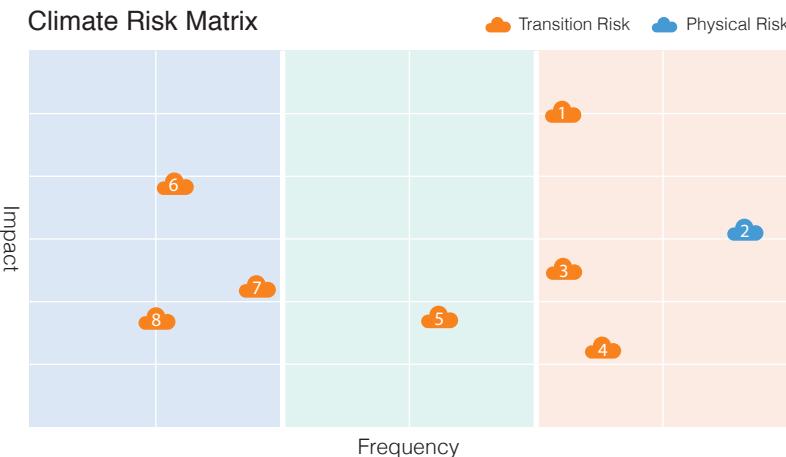
## Climate Change Risks and Opportunities Financial Impact Analysis and Responses

VIS has summed up 8 risk topics, and explained the impact and response of each risk, and disclosed opportunities derived from each risk, as well as the adopted response measures and actions.

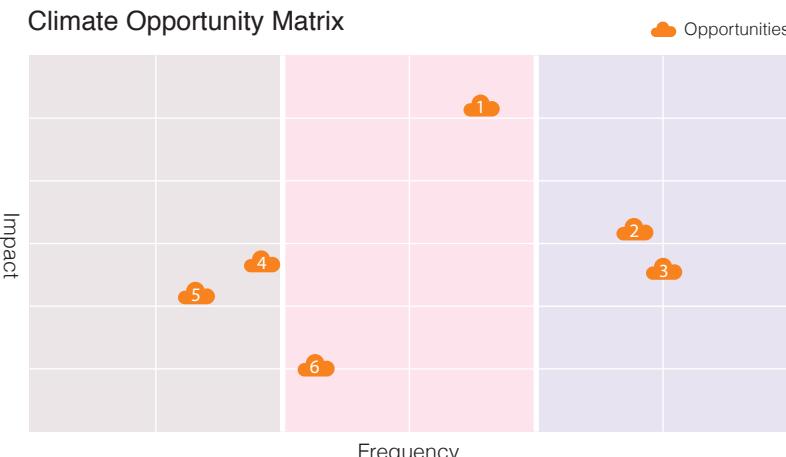
Ranking	Climate Risk	Impact Description	Financial Impact	Opportunities and Actions	Corresponding Section
1	Supply Chain Disruption	Sudden climate disasters cause disrupted or insufficient supply of raw materials, delaying delivery.	Compensate customers' losses, resulting in increased operation cost	Proactively enhance stability of supply chain <ul style="list-style-type: none"> <li>• Implement supplier audit mechanism, enhance supplier quality and environmental management capacity</li> <li>• Require suppliers to submit post-disaster impact and recovery plan to lower the risk of supply chain breakage</li> </ul>	5. Responsible Supply Chain
2	Intensified Extreme Weather Events	Physical risks, such as drought or rising sea level, that may lead to stoppage of FAB's operations	Shortage of water, as the result of climate change, is growing more serious. VIS has conducted analysis on operational and financial impacts in various stages of water rationing.	Enhance production line's resilience of natural disasters <ul style="list-style-type: none"> <li>• To avoid the situation of scarce water resource, VIS strives to implement water-saving measures and enhance water resource efficiency.</li> <li>• Implement wastewater recovery in fabs to reduce the company's reliance on water resource.</li> <li>• To mitigate the impact of drought on production, VIS formulated the "VIS water vehicle transportation contingency response plan during water shortages," initiating related responses according to water situation, reducing the impact on capacity.</li> </ul>	4.2 Water Resource Management
		Physical risks, such as torrential rain or flood, that may impact FAB's facilities and operations	Due to changes in precipitation and long-term climate change, potential flooding caused by heavy rainfall may reduce revenue on a risk of production interruption.	Proactively raising the water recovery rate and formulate emergency response mechanism <ul style="list-style-type: none"> <li>• Conducted 500-year-cycle precipitation analysis on the potential of floods at production sites, and installed 138 floodgates according to the results of simulation. Combined with "Flood Prevention and Rescue Plan Implementation Regulations, VIS manages the risk of flood in fabs.</li> <li>• Formulate crisis management procedure, establish disaster prevention and response system, including employee flood drill, typhoon prevention measures, establishment of river level monitoring system, and installation of floodgates.</li> </ul>	
3	Change in Consumer Behavior	Brand customers demand low-carbon manufacturing processes and products Customers prefer and focus more green, low-carbon products	Consumers' willingness to buy lowers, resulting in decreased revenue	Promote low-carbon, green products <ul style="list-style-type: none"> <li>• Utilize specific wafer manufacturing technology to develop low-carbon design products; enhance product efficiency to respond to market demands</li> </ul>	3.4 Innovation Management
4	Impact on Company Image	Passive or underwhelming performances on topics of climate change, energy-saving and carbon reduction, failing to satisfy stakeholder expectations to cause negative impact on company reputation or image	Stakeholders willingness to invest lowers	Enhance corporate reputation <ul style="list-style-type: none"> <li>• Satisfy stakeholders' demand of energy-saving products and engage in green design of products</li> <li>• Targeting manufacturing process, enhancing green management, obtaining ISO 50001 Energy Management System, ISO 14001 Environmental Management, and ISO 14064-1 GHG Inventory certifications</li> </ul>	Awards and Recognitions 4.1 Climate Change and Energy Management

Ranking	Climate Risk	Impact Description	Financial Impact	Opportunities and Actions	Corresponding Section
5	Stakeholders' Increasing Level of Concern for Low-Carbon Products and Services	Stakeholders demand disclosures of environmental data, such as process emissions and pollutions, and demands the company to declare carbon reduction	Development cost for low-carbon products and services increase	<p>Promote low-carbon technology and processes</p> <ul style="list-style-type: none"> <li>Utilize specific wafer manufacturing technology to develop low-carbon design products; enhance product efficiency to respond to market demands. On BCD, UHV, MOSFET, and GaN platforms relating to power control, VIS has invested NT\$2.15 billion and over 300 people in R&amp;D in 2021, and has accumulated over 200 power related patents.</li> <li>Currently mainly invest in areas of DC-AC and AC-DC power convertors, which have wide applications in computer, smartphone, TV, domestic appliances, and lighting devices.</li> </ul>	3.4 Innovation Management
6	Global Fuel Price Increase	Global fuel price increases resulting in increased production and operation costs	Fuel price increases resulting in increased production and operation costs	<p>Participate in renewable energy projects</p> <ul style="list-style-type: none"> <li>Introduce renewable energy, plan installation of renewable energy facilities, such as solar PV system, and purchase RECs</li> <li>Rome 2021 to 2022, VIS has installed 270kW of solar PV generation system, and continued to procure renewable energy and generation facilities. By 2025, VIS is projected to reach 8,437kW of renewable energy capacity, generating approximately 11.3 million kWh.</li> </ul>	4.1 Climate Change and Energy Management
7	Cost of Innovative Technology Production	R&D of new technology, introduction of new equipment, and innovation of processes lead to increase in cost	Cost of innovative technology production increase	<p>Technological innovation opportunity</p> <ul style="list-style-type: none"> <li>Continue to increase investment in R&amp;D of products and manufacturing processes; develop power management related BCD and UHV technology</li> </ul>	3.4 Innovation Management
8	Policy/Regulatory Requirements	With "Greenhouse Gas Reduction and Management Act" and "Renewable Energy Development Act" becoming stricter, and related fees and taxes increased, incompliance will lead to increased penalties and litigations	<ul style="list-style-type: none"> <li>If Taiwan implements "Carbon Emissions Cap and Penalty" or "Carbon Tax," financial expenses will increase.</li> <li>Install renewable energy power generation facilities resulting in increased operation cost</li> </ul>	<p>Participate in renewable energy projects and carbon trading market</p> <ul style="list-style-type: none"> <li>We adopt ISO 50001 Energy Management System to examine the possibility of energy saving measures within fabs, and Proactively implement GHG emissions management measures. Achieving 21% GHG emissions reduction per unit area of wafer in 2021.</li> <li>Introduce renewable energy, plan installation of renewable energy facilities.</li> </ul>	4.1 Climate Change and Energy Management

## Climate Risks Materiality Analysis Matrix



1. Supply Chain Breakage  
 2. Intensified Extreme Weather Events  
 3. Change in Customer Behavior  
 4. Impact on Company Image
5. Stakeholders' Increasing Level of Concern for Low-Carbon Products and Services  
 6. Global Fuel Price Increase  
 7. Cost of Innovative Technology Production  
 8. Policy/Regulatory Requirements



1. Enhance capability to resist natural disasters  
 2. Enhance corporate reputation  
 3. Participate in renewable energy plans and carbon trading market
4. New opportunity for technological innovation  
 5. Stability of supply chain  
 6. Promote low-carbon green production

## Scenario Analysis and Financial Impacts of Physical/Transition Risks

Taiwan has high mountains with steep slopes and uneven precipitation, and therefore is prone to experience seasonal and regional water shortage. In recent years, torrential rain, flood, and drought, have become growingly serious due to climate change, and to cope with the impacts of flood and water shortage, VIS has completed risk factor identification, and planned in advance response mechanism and related measures to lower operational risks.

The identification of flood risk due to torrential rain was based on the potential flood analysis using 500-year rainfall cycle; floodgates were then designed based on the analysis results to prevent floods. The resulting financial impacts include: (1) Hardware investment for the installation of floodgates; (2) Annual maintenance expenses for software and hardware of flood prevention, such as personnel flood prevention and response training, flood and typhoon prevention preparation, and monitoring of retaining wall for collapse prevention; (3) Flood and typhoon prevention insurance expense of approximately NT\$20 to 30 million. As for other remaining risks, VIS has also planned to purchase related insurances for risk transfer.

Climate change has led to severe water shortage. VIS has targeted different stages of water rationing to complete analysis on operational influences and financial impacts. The results of financial impact analysis are: when water rationing is at 10%, there will be an additional NT\$500,000 of daily expense; when water rationing is at 20%, the additional daily expense reaches NT\$1 million; when water rationing is at 30%, the additional daily expense is NT\$2 million. In general, VIS' response strategy to water rationing and

water shortage crisis includes: (1) Implementation of everyday water-saving measures to enhance the efficiency of water consumption; (2) During water rationing, water vehicles will be utilized to transport water to make up for the insufficient production water.

### Scenario Analysis and Financial Impacts of Transition Risks

Using current climate change policy and strategy, as well as operational situation, as the baseline scenario, VIS evaluates the financial impacts on the company of two transition risk factors—increased costs of carbon tax and grey electricity and lowered cost of green energy. Analysis shows that, if VIS did not make any improvements, the operational cost would gradually increase annually due to increased carbon tax and electricity fee, and it is projected that costs of electricity and carbon tax in 2050 would increase by 3.8 times compared to 2020; if VIS implemented volume and emissions reduction, energy-saving programs, and green energy procurement, the 2050 electricity and carbon tax cost would be lowered by 40.3%; compared to the 2020 level, the increase would be lowered from 3.79 times to 2.26 times.

VIS has further evaluated the anticipated cost of REC under the two scenarios of RCP 2.6 and NDC in response to the trend of renewable energy consumption and to realize SBT carbon-reduction targets. Assuming the historical rate of increase of electricity consumption and REC price at NT\$1,500 per 1,000 kWh, the calculation shows that, when using 2015 as the baseline, the annual cost of procuring energy-saving equipment and REC under the RCP 2.6 scenario will gradually increase from NT\$14 million in 2030 to NT\$53 million in 2050; under the NDC scenario, the annual cost will gradually increase from NT\$12 million in 2030 to NT\$36 million in 2050.

## 4.1.2 Energy Management

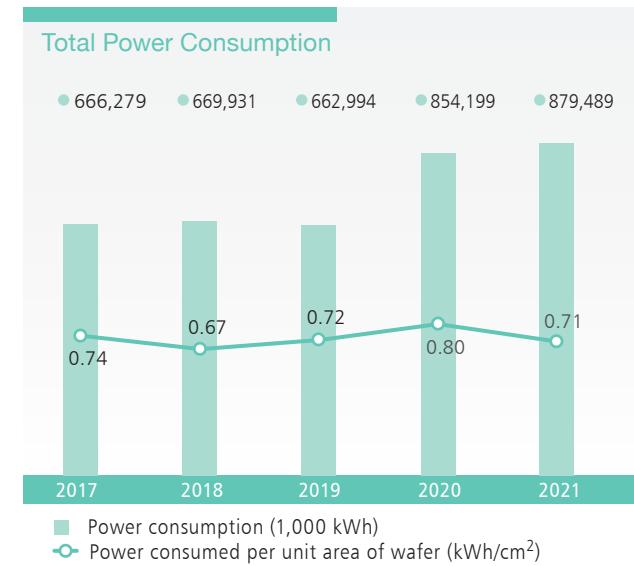
### Energy Policy

VIS is a specialty foundry service provider specializing in IC design, R&D, manufacturing and sales. To ensure corporate sustainability and perform the duties of a good corporate citizen, VIS involves all employees in the operation of energy management system, emphasizing risk management, green production, and energy shock, to achieve the goals of meeting regulatory requirements, answering customers' demands, and enhancing power usage effectiveness. To achieve these goals, VIS is committed to continue implementing and improving the following:

- (1) Compliance with energy regulations – comply with related laws and regulations;
- (2) Effective Utilization of energy – treasure and properly utilize resources, such as electricity and natural gas;
- (3) Realization of management by objectives – Set energy performance indicators and adopt PDCA model for management;
- (4) Continued Improvement of Performances – Inspect and review regularly to continue improving PUE;
- (5) Support for Green Procurement – Support procurement of energy-saving facilities or products;
- (6) Promotion of Internal and External Communications – Establish internal/external communication channels to facilitate information transmission;
- (7) Provide proper resources to achieve objectives and targets;
- (8) Strive for energy conservation and sustainability.

VIS continues its efforts in lowering carbon emissions. Between 2015 and 2021, VIS' power consumption per unit area of wafer was reduced from 1.01kWh/cm<sup>2</sup> to 0.71kWh/cm<sup>2</sup>, which was a 30% reduction. In 2021, VIS' annual revenue was NT\$43.95 billion, total energy consumption was 902,208MWh, and the energy intensity was 0.21. VIS continued to conserve energy within its public facilities. In response to government's ESCO plan, VIS invested in replacement of large energy- conserving equipment in 2021, investing NT\$231.67 million and saving 18.49 million kWh of power. A total of 30 energy conservation projects were proposed in four major categories of public facilities/air conditioning/adjustment of process parameters/replacement of energy-saving auxiliary equipment of machines, among which 25 improvements were made.

Fab 1/2/3 obtained ISO 50001:2011 certification in 2017, and transitioned to ISO 50001:2018 certification in 2020; all fabs continued to pass SGS third-party certification. The systematic management processes and energy utilization rate comparison across fabs of ISO 50001:2018 have enabled VIS to identify new opportunities for improving our energy-saving capabilities, thus enhancing the company's energy conservation efforts. Through continuous implementation of multiple energy-conservation schemes, VIS invests in more energy-conserving measures and responds to national energy conservation goals. According to the "1% Energy-Saving Target Formulated by Energy Users" promulgated by Ministry of Economic Affairs on August 1, 2014, VIS has achieved annual power-saving rate above 1% in the past five consecutive years.



Note: VIS added facilities and equipment for capacity expansion, thus power consumption in 2021 increased.

Year	Annual Consumption (kWh) (A)	Energy Saved (Note 1) (kWh) (B)	Power-saving Rate (Note 2) (%) (C)
2017	666,279,086	12,154,982	1.8%
2018	676,454,309	21,135,294	3.0%
2019	667,686,839	18,603,787	2.7%
2020	855,037,203	18,171,696	2.1%
2021	879,488,668	18,492,319	2.1%

Note 1: Energy saved is the sum of all energy-saving results from the year's energy conservation measures.

Note 2: Power-saving Rate  $C=B/(A+B)\times 100\%$

Note 3: 2020 statistical boundary for energy consumption also includes Fab VIS1.

Note 4: Unit Conversion: 1kWh of electricity = 3,600 KJ

### 4.1.3 Renewable Energy

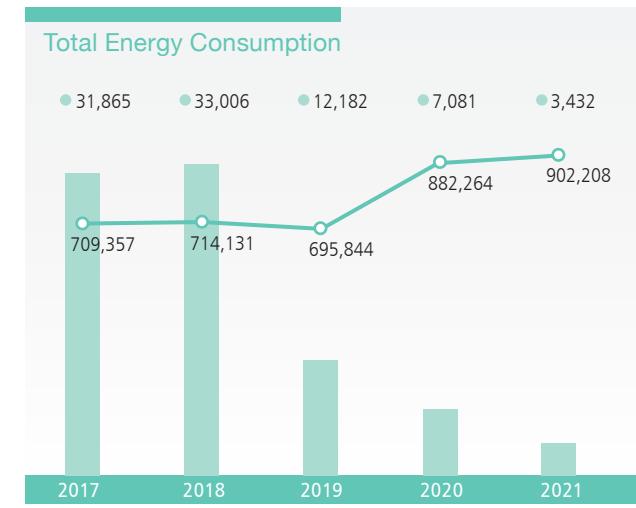
To comply with the government's promotion of utilization of renewable energy through Renewable Energy Development Act, enhance energy diversity, improve energy mix, lower GHG emissions, and improve environmental quality, VIS proactively responds to the government's policy of developing renewable energy, and strives to use clean and pollution-free green energy, demonstrating the spirit of generating power for own use. From 2021 to 2022, VIS will install 270kW of solar PV system annually, and continue to purchase renewable energy and renewable energy generation facilities. By 2023, VIS' renewable energy capacity is projected to reach 8,437kW, generating approximately 11.3 million kWh of power annually.

Also, VIS was approved by Taipei Exchange to issue NT\$5 billion of corporate bond, including NT\$700 million of green bond, to be used for future developments like renewable energy.

### 4.1.4 Greenhouse Gases

#### GHG Inventories and Verification

Reducing GHG emissions is a key method for mitigating global warming and climate change, and conducting an inventory provides supporting data for reduction. An accurate inventory allows us to set



■ Steam Consumption (Ton)  
● Total Energy Consumption (1,000 kWh)

Note 1: Total energy consumption includes natural gas, procured steam, and diesel

Note 2: Unit Conversion: 1m³ natural gas (1L diesel) = 10.5kWh of electricity; 1kWh of electricity = 3,600 KJ

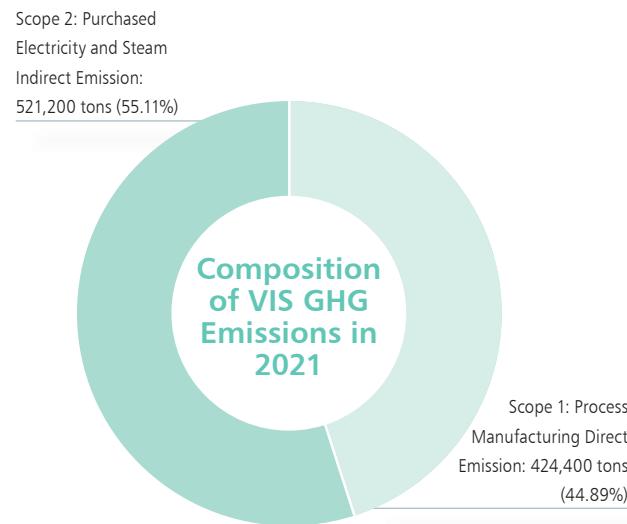
Note 3: VIS added facilities and equipment for capacity expansion, thus power consumption in 2021 increased.

priorities and reduction goals, raise the efficiency of the reduction process, and confirm reduction results. Thus, the earlier the inventory is carried out, the earlier the opportunities and direction of reduction can be identified, achieving better reduction outcomes.

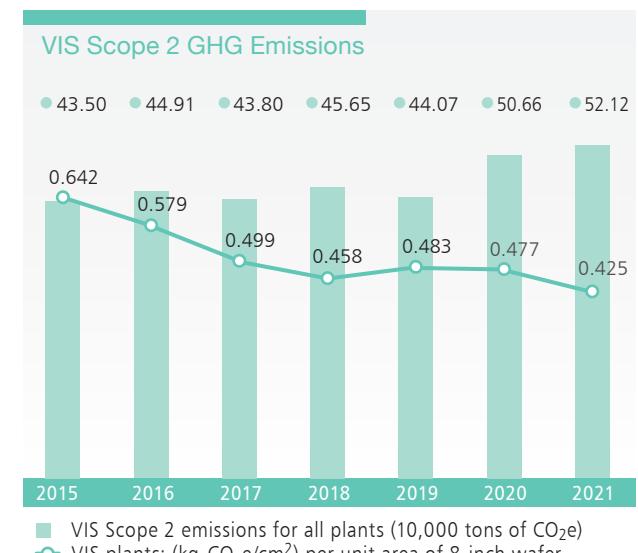
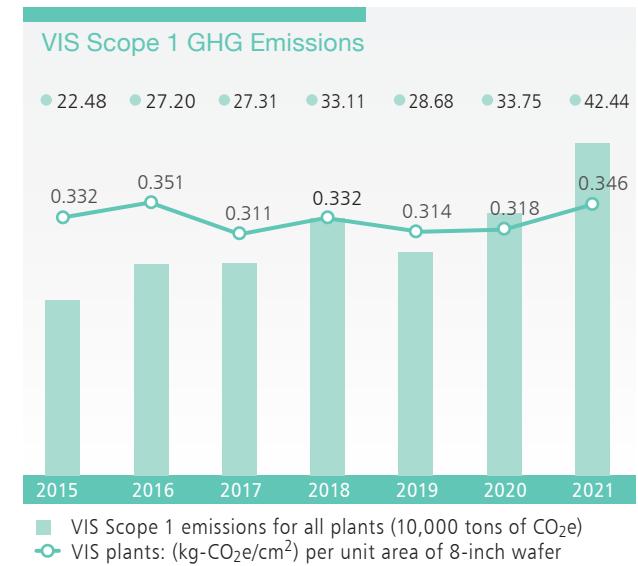
At VIS, Scope 1 GHG emissions refer to direct emission sources at its facilities, including diesel fuel for power generators and natural gas used by stationary emission sources; mobile emission sources include petroleum and diesel fuel (including biodiesel) used for company vehicles; fugitive emission sources include organic waste gas, firefighting equipment, septic tanks, and refrigerant. Scope 2 GHG emissions refer to indirect emission sources consisting of purchased electricity.

VIS conducts its GHG inventories by following ISO/CNS 14064-1 standards, the Executive Yuan Environmental Protection Administration (EPA) Greenhouse Gas Validation Guidelines (Note), "Greenhouse Gas Emission Inventory Registration Guidelines," and the WBCSD/WRI GHG Protocol, with 100% control over operation to define organizational boundaries (Operational Control).

VIS GHG inventory results for Scope 1 and Scope 2 emissions are shown in the charts below. In particular, the area of wafer was based on information that has been verified following GHG inventory.



Note: For the 2021 GHG inventory, GHG emissions were calculated according to the Fourth Assessment Report (AR4) by the IPCC (Intergovernmental Panel on Climate Change); before (including) 2020, GHG inventory calculated GHG emissions according to AR4.



Direct GHG Emissions (Scope 1) (Ton CO <sub>2</sub> e)	Direct GHG (Scope 1)	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021
	Total DGHG Emissions (Scope 1)	286,831.8847	337,466.3252	424,442.5351
Indirect GHG Emissions (Scope 2) (Ton CO <sub>2</sub> e)	IGHG (Scope 2)	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021
	Purchased Electricity and Steam Indirect Emissions (Scope 2)	440,694.332	506,591.23	521,171.67
Perfluorocarbon Emissions (Kg/Ton of Product)	Direct PFC Emission	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021
	Direct PFC Emission	799.5	1,010.2	680.1

VIS referenced carbon footprint calculation to project the following Scope 3 GHG emissions, and passed SGS third- party verification, identifying other indirect GHG emissions other than Scope 1 and Scope 2. The following chart is the result of 2021 Scope 3 GHG emissions inventory.

Category	Description	2021 Scope 3 GHG Emissions (tCO <sub>2</sub> e)
Purchased goods and services	Carbon emissions generated by main materials and auxiliary materials in the process procured for the production of 8-inch wafer, not including outsources services.	154,892.87
Fuel- and energy-related activities (not included in Scope 1 and 2)	Fuel and energy used in fabs. Calculated based on lifecycles with results of Scope 1 and 2 deducted.	106,396.35
Upstream transportation and distribution	Main materials and auxiliary materials procured for the production of 8-inch wafer. The carbon emission generated through the ton-kilometers as materials are transported from suppliers to the fabs (including air, land, and sea).	1,811.19
Waste generated in operations	Carbon emission generated by the wastes through the production process, including transportation and processing of wastes.	3,727.63
Business travel	Carbon emission resulted from domestic and international business trips by employees. Calculated with the round-trip distances via land and air to domestic or international destinations from Fab 1.	13.40
Employee commuting	Calculated using passenger-kilometer from local civic centers of employees' household registrations to each fab.	10,391.97
Downstream transportation and distribution	First-tier point of sales of 8-inch wafers	908.13
Total		278,141.54

## GHG Reduction

The Company has devoted great efforts in the reduction of GHG. In 2005, VIS signed the "Memorandum of Cooperation for the Reduction of Perfluorinated Compound Emissions" with TSIA and the EPA of Executive Yuan. To reduce our Scope 2 GHG emissions, VIS will continue to promote various energy-saving plans (Please refer to "Energy Management") to reduce GHG emissions per unit area of wafer. VIS acquired GLOBALFOUNNDRIES' Fab 3E 8-inch fab in Singapore on January 1, 2020 (now Fab VS1), the future GHG reduction goal in 2025 is 25% lower than the 2015 level of GHG emissions per unit area of wafer. VIS has achieved the 2021 GHG reduction goal of reducing GHG emissions per unit area of wafer to 21% lower than the 2015 level.

## GHG Information Disclosure

VIS ensures the transparency of its GHG information by disclosing relevant GHG emission and reduction information via various types of channels. VIS performs self-inspection during the disclosure process and obtains external opinions to continue to improve GHG emission. Information disclosure channels include the following:

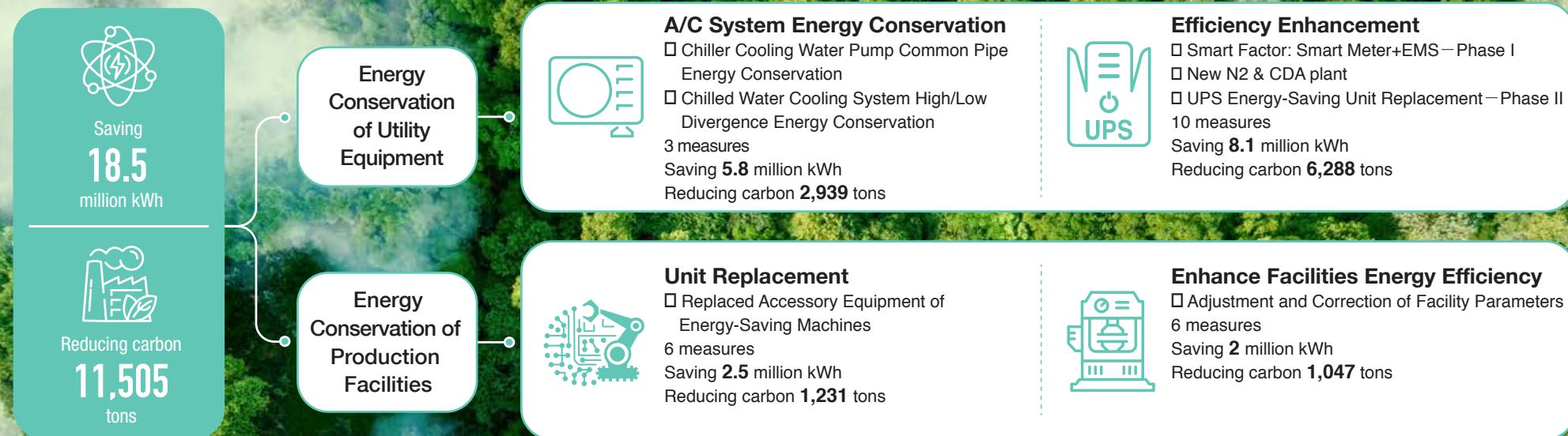
- Since 2005, VIS has utilized third-party verification for annual greenhouse gas (GHG) emissions and submitted annual reports of GHG emission to the Taiwan Semiconductor Industry Association (TSIA) and EPA, Executive Yuan.
- Since 2014, VIS has voluntarily participated in the Carbon Disclosure Project (CDP) to disclose climate change-related information on a yearly basis which includes information on GHG emissions and reductions. In addition, we conduct inspections and make improvements on risks and opportunities relating to legal regulations, natural disasters, finance, and business operations. External bodies are able to access relevant information on the CDP website.
- Since 2014, VIS has made its annual CSR reports publicly available on the Company's website, which includes information disclosures.

### 4.1.5 Energy Conservation Measures

#### 2021 Primary Energy Conservation Measures and Their Effectiveness

The most efficient means of conserving energy and reducing carbon emission is by lowering power consumption. Through real-time equipment management, while maintaining proper usage/quality and normal equipment operations, optimal operating conditions can be achieved, which shortens power-usage time and reduces power consumption. Moreover, equipment efficiency can be increased by using high efficiency equipment (lighting, transformers, motors, air compressors, etc.), and by installing variable-frequency devices in electrical equipment to reduce energy consumption and improve the power factor. Through the above-mentioned methods, VIS implemented management and enhanced equipment efficiency. VIS' energy-conservation measures in 2021 resulted in 18.49 million kWh in reduced electricity consumption, which was an energy conservation rate of 2.1% compared to 2020 and translated to NT\$45.36 million in savings as estimated internally.

# 2021 Primary Energy Conservation Measures and Their Effectiveness 25 measures



Note 1: CO<sub>2</sub> equivalent was 0.509Kg/kWh. Note 2: Unit Conversion: 1kW·h = 3,600 KJ

## Energy Management Plans

VIS' energy management plans are shown in the table below. VIS has set the 2025 target of reducing energy per unit area of wafer to 40% lower than the level of 2015. By 2021, VIS has reduced energy per unit area of wafer to 30% lower than the level of 2015. VIS continues to implement energy conservation plans. The energy management plans to be implemented by VIS from 2022 to 2023 are listed below:

Project Name	Implementation Year
F1/F2/F3 High-Efficiency UPS Replacement – Phase III	2022
F1/F2/F3 Variable-Frequency Dry Pump Replacement	2022
F1/F2/F3 C/R Replacement of Fluorescent Light (White/Yellow) with LED Lighting	2022
F2/F3 Smart Factory: Power Saving – Chiller AI Energy Conservation	2022
F1/F3 Smart Factory: Smart Meter+Energy Management System – Phase II	2022
F1/F2/F3 UPW System Transmission Pump Energy Conservation	2022
F2 UPW Pump INV Installation	2022
F1/F3 CDA Variable-Frequency Controller Replacement	2022
F1/F2/F3 Water Tank Energy-Saving Fan Installation	2022
F3 Chilled Water System Divided into Two Temperatures (6°C/14°C)	2022
F1/F2/F3 High-Efficiency Motor Replacement	2022
F1/F3 HV Motor Replaced with Variable-Frequency Motor	2023
F1/F2/F3 UPS Replacement of Energy-Saving Machine – Phase II	2023
F1/F2/F3 Rotating Equipment Motor Replaced with IE3 High-Efficiency Energy-Saving Motor – Phase I	2023
F1/F2/F3 Green Dry Pump replacement – Phase V	2023
F1/F2/F3 High-Efficiency Chiller Replacement	2023

## Data of Energy Conservation

Unit: NT\$ thousand

	2017	2018	2019	2020	2021
Energy Conservation	29,780	46,700	41,110	43,220	45,360
Data Coverage	100%	100%	100%	100%	100%

## Total Non-Renewable Energy Consumption

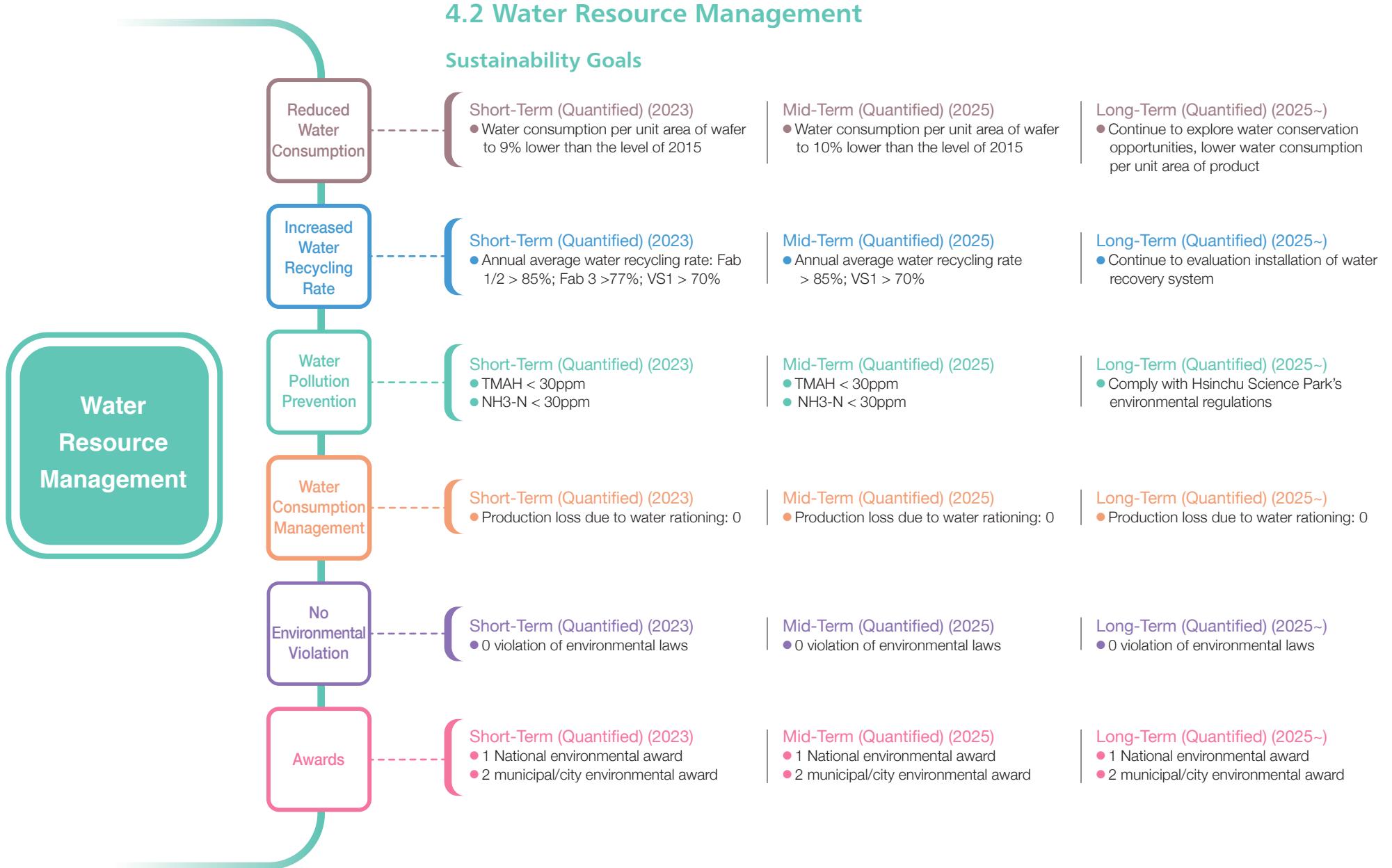
Unit: MWh

Total Energy Consumption	2017	2018	2019	2020	2021
(A) Non-Renewable Fuels (Procured or Used)	18,624	18,871	18,808	21,792	20,085
(B) Non-Renewable Electricity (Procured)	666,279	669,931	667,687	855,037	879,489
(C) Other Procured Energy (Steam)	24,455	25,330	9,349	5,434	2,634
(D) Total Procured or Generated Renewable Energy	0	0	0	0	0
(E) Total Sold Renewable Energy	0	0	0	0	0
Data Coverage	100%	100%	100%	100%	100%

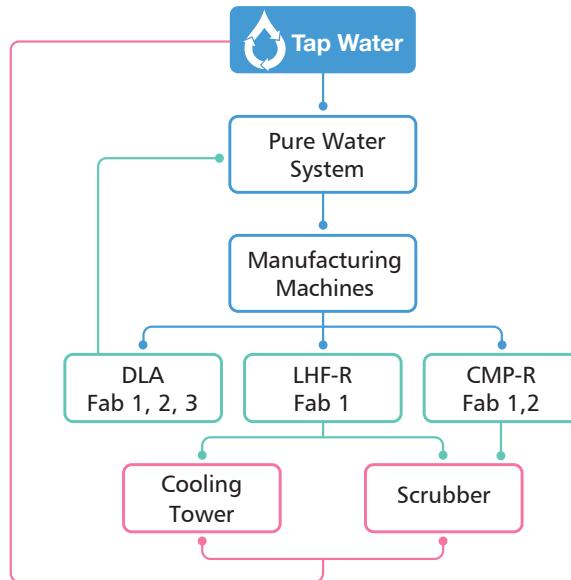
## Total Energy Consumption

Unit: MWh; NT\$ thousand

Total Energy Consumption	2017	2018	2019	2020	2021
Total Non-Renewable Consumption (A+B+C-E)	709,357	714,131	695,844	882,264	902,208
Total Amount of Energy Procurement	1,471,654	1,514,022	1,507,383	2,024,625	2,136,607
Data Coverage	100%	100%	100%	100%	100%



## Schematic Diagram of Water Recycling



### 4.2.1 Water Information

Located within the Hsinchu Science Park, the VIS' Fab 1 and Fab 2 typically use tap water supplied from the Baoshan Dam and Baoshan Dam No. 2. The wastewater generated within these two plants is preprocessed inside the plants in accordance with regulations, and then treated in the Hsinchu Science Park wastewater treatment facilities before being discharged. Fab 3 is located in Taoyuan City, using water supplied from the Shihmen Dam as its water source; its wastewater is processed and verified to conform with the water discharge standards, then discharged into Taoyuan's Takeng River. Fab VS1 is located in Singapore and uses Newater. The impact of climate change has increased the likelihood of droughts and floods in Taiwan, further increasing the risks of water shortages and floods. Therefore, the management of water resources, water recycling, and response measures during water shortages are critical.

In terms of water resource management, VIS has developed the "VIS water vehicle transportation contingency response plan during water shortages" based on the status and condition at each plant as well as the practices of other foundries in order to lessen the impact of water shortages on production processes during periods of low rainfall.

VIS maximizes the reuse of water discharged from its manufacturing processes. Based on the characteristics of the discharged water, VIS has established over 10 types of water discharge pipes according to water quality and user demands. Recycling systems are used to reduce wastewater discharge and ease the burden on the environment, as well as prevent the use of tap water as refills, thereby conserving water resources.

## Water Resource Risk Management

In terms of water resource risk management, VIS adopts World Resources Institute's (WRI) water risk assessment tool to identify the water resource stresses and risks of the regions fabs are located in. The identification results show that fabs in Taiwan are exposed to mid-level risks, and VS1 is exposed to low-level risks. All VIS fabs are not located in high-risk regions, and water intakes of all the fabs are less than 2% of their respective regions, resulting in no significant impact on water sources.

Nonetheless, to prepare for the unexpected, VIS makes use of the opportunity of employees serving as representatives of park industry association water resource task force to further increase social engagement of the company. VIS proactively participates in water-saving consulting or technical sharing organized by Hsinchu Science Park Bureau or Water Resources Agency, exchanging with peers on water recycling and utilization. VIS also carries out autonomous water shortage responses; during dry periods, VIS cooperates with government agencies to carry out responses, achieving water-saving targets set by the government, and coordinates with Hsinchu Science Park Bureau or Water Resources Agency for allocation of water resources, ensuring the quality and quantity of tap water supply.

Moreover, Water Resources Agency plans to build additional seawater desalination facilities in Hsinchu and connect Shimen Reservoir with Baoshan Reservoir, ensuring regional water allocation and satisfying future water demand of Hsinchu Science Park in 2025.

Region	Fab	Water Source	WRI Water Risk Assessment Level
Taiwan	Fab 1	Baoshan Reservoir 1 & 2; backed up by Yongheshan Reservoir	Mid to Low
	Fab 2		
	Fab 3	Shimen Reservoir; backed up by Feicui Reservoir	
Singapore	VS1	Municipal wastewater reuse (Newater)	Low

## Water Source and Intake

Unit: Million L/Year

Year	2017	2018	2019	2020	2021
Surface Water	1,348.93	1,554.17	1,508.71	1,249.23	1,371.78
Ground Water	0.00	0.00	0.00	0.00	89.91
Third-Party Water	3,508.79	3,432.70	3,473.86	5,309.42	5,383.05
Total Intake	4,857.72	4,986.87	4,982.57	6,558.65	6,844.74

Note: Third-party water refers to tap water supplied by Taiwan Water Corporation, which comes from surface water, and is freshwater ( $\leq 1,000$  mg/L TDS).

### 4.2.2 Water Recycling Management

In addition to setting a manufacturing recycling rate of 85% required by the science park as our goal, VIS also selected water-conserving manufacturing machines, ensured effective diverting and discharging water drainage pipes, constructed various water recycling systems, and persisted in promoting water-conservation measures, in order to reduce our reliance on tap water.

In 2021, VIS' Fab 1 and Fab 2 plants recorded an average water recycling rate (Note) of 87.1% and 85.5%, respectively, which were both higher than the science park's requirement of 85%. Fab 3 is located in Taoyuan and outside the science park; however, the water recycling goal for Fab 3 was 75%, and

Fab 3 achieved 77.1% water recycling rate in 2021. After acquiring Fab VS1 in Singapore in 2020, VIS proactively planned water-saving measures and equipment to enhance the water recycling rate, which reached 60.9% in 2021.

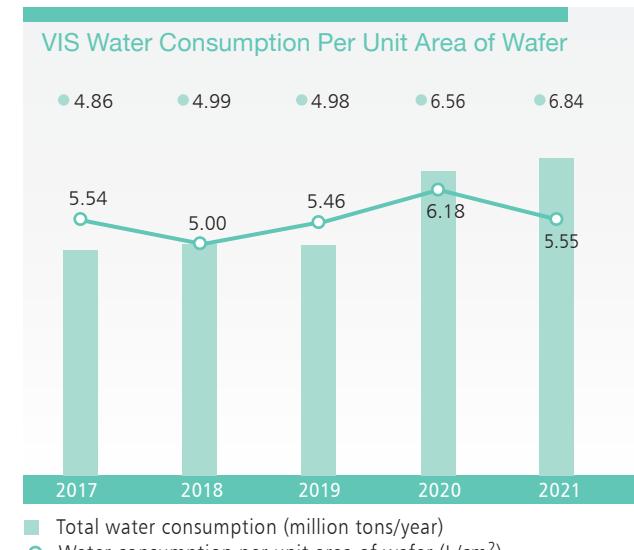
With regard to the volumes of water recycled from the production process between 2021 and 2015, Fab 1 increased by approximately 10.4%, Fab 2 increased by around 5.3%, and Fab 3 increased significantly by 142.5%, whereas Fab VS1 is currently implementing improvement of water recycling. From 2015 to 2021, VIS has accumulated nearly 60 million metric tons of recycled water.

Year	2017	2018	2019	2020	2021
Fab 1 average Water Recycling Rate (%)	86.7%	86.4%	86.4%	86.7%	87.1%
Fab 1 amount of recycled water (million metric tons)	2.71	2.77	2.76	2.87	2.78
Fab 2 average water recycling rate (%)	85.4%	85.3%	85.5%	85.3%	85.5%
Fab 2 amount of recycled water (million metric tons)	3.61	3.66	3.71	3.70	3.66
Fab 3 average water recycling rate (%)	76.7%	77.0%	77.0%	77.1%	77.1%
Fab 3 amount of recycled water (million metric tons)	1.98	2.01	1.97	1.96	2.08
Fab VS1 average water recycling rate (%)				59.8%	60.9%
Fab VS1 amount of recycled water (million metric tons)				1.30	1.61
Total amount of recycled water (million metric tons/year)	8.31	8.43	8.45	9.83	10.13

Note: All water recycling rates at VIS Fabs are calculated based on Science Park Bureau's Water Balance Chart.

VIS has set the goal of reducing water consumption per unit area of wafer to 8% lower than the 2015 level by 2021, which is the company's water-saving target. With the acquisitions of Fab 3 in 2015 and Fab VS1 in 2020, VIS carried out production water recycling improvement projects and therefore, the water consumption per unit area of wafer has dropped from 6.7L in 2015 to 5.55L in 2021, achieving approximately a 17.1% reduction of water consumption.

Note: water recycling rates were calculated based on each fab's water balance chart, and therefore were not converted into the water recycling rate of the entire company.



Note: Water consumption per unit area of wafer increased due to the acquisition of Fab VS1 in 2020; VIS will devise water-saving measures to lower the water consumption per unit area of wafer.

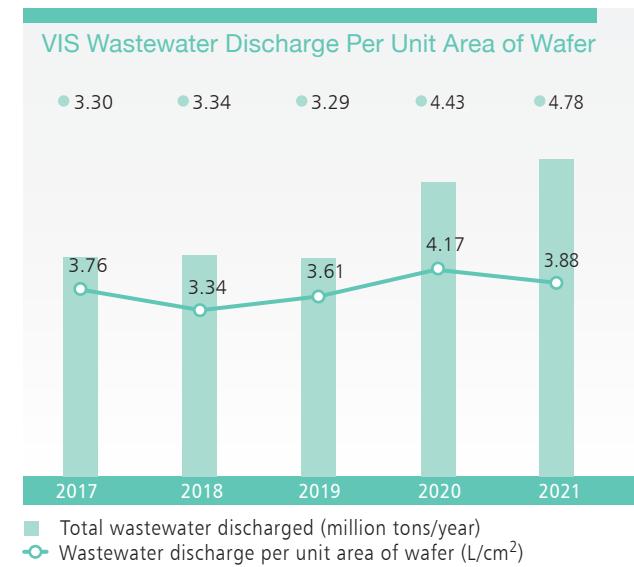
The amounts of tap water consumed by VIS in 2019, 2020, and 2021 changed with the acquisition of Fab VS1, capacity and recycling rate of water discharged through the process. The amount of tap water consumed by VIS was 4.98 million (2019), 6.56 million (2020), and 6.84 million (2021) metric tons. The 2019 data was verified during the product water footprint assurance carried out once every two by SGS under the commission of VIS; the most recent assurance was completed in August 2020. 2020/2021 data remain to be verified.

VIS' water conservation and recycling efforts are also reflected by the reduction of discharged wastewater. With the acquisitions of Fab 3 in 2015 and Fab VS1 in 2020, VIS carried out production water recycling improvement projects and therefore, the trend reflected the decline in wastewater discharge per unit area of wafer from 5.08L in 2015 to 3.88L in 2021, achieving approximately a 23.6% reduction of wastewater.

#### 4.2.3 Water Resource Management Plans

Water resource management plans of VIS are listed in the chart below. VIS has set the goal of reducing water conservation per unit area of wafer to 8% lower than the level of 2015 by 2021. By 2021, VIS has reduced water consumption per unit area of wafer to 17.1% lower than the 2015 level.

Category	Water-conservation Measures	Implementation Year
Water conservation at public facilities	Altered WWTs sand filter tower backwash to ROR concentrated water to reduce the depletion of water resources	2020
	Recycled and reused water discharged from the west MAU	2020
	Adjusted the ROR recovery ratio	2021
Water conservation at production facilities	Recycled and reused discharged water from 1B UF backwash	2018
	Water saving for change QDR idle	2019
	Recycled and reused discharged water from PB UF backwash	2020
	Adjusted the RO recovery ration	2021



Note: Wastewater discharge per unit area of wafer increased due to the acquisition of Fab VS1 in 2020; VIS will devise water-saving measures to lower the wastewater discharge per unit area of wafer.

VIS' water pollution prevention strategy focuses on reducing the generation of pollutants, recycling and treating water pollutants by using effective equipment to make sure that the quality of discharged water is better than or equal to the standards set by the government. VIS also continued to take measures in reducing the concentration of tetramethylammonium hydroxide (TMAH) and ammonia nitrogen ( $\text{NH}_3\text{-N}$ ) in water discharges in order to mitigate the harmful effects of water discharge.

VIS has installed water quality and quantity monitoring equipment at the discharge outlet of its wastewater treatment facilities to monitor and record changes in water quality and quantity. To prevent wastewater tanks from rupturing causing contamination of underground water, the Company also conducts sampling tests every year on the underground water within its plants, as well as the soil inside its facilities every 3 years. This ensures that wastewater discharge and underground water and soil conditions near the vicinity of the plant comply with monitoring standards.

Analysis results of wastewater discharge quality show sound stability of every fab's wastewater treatment facilities. The results are shown below:

Item	Fab Location		Control Standards	2017	2018	2019	2020	2021
Suspended Solids (SS) Concentration in Wastewater (mg/L)	Inside the Science Park	Fab 1, 2	300	6.8-170.0	5.9-44.5	5.7-255	1.4-42.5	2.7-47
	Outside the Science Park	Fab 3	30	2.3-18.3	12.1-17.0	4.0-29.0	4.5-29	5.7-28.5
Chemical Oxygen Demand (COD) Concentration in Wastewater (mg/L)	Inside the Science Park	Fab 1, 2	500	29.9-131.0	22.5-202.0	31.2-127	27.3-147.0	30.3-152.0
	Outside the Science Park	Fab 3	100	5.9-53.9	35.1-55.0	9.0-54.5	12-63	14.4-63.6
TMAH Concentration in Wastewater (mg/L)	Inside the Science Park	Fab 1, 2	30	0.5-19.3	10.4-26.4	1.3-26.4	7.57-26.5	9.96-24.5
Ammonia Nitrogen Concentration in Wastewater (mg/L)	Inside the Science Park	Fab 1, 2	50	8.3-46.1	12.7-37.5	10.9-29.8	14.7-31	15.4-36.1
	Outside the Science Park	Fab 3	30	16.4-18.6	16.8-19.8	4.7-29.0	11-25	6.2-29.6

Note: Fab 1,2 data come from samples taken twice a month by Hsinchu Science Park Bureau; Fab 3 is located outside of the Science Park, the data come from samples taken twice a month by an outsourced agency.

Each fab's wastewater treatment facilities are equipped with proper backup systems, including emergency power, to ensure normal operation in the event of equipment failure. All wastewater treatment facilities of VIS are included in the central monitoring system, which is closely monitored around-the-clock by on-shift personnel; in case of abnormal water quality or quality values exceeding limits, the system will send out warning and temporary stop wastewater discharge until the abnormal situation is resolved.

**Wastewater Discharge Water-Body Types and Amounts**

Unit: Million L/Year

Year	2017	2018	2019	2020	2021
Surface Water	1,140.79	1,130.65	1,078.32	1,125.63	1,245.14
Ground Water	0.00	0.00	0.00	0.00	0.00
Seawater	0.00	0.00	0.00	0.00	0.00
Third-Party Water	2,159.46	2,204.67	2,211.65	3,306.83	3,531.87
Total Discharge	3,300.25	3,335.32	3,289.97	4,432.45	4,777.01
Degree of Treatment	Secondary	Secondary	Secondary	Secondary	Secondary

Note: All discharges are freshwater ( $\leq 1,000$  mg/L TDS).**Total Water Consumption**

Unit: Million L/Year

Year	2017	2018	2019	2020	2021
Total Intake	4,857.73	4,986.87	4,982.57	6,558.65	6,844.74
Total Discharge	3,300.25	3,335.32	3,289.97	4,432.45	4,777.01
Total Consumption	1,557.48	1,651.55	1,692.60	2,126.20	2,067.73

**Water Consumption**

Unit: Million Ton

Year	2018	2019	2020	2021	2021 Target
(A) Quantity of Water Intake: From Taiwan Water Corporation (or other water supply system)	3.433	3.474	5.309	5.383	
(B) Quantity of Water Intake: Surface water (lake, river, etc.)	1.554	1.509	1.249	1.372	
(C) Quantity of Water Intake: Ground water	0	0	0	0.090	
(D) Reused Water: Water returns to sources that have the same or better water quality compared to the original source of water (applicable to only B and C)	0	0	0	0	

Year	2018	2019	2020	2021	2021 Target
(E) Total Freshwater Consumption (A+B+C-D)	4.987	4.983	6.558	6.845	6.850
Data Coverage	100%	100%	100%	100%	

**Trend:** In 2021, fabs in Taiwan adjusted percentage of recycled water due to drought, and therefore used less pure water; VS1 increased capacity by 73%, and therefore water consumption increased.

**Targets:** 2021 VIS target is calculated by adding TW target calculated through linear regression of actual amounts from 2016 to 2021 (TW Fabs only) and 2021 SG actual discharge.

**Method:** Continue to plan and establish wastewater recycling system.

### Ultra Pure Water (UPW)

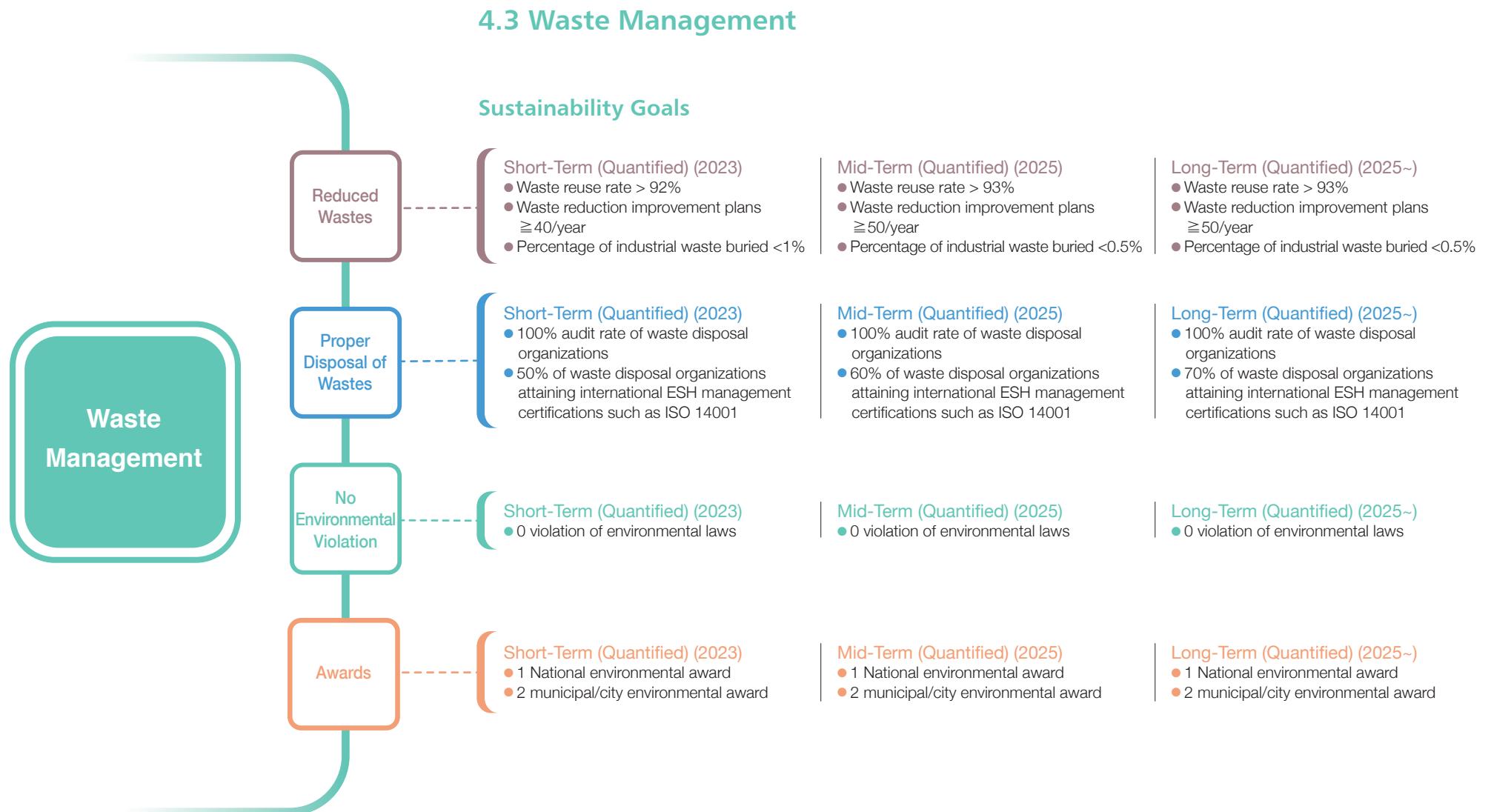
Unit: Ton

Year	2018	2019	2020	2021	2021 Target
UPW Consumption	6,992,666	6,979,430	8,718,083	9,071,904	9,140,000
Data Coverage	100%	100%	100%	100%	

**Trend:** In 2021, fabs in Taiwan adjusted percentage of recycled water due to drought, and therefore used less pure water; VS1 increased capacity by 73%, and therefore water consumption increased.

**Targets:** 2021 VIS target is calculated by adding TW target calculated through linear regression of actual amounts from 2016 to 2021 (TW Fabs only) and 2021 SG actual discharge.

**Method:** Continue to optimize operational conditions of pure water system.



## Life Cycles and Management of Substances/Resources

Waste management at VIS has shifted from the traditional approach of cleaning and disposing of wastes to an integration of resource management. VIS has designated professional technician for waste disposal management, and adhered to the spirit of ISO 14001 to formulate detailed management regulations. In addition, VIS requires its employees to comply with requirements mandated for the classification, collection, storage, and clearance of wastes, doing our best to recycle and reuse wastes as valuable resources.

To facilitate sustainable utilization of resources, the primary principle of waste management is to reduce the use of processed chemicals, which in turn lowers waste output. Furthermore, we prioritize in the recycle and reuse of waste materials. We view other treatment methods such as incineration and burial of wastes as a last resort.

To properly manage VIS' wastes, our internal waste management has extended its focus from proper clearing and disposal of wastes to reducing waste at the source and recycling wastes. To reduce wastes production, we encourage employees to provide suggestions based on the results of ISO 14001 for reducing the use of resources in order to minimize waste production at the terminal end.

## Waste Reuse Methods

The waste we produced is mainly composed of acid waste, solvent waste, and sludge, most of which are physically or chemically treated into industrial raw materials or additives for cement or bricks for reuse. Containers that cannot

be recycled are washed and reused. VIS employs waste disposal and recycling organizations to recycle usable metals (e.g., scrap metal, tin, aluminum). The annual nickel-cadmium battery output volume follows the Basel convention specifications, which are then shipped to advanced countries by sea where they are recycled. Due to limited output volume, VIS shipped no nickel-cadmium battery by sea for recycling in 2021.

Concerning discarded computers, since 2009, VIS has worked in cooperation with Asus in the digital divide project to implement the "Renewable Computer Hope Project," with the hope of establishing a society that embraces resource recycling and cherishes the land we live on. In this Project, discarded computer products were recycled and repaired into operational computers, which were then donated to disadvantaged groups to reduce the digital divide in our society and care for our planet Earth. To date, VIS has donated 8,083 computers and monitors (Note). VIS continues to pay attention to international laws and regulations, customer demands, and future legal requirements to prepare for responses in advance.

## Management of Waste Disposal Organizations

In the management of external waste treatment vendors, VIS conducts annual audits on cooperating vendors, completing auditing on 30 vendors in 2021. During the auditing process, we review the workplace safety and environmental protection practices, waste-related certifications, and onsite

Note: Link to Asus' "Computer Recycling and Education Project": <http://www.asusfoundation.org/recycling.aspx>

operations of our vendors' plants. Moreover, the flow of their products and waste is also evaluated to ensure that material reuse, the products they sell, and their method of waste disposal conform to legal requirements. VIS has teamed up with high-tech companies to formulate evaluation and audit regulations for waste treatment vendors, thus enhancing the quality of audits and facilitating selection of reliable waste treatment vendors.



VIS Waste Disposal Organization Audit includes aspects of "Safety and Health Management," "Environmental Management" (including: requirements for organizations of waste clearance/processing/recycling and reuse, air pollution prevention, water pollution prevention), "Loss Control Management," and "Onsite Inspection". The 2021 audit demanded 11 vendors to make improvements for a total of 19 weaknesses (see table below). All improvements have been completed.

Type of Vendor	Weakness	Number of Cases
Waste Solvent	No warning sign at ladder	2
	Failure to notify contractor operational hazards	2
	No seatbelt and helmet when operating forklift; no blinking reverse light or buzzer	2
	Damaged labels at waste storage area.	1
	No hot surface sign for prevention of burn on boiler	1
	No static grounding device at tank car unloading area	1
	No regular external check for gas detector	1
	No safety cover when equipment is running, causing risk of personnel injury	1
	No water supply for emergency eye-washing/shower station during inspection	1
Waste Acid Liquid	Rusty showerhead at emergency eye-washing/shower station during inspection	1
	No daily check for cargo elevator	1
	No list of emergency eye-washing/shower stations and regular check, and method of maintenance	1

Type of Vendor	Weakness	Number of Cases
Sludge	No warning sign at ladders by air pollution prevention equipment and heavy oil tank	1
Waste Ion-Exchange Resin	Random objects placed inside and in front of emergency eye-washing/shower station	1
Waste Mercury Lamp	No license for operator of forklift	1
General Industry Waste Clearance	No annual calibration and record of weigh station	1
Total		19

## Waste Management Goals

A waste reuse rate greater than 90% is required for all VIS plants. Monthly plant reuse rate reports are submitted to supervisors and environmental safety committee monitors to track our progress. Currently, all VIS wastes are properly removed, processed or reused by qualified institutions. The aforementioned data were verified during the biennial product carbon footprint assurance conducted by SGS under the commission of VIS; the most recent one was done in 2020.

To reinforce the validity of audits on waste treatment vendors, VIS signed the TSIA Convention for Waste Disposal and Reuse by High-Tech Industries in 2017 and participated in TSIA's auditing activities to reduce the risks of legal violations by waste disposal vendors.

The reuse rate of wastes is determined by confirming the method of waste disposal when seeking waste treatment service vendors. If their method of waste disposal is by burial or incineration, then they are excluded from the calculation of reuse rate. VIS' waste production is shown in the table below:

## Waste Production

Unit: metric tons/year

Category	2017	2018	2019	2020	2021
General industrial waste	2,715	3,135	2,670	4,046	4,018
Hazardous industrial waste	3,801	3,798	3,823	4,494	4,894
Total industrial waste	6,516	6,934	6,493	8,539	8,911
Amount of industrial waste recycled	6,077	6,505	6,098	7,906	8,306
Amount of industrial waste incinerated	432	396	390	618	597
Amount of industrial waste buried	7	32	4	16	8
Waste reuse rate	93.25%	93.82%	93.92%	92.58%	93.21%
Percentage of industrial waste incinerated	6.64%	5.71%	6.01%	7.23%	6.7%
Percentage of industrial waste buried	0.11%	0.47%	0.06%	0.19%	0.09%

Note: Waste reuse rate (%) = Amount of industrial waste recycled (metric tons/year)/Total industrial waste (metric tons/year) x 100

Percentage of industrial waste incinerated (%) = Amount of industrial waste incinerated (metric tons/year)/Total industrial waste (metric tons/year) x 100

Percentage of industrial waste buried (%) = Amount of industrial waste buried (metric tons/year)/Total industrial waste (metric tons/year) x 100

**Solid General Industrial Waste**

Unit: Ton

	2018	2019	2020	2021	2021 Target
Total Waste Recycled/ Reused	2,560.09	2,144.29	3,257.15	3,431.06	3,656
Total Waste Disposed	405.03	365.16	611.19	580.77	615
Waste Landfilled	27.07	0.73	8.28	1.90	
Waste Incinerated with Energy Recovery	0	0	0	0	
Waste Incinerated without Energy Recovery	377.96	364.43	602.91	578.87	
Waste Otherwise Disposed	0	0	0	0	
Waste with Unknown Disposal Method	0	0	0	0	
Date Coverage	100%	100%	100%	100%	

**Hazardous Industrial Waste**

Unit: Ton

	2018	2019	2020	2021	2021 Target
Total Waste Recycled/ Reused	3,464.77	3,554.06	4,261.69	4,584.94	4,814
Total Waste Disposed	333.59	269.17	232.44	308.64	290
Waste Landfilled	5.25	3.46	8.28	6.37	
Waste Incinerated with Energy Recovery	310.05	239.68	196.30	282.94	
Waste Incinerated without Energy Recovery	18.29	26.03	26.65	18.88	
Waste Otherwise Disposed	0	0	1.21 (wastewater treatment)	0.45 (wastewater treatment)	
Waste with Unknown Disposal Method	0	0	0	0	
Date Coverage	100%	100%	100%	100%	

## 4.4 Air Pollution Control



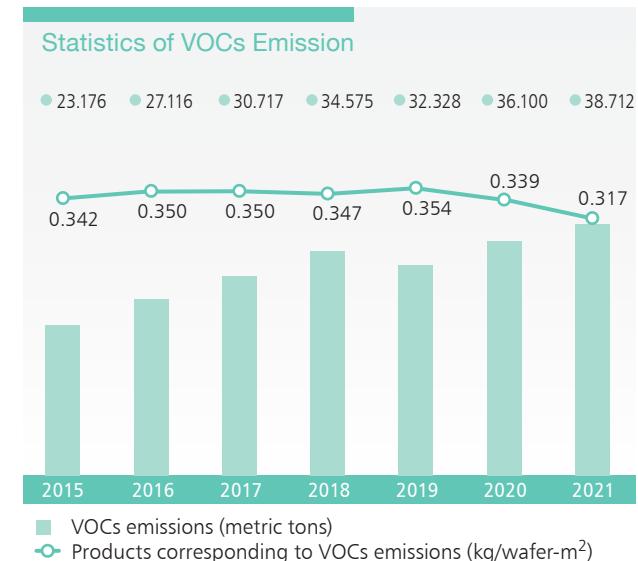
The air pollutants generated by the semiconductor industry are VOCs and acidic or basic gases. VIS adopts classification at source, and best feasible technology in multiple phases to implement air pollution control. Then VIS processes the pollutant before effectively treating it using high-performance control equipment. The content of pollutant emitted into the atmosphere is less than (or conforms to) the amount specified in government regulations. Based on VIS' annual test results, the concentration and emission of air pollutants were substantially lower than the permitted amount allowed by the EPA of Executive Yuan.

Proper backup systems, including emergency power, have been setup to ensure normal operation in the event of equipment failure, thereby reducing the risk of abnormal discharge of pollutants. Equipment for processing VOCs uses clean, natural gas as fuel, but it is also equipped with other fuel supply systems. If problems arise with the supply of natural gas, backup fuel can be used instead to ensure the smooth operation of our pollution prevention facilities. All VIS plants have VOCs systems that are equipped with rotor processing equipment. In 2021, Fab 2 replaced a rotor processing equipment of the VOCs system and Fab 3 added another VOCs system in 2021, in order to achieve removal rate better than the legal requirement (>90%). The average removal efficiency of VOCs in plant areas in Taiwan was 94.11% last year, which was better than the 92% established by the environmental impact assessment best available control technology. Moreover, according to estimated air pollutant emission coefficients of VOCs formulated by the EPA with respect to the semiconductor industry, VIS fabs in Taiwan and Singapore combined to report VOCs emissions of 38.71 metric tons in 2021.

VIS has set the 2023 goal for all fabs in Taiwan and Singapore to reduce VOCs emissions per unit area of wafer by 8% compared to the 2015 level. By 2021, VOCs emission per unit area of wafer has been reduced by 7% lower than the 2015 level.

At VIS, natural gas and minor amounts of diesel fuel are used (for power generators). According to estimated air pollutant emission coefficients of NOx and SOx formulated by the EPA with respect to the semiconductor industry, VIS reported NOx emissions of 18.46 metric tons and SOx emissions of 9.79 metric tons in 2021.

VOCs Emissions						Unit: Ton
	2018	2019	2020	2021	2021 Target	
VOCs Emissions	34.58	32.33	36.10	38.71 (including Singapore)	40.00	



## 4.5 Environmental-Friendly Products

Adhering to the ideal of corporate sustainability, VIS strives to develop environmental-friendly products, and has formulated related measures for procurement, production and manufacturing, logistics, and disposal and recycling, in aim for reduction of consumption of resources, as well as energy conservation and carbon reduction, continually improving the environment.

Environmental Consideration	Stage in Lifecycle				
	Procurement	Production and Manufacturing	Logistics	Product Use	Disposal and Recycling
Hazardous Substances	V				
Energy Efficiency		V		V	
Material Reduction		V			
Material Recycling		V			V
Water Saving		V		V	
Carbon Emissions Reduction		V	V		

Stage in Lifecycle	Implementation Direction	2021 Method
Procurement	Cooperate with vendors to comply with environmental protection laws and regulations, as well as to maintain ecological environment and system and lower influences	All newly established qualified raw materials comply with RoHS requirements
Product Manufacturing	Launch energy conservation projects to enhance product PUE	Energy consumption per unit area of wafer to 30%
	Adjustment of machine operation conditions	Saving O <sub>2</sub> consumption by 947kg/year
	Recycle and reuse materials of emission pipes, gas pipes, and chemical pipes	Reduced wastes by 0.397 metric tons/year
	Reuse of process water to reduce wastewater discharge, while also lowering intake of running water to save water resource.	Water consumption per unit area of wafer to 17.1% lower than the 2015
Logistics	Based on trade terms, delivery date, quantity, and destination, VIS plans shared delivery routes to replace frequent/small-quantity transportation.	

Stage in Lifecycle	Implementation Direction	2021 Method
Disposal and Recycling	Reuse raw material packaging materials and some used product packaging materials to reduce amount of packaging materials and wastes	Recycled 7,063kg of used packaging materials
	Recycle empty boxes after tape-out of raw materials and packaging boxes of semi-finished products delivered to outsourced vendors, and reuse them for (finished) product packaging.	Achieved recycling rate of 94.9%

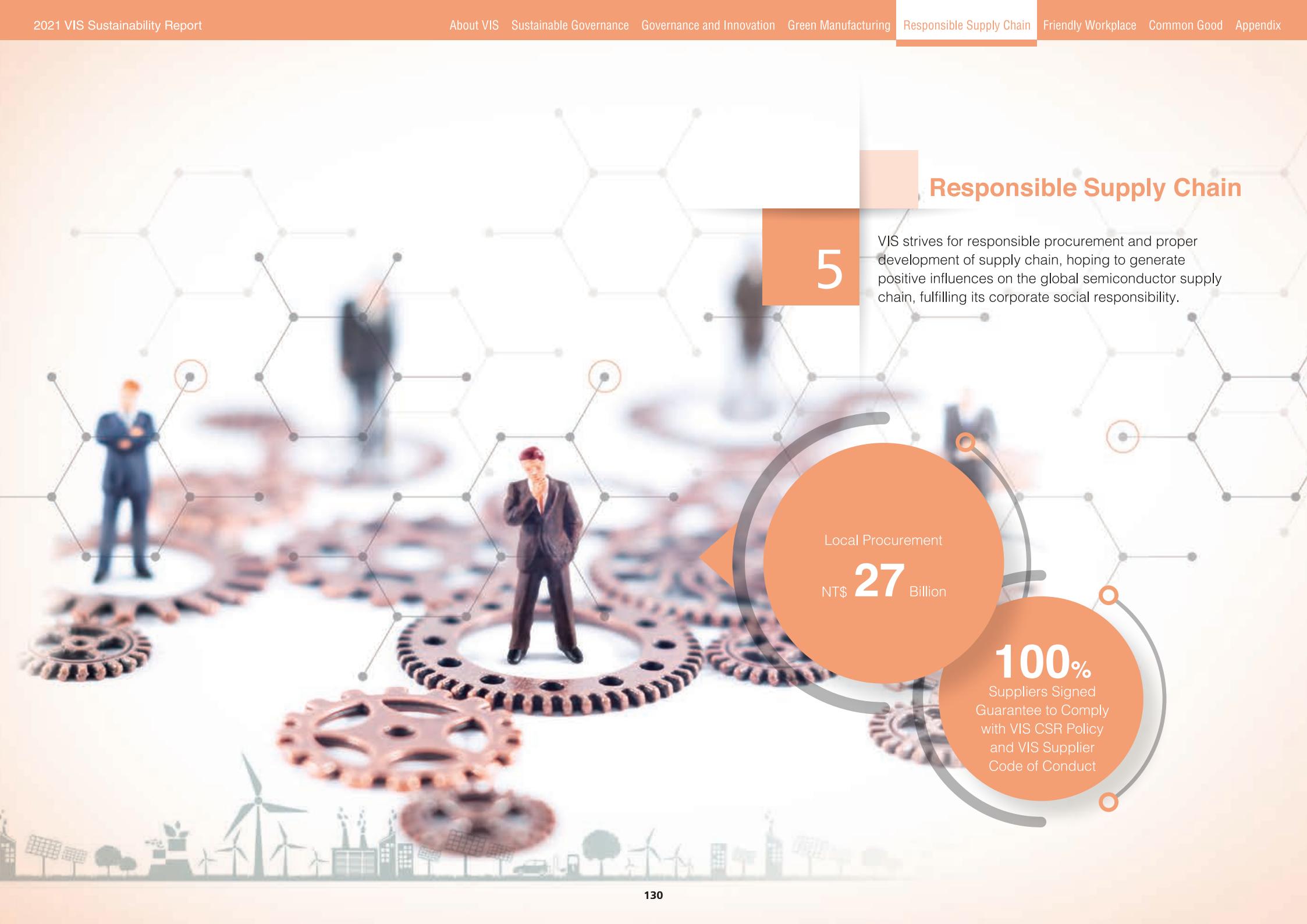
## Environmental Protection Expenditures

In 2021, VIS did not suffer any loss due to environmental pollution. Moreover, in addition to striving for daily maintenance and management of existing facilities, VIS continued to expand preventive facilities of wastewater, waste gas, and emission of air pollutants. In 2021, the total investment in environmental protection was approximately NT\$517 million.

## 4.6 Biodiversity

Factors like complex terrains and climate have created Taiwan's diverse ecological environment and given rise to rich biodiversity. Protecting biodiversity is to maintain and sustain this environment. VIS fabs are located in the science park, and the sites of operation do not come into contact with sensitive areas that would otherwise affect biodiversity or natural forest ecosystem; therefore, there is no concern of potential destruction of biodiversity and clear-cutting of forest. If VIS does engage in development in biodiversity sensitive areas or natural forest ecosystems, the company will carry out environmental impact assessment in compliance with local laws and regulations, and adopt related protective measures to lower the impacts on biodiversity and forest ecology. Also, VIS will continue to protect and take care of trees within the fabs so it will not impact green coverage.

VIS has formulated and promulgated "Biodiversity Pledge" before the publication of this report. For more details, please visit the company's website.

A background image featuring two small, stylized human figures standing on large, interlocking copper-colored gears. The figures are dressed in business attire; one wears a blue suit and the other a brown suit. They are positioned on a white surface that appears to be a conveyor belt or a path through a network of hexagonal nodes connected by lines, representing a complex supply chain system. In the foreground, there's a faint silhouette of a factory or industrial building, and at the bottom, there are icons of wind turbines and solar panels, suggesting a focus on sustainable energy.

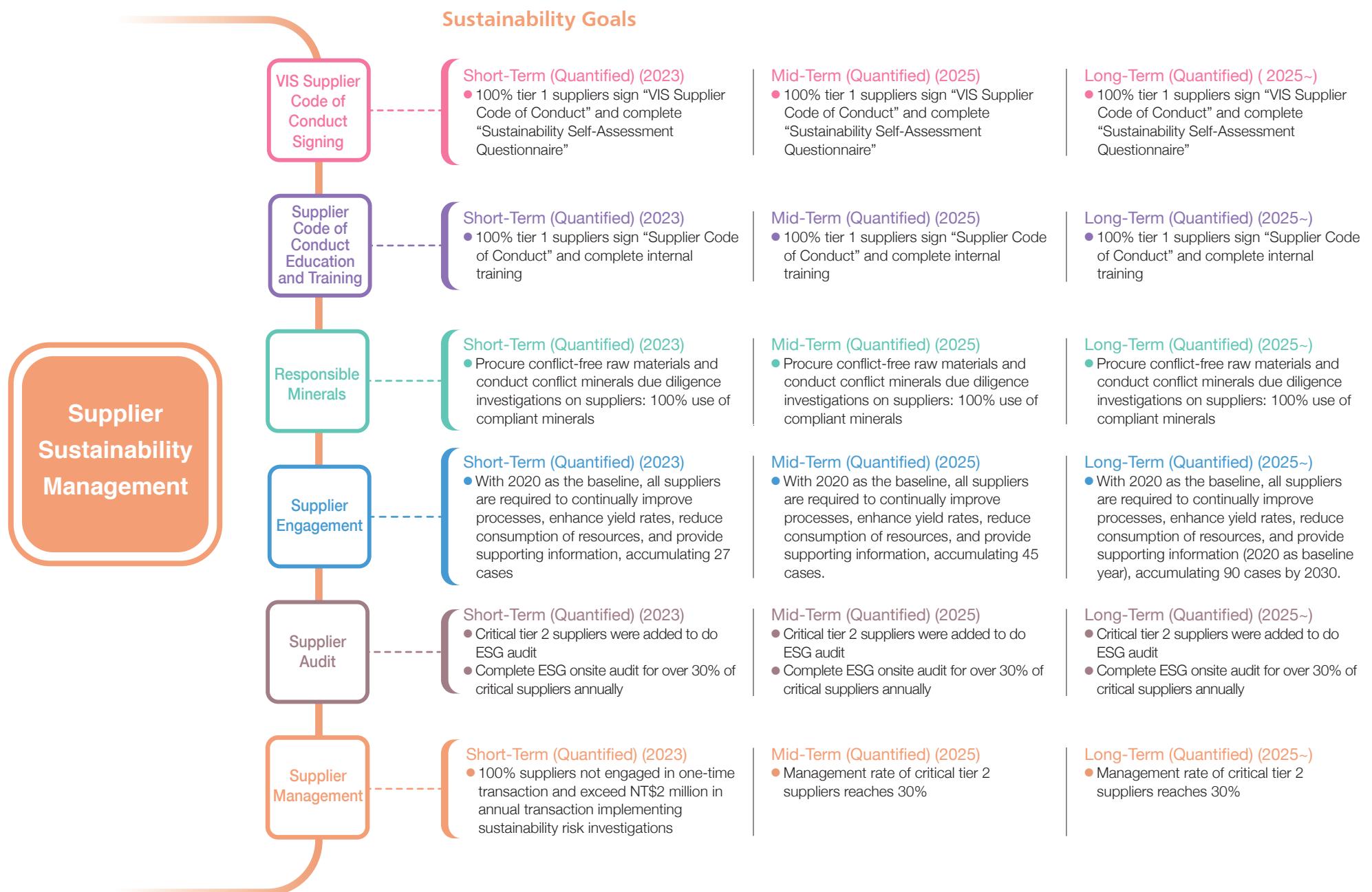
## Responsible Supply Chain

VIS strives for responsible procurement and proper development of supply chain, hoping to generate positive influences on the global semiconductor supply chain, fulfilling its corporate social responsibility.

5

Local Procurement  
NT\$ **27** Billion

**100%**  
Suppliers Signed  
Guarantee to Comply  
with VIS CSR Policy  
and VIS Supplier  
Code of Conduct

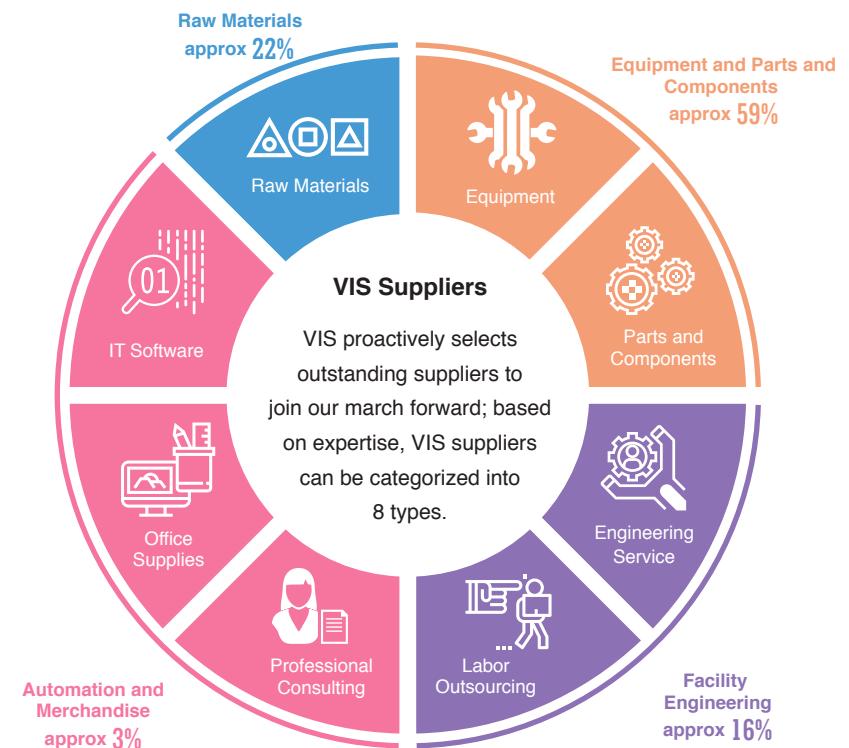


## 5.1 Types of Supply Chain

VIS' supply chain covers an extensive range that includes international and domestic equipment suppliers, parts suppliers, raw material suppliers (8-inch wafer substrates, process chemicals, process gases, photoresist materials, and sputtering targets), engineering services, information software, office supplies (including computer, communication, and consumer electronics), information technology software, and outsourced manpower (security services, cleaning, dormitories, and transportation shuttles). VIS has 1,598 supply chain partners worldwide and we have been devoted to build high quality, stable, and low-carbon local supply chains, and dedicated to support local companies in recent years. More than 97% and 82%, respectively, of our suppliers are domestic suppliers (including manufacturers with branch offices, agents, and distributors) in Taiwan and Singapore. In 2021, VIS continues to accumulate competitiveness in applications such as power management, display, automotive electronics, fingerprint sensor, IoT, and MEMS. In general, the structure of VIS' supply chain has not experienced significant changes.

## Robust Supply Chain Types

### VIS Supplier Types and Ratio (According to Procurement Amount)



Suppliers are categorized into four types: raw materials, equipment, parts and components, facility engineering, and automation and merchandise. Among them, raw materials, equipment, and parts and components suppliers have the most significant influences on the daily operation and production of VIS.

## 5.2 Sustainable Supply Chain Management Strategy

VIS develops a sustainable supply chain management framework to devise sustainable supply chain roadmap based on four major mechanisms and eight key aspects, and realize supply chain management through, identifying supply chain sustainability risk topics, strengthening supply chain resilience, and facilitating sustainable performances of suppliers. Through these actions, VIS establishes long-term partnership with its supply chain, and leads suppliers to grow together, so that they fulfill their crucial roles and exert influences to help VIS enhance its competitiveness.

VIS develops a sustainable supply chain through four management mechanisms and eight key aspects.

### Commitment and Regulations

#### Climate Action

Monitor supply chain carbon emissions and climate change issues to build a resilient supply chain.

#### Value-oriented

Continually enhance supply chain with value-competitiveness.

### Risk Assessment

#### Strategic Cooperation

Integrate supplier resources and capacities to jointly enhance supply chain resilience.

#### Diverse Supplies

Secure multiple sources for various materials to ensure stability of supply chain.

### Continued Improvement

#### Responsible Minerals

Ensure suppliers provide products from reliable sources of conflict-free minerals.

#### Environmental Friendly

Realize green procurement while ensuring operational growth and environmental responsibilities.

### Regular Auditing

#### Quality First

Ensure suppliers provide products and services of the most optimal quality.

#### Risk Management

Improve suppliers' sustainability performances in environmental, social, and economic areas.

## 5.2.1 2021 Supply Chain ESG Action Plan and Achievements

Corresponding VIS Strategy	Sustainability Aspect	Management Mechanism	Action Plan	Objectives	Achievements
Promote Environmental Sustainability	Environmental Friendly	Continued Improvement	<b>Environment-Friendly Low-Carbon Production, Replaced C<sub>3</sub>F<sub>8</sub> by C<sub>4</sub>F<sub>8</sub></b> In 2020, VIS began technical cooperation with gas suppliers, and replaced C <sub>3</sub> F <sub>8</sub> by C <sub>4</sub> F <sub>8</sub> extensively in 2021. C <sub>4</sub> F <sub>8</sub> is a cleaning gas in the manufacturing process with a low GWP value. By changing the gas flow rate, clean time, and clean efficiency, resources utilization efficiency in the manufacturing process is enhanced, successfully reducing GHG emissions in the supply chain.	Procure environment-friendly raw materials and join forces with supply chain for carbon reduction	In 2021, VIS' Scope 3 raw materials reduced a total of approximately 15,520 kg CO <sub>2</sub> e, equivalent to 30,916 kWh.
Establish Friendly Workplace	Strategic Cooperation	Commitment and Regulations Regular Auditing	<b>Assess the Reasonableness of Human Resource Contractors</b> 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.	Zero agency fee payment for 100% of supply chain employees, perfecting human rights protection throughout supply chain	In 2021, a total of 284 foreign workers benefited from this plan, and related fees have been paid by VIS in full (approximately NT\$511,200). 100% of brokers have signed Supplier Code of Conduct, and VIS did not receive any complaints regarding brokers requiring payments from foreign workers in 2021.
Practice Corporate Governance	Responsible Minerals	Risk Assessment	As a member of RMI (Responsible Mineral Initiative), VIS closely follows latest responsible mining related information released by RMI, and uses CMRT (Conflict Minerals Reporting Template) and CRT (Cobalt Reporting Template) developed by RMI for investigation and reporting. VIS has also carried out due diligence investigations on all suppliers, demanding that all suppliers' smelters and refiners must comply with RMI RMAP (Responsible Minerals Assurance Process) and that new suppliers must sign "Letter of Compliance with Environmental Protection and Corporate Social Responsibility," and pledge to comply with VIS' responsible minerals procurement policy, while also submitting qualified CMRT report, before becoming the group's qualified suppliers.	Reduce supply chain management risks, ensure all products use 100% conflict-free minerals	100% of suppliers responded to CMRT or CRT questionnaires, and guaranteed that they did not use conflict minerals.

## 5.2.2 Supply Chain Development Commitment and Code of Conduct

### Supply Chain Development Commitment

The supply chain management of VIS aims at sustainable development, and our commitment to ESG has been publicly disclosed on the company's website to convey VIS' management requirements for supply chain. VIS advocates cooperation with supply chain partners to jointly establish sustainable supply chain, strive for responsible procurement and proper development of supply chain, hoping to generate positive influences on the global semiconductor supply chain, while continually providing responsible and excellent services to our customers. For more details on VIS' commitment on supply chain development, please visit: [https://www.vis.com.tw/en/cs\\_supplier\\_sustainability](https://www.vis.com.tw/en/cs_supplier_sustainability)

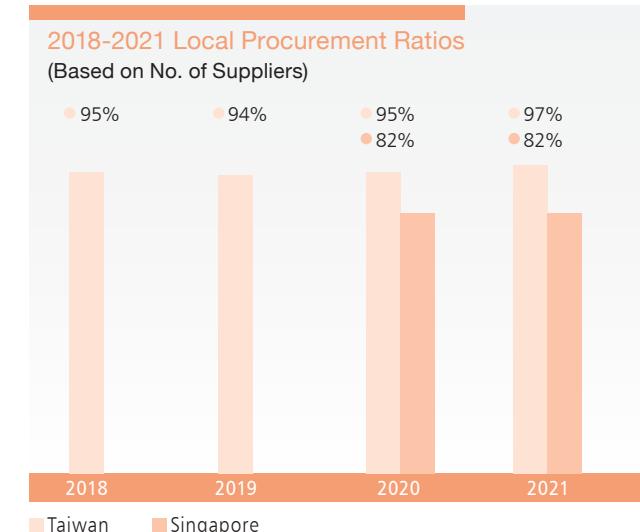
## Local Procurement

The semiconductor industry in both Taiwan and Singapore remains reliant on foreign imports for machinery equipment, raw materials, and software. However, VIS has long launched procurement localization policy, fostering related industry chains and creating the local employment opportunities in Taiwan and Singapore. In addition to diverting risks, and reducing relevant costs, with the length of transportation routes significantly shortened, we will be able to exercise our corporate social responsibility by reducing carbon emissions.

In 2021, VIS collaborated with over 1,000 partners worldwide, and procured from over 97% and 82% of domestic suppliers (including manufacturers with branch offices, distributors, and wholesalers) in Taiwan and Singapore respectively. Our domestic purchases amounted to NT\$25 billion in Taiwan and approximately NT\$2 billion in Singapore, accounting for 69% and 76% of respective total domestic procurements. Compared to the previous year, domestic procurement amount in Singapore increased by around 10%, whereas amount in Taiwan decreased mainly due to procurement of equipment from foreign suppliers to meet the needs of fab expansion.

## Supplier Code of Conduct

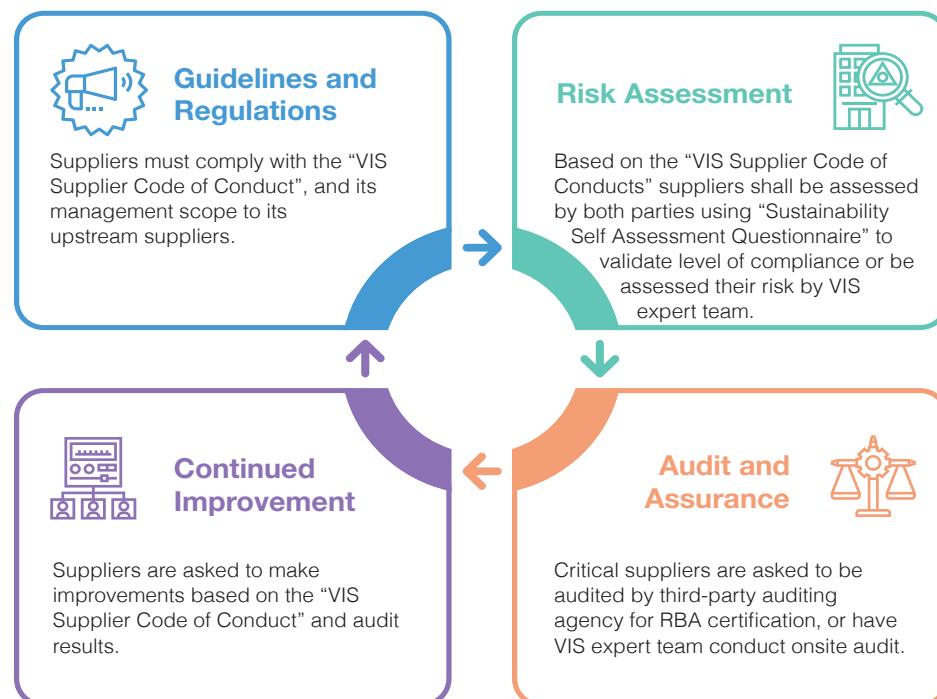
VIS treats all suppliers as business partners and has long-term cooperation with suppliers to jointly establish and develop a stable, competitive and sustainable supply chain partnership. For this purpose, we proactively involve in supply chain development to ensure we can realize the SDGs with our suppliers, formulating VIS Supplier Code of Conduct for all suppliers to comply with; in addition to demanding suppliers to comply with local laws and regulations of respective countries/regions, VIS has devised rules governing business conducts in various aspects, including labor, health and safety, environment, business ethics, and management system. At the same time, suppliers must pass on this Code of Conduct to the next tier suppliers and oversee their compliance. For "VIS Supplier Code of Conduct," please visit: [http://media-vis.todayir.com/20220627170855273283505\\_en.pdf](http://media-vis.todayir.com/20220627170855273283505_en.pdf)



Note: Local procurement refers to VIS suppliers of direct transaction, whose profit-seeking business registration location and VIS' production sites are located in the same country/region. For example, if a supplier's profit-seeking business registration location is in Taiwan/Singapore, it is considered local procurement to VIS' production sites in Taiwan/Singapore.

## 5.3 Supplier Management Mechanism

To fulfill its commitment to supply chain development, VIS has established a four-stage cycle of the supplier sustainability management mechanism, and demands all suppliers (new or existing suppliers) to sign Supplier Sustainability Code of Conduct and achieve a score of over 60 on the annual SAQ to be considered a qualified vendor. Through the cycle, VIS facilitates positive development annually, to not only ensure suppliers' continued compliance with the "VIS Supplier Code of Conduct," but to also lead the continual improvement and commitment of supply chain, and proactively establish sustainable actions with upstream suppliers, jointly creating responsible supply chain of the semiconductor industry for sustainability and common good.



### 5.3.1 New Supplier Selection

With regard to supplier selection, potential material suppliers must be selected and assessed by the VIS supplier management procedures according to the "New Supplier/Material Evaluation Guidelines," "Vendor Safety, Health, and Environment Audit Management Regulations," and "Purchase Operation Instructions"; Potential suppliers must sign and guarantee compliance with the "VIS Corporate Social Responsibility Policy," "VIS Supplier Code of Conduct" and complete relevant evaluation procedures before they are selected to become qualified vendors. Only then can purchases be made from that qualified suppliers.

The evaluation process includes preliminary survey and onsite audit. Our Supplier Quality Management Department conducts the preliminary surveys and specification reviews, then invites our Risk and Environmental Safety Management Department, as well as any other relevant departments to conduct audits. The audits include areas such as quality, environmental protection, health and safety, labor rights etc. Finally, our supplier quality management, procurement, material planning, and risk and environment safety management departments jointly select compliance suppliers as qualified suppliers based on the survey, audit and evaluation results.

To ensure that all suppliers comply with our green product policy, we required suppliers to submit product test reports and safety data sheets (SDS) in accordance with our regulations; the reports are reviewed by designated VIS authorities. In addition, we required suppliers to sign a RoHS pledge, in which they pledge to uphold environmental protection commitments, to ensure that all VIS products and products of its suppliers comply with the VIS green product standards, as well as international regulations and customers' product specifications.

### 5.3.2 Supplier Management

To establish long-term, stable partnership with suppliers, VIS has defined tier 1 and critical tier 1 suppliers as follows.

- Tier 1 supplier refers to:

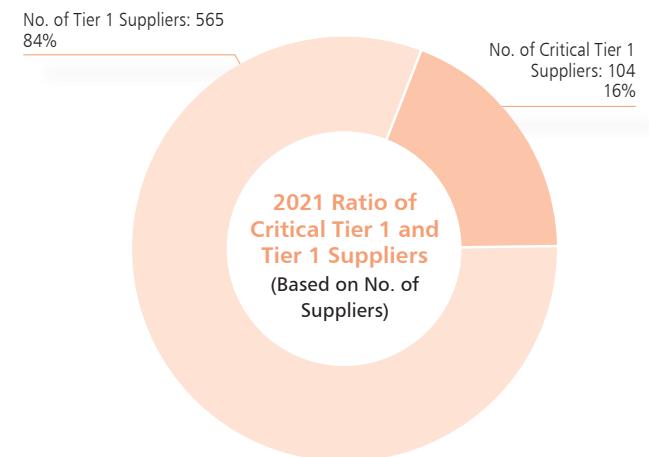
- a. A supplier trading with VIS directly;
- b. A supplier has more than 1 VIS purchase order per year and exceed NT\$2 million in annual transaction.

- Critical tier 1 supplier refers to:

- a. Suppliers in the top 85% of total procurement amount;
- b. Single sources or irreplaceable suppliers.

Critical non-tier 1 suppliers refer to the critical suppliers in the critical tier 1 suppliers' supply chain.

VIS screen and select tier 1 suppliers that have to be monitored and managed according to the number of annual transactions and amount, and fulfill to strengthen the management and cooperations of critical tier 1 suppliers. In 2021, a total of 669 suppliers refer to tier 1 supplier; 104 of them are critical tier 1 suppliers.



## Supplier Risk Assessment

To understand the status of sustainability development of supply chain, and grasp the sustainability risks of supply chain, VIS has conducted supplier sustainability risk investigation and assessment through three risk identification stages annually starting from December 2020, in aim to identify suppliers with high risks in the environment, social and governance aspects, and conduct audit on and provide guidance to those suppliers with higher risks, ensuring their risks can be effectively controlled and lowered.

## Supplier Sustainability Risk Identification Procedure

### Proactive Risk Assessment

#### **Target: All Suppliers (Not One-Time Transaction)**

VIS examines and investigates respective regions, procurement amounts, supplying product types and production processes of all suppliers to carry out preliminary risk identification on suppliers.



Risk Identification Stage

### Sustainability-risk Assessment Questionnaire

#### **Target: Tier 1 Suppliers**

To ensure proper understanding of suppliers' sustainability risks, VIS targets all tier 1 suppliers to conduct sustainability questionnaire survey. Facing diverse and complex supplier types, VIS strives for the validity of the survey, and safeguards the rights of small and medium suppliers, in aim to build a more resilient sustainable supply chain. VIS has different criteria and requirements for critical suppliers and non-critical suppliers.

- Critical Supplier: Sustainability-risk Assessment Questionnaire or RBA SAQ
- Non-critical Supplier: Sustainability-risk Assessment Questionnaire



Risk Identification Stage

### High-risk Supplier Assessment/Audit

#### **Target: High-risk Suppliers**

VIS analyzes and examines survey results of sustainability-risk assessment questionnaire, and identifies suppliers that may be facing high-level risks. Targeting the different natures of suppliers, VIS launches further measures to confirm and lower the risks.

- Critical Supplier with High-risk: On-site audit or RBA VAP
- Non-critical Supplier with High-risk: RBA SAQ



Risk Identification Stage

## Sustainability Risks Investigation Items

Environmental	Social	Economic
<ul style="list-style-type: none"> <li>Environmental management system</li> <li>Carbon risk management</li> <li>GHG management</li> <li>Resource utilization efficiency</li> <li>Waste resource management</li> </ul>	<ul style="list-style-type: none"> <li>Labor rights</li> <li>Labor management mechanism</li> <li>Human rights management</li> <li>Social engagement</li> <li>Occupational safety and health management system</li> </ul>	<ul style="list-style-type: none"> <li>Business continuity program</li> <li>Sustainability management policy and organization</li> <li>Business ethics</li> <li>Conflict mineral management</li> <li>Information security management</li> </ul>
<p>High-risk Supplier Definition</p> <ul style="list-style-type: none"> <li>Supplier has no clear carbon management strategy</li> <li>Supplier takes no environmental management actions</li> </ul>	<p>High-risk Supplier Definition</p> <ul style="list-style-type: none"> <li>Supplier has not evaluated human rights risks of operation sites and supply chain</li> </ul>	<p>High-risk Supplier Definition</p> <ul style="list-style-type: none"> <li>Supplier has not implemented sustainability management on its upstream suppliers</li> <li>Supplier's sustainability management does not meet statutory and regulatory requirements</li> <li>Supplier's information disclosure lacks transparency</li> </ul>

## 2021 Critical Suppliers Sustainability Risk Investigation Results of VIS Supply Chain

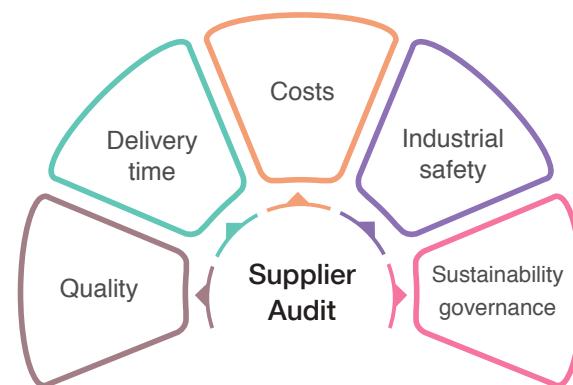


- No. of suppliers audited over the past three years: **55**
- Percentage of suppliers passing the audit: **100%**
- No. of high-risk suppliers: **0**
- Percentage of high-risk suppliers in the group: **0%**

- No. of suppliers audited over the past three years: **669**
- Percentage of suppliers passing the audit: **100%**
- No. of high-risk suppliers: **7**
- Percentage of high-risk suppliers in the group: **1%**
- Target percentage of audited suppliers: **100%**

### 5.3.3 Supplier Audit Confirmation

To effectively manage the product quality, delivery time, costs, services, industrial safety and environmental protection practices of suppliers, the procurement, material planning, quality management and industrial safety departments conduct joint reviews of qualified suppliers listed in the qualified vendors list (QVL) every six months. The review focuses on the factors as product quality, delivery time, costs, services, industrial safety practices, and environmental protection, and a new review factor "sustainability governance" has been added in 2021. In this review, the importance of each item is considered, and different weights are assigned to evaluate a supplier's performance. Even if a supplier demonstrated high performance with evaluation scores of all items at 90 points or above, VIS still requires the supplier to make continuous improvements and enhance its competitiveness.



Note: Evaluation factor "sustainability governance" has been added in 2021.

Regarding management of critical suppliers, the Risk and Environment Safety Management Department holds annual onsite audits to ensure suppliers comply with "Safety, Health, Environmental Protection, and Fire Prevention" laws, regulations and guidelines. In the past three years (2019-2021) 39 onsite audits were conducted. More specifically, in 2019: 25 times; 2020: 13 times; 2021: 1 time. Results from audits in the past three years showed that suppliers' overall performance has been stable and all suppliers were able to meet VIS' requirements; Nevertheless, each competent authorities of audit still provided suppliers with recommendations against complacency and to continuously improve so that suppliers are able to continue to make progress and successively enhance their overall competitiveness.

Furthermore, VIS continues to enhance the sustainability performances of supply chain, and has established supplier sustainability audit system, conducting regular or irregular on-paper or onsite audits targeting suppliers' sustainability accomplishment, or commissioning a third party to implement RBA validated assessment program (VAP) , or to act for VIS to conduct second party audit. Targeting the deficiencies identified through audits, VIS demands suppliers to propose improvement plans, and they must complete the improvement measures within given time. VIS will review the implementation of improvement plans, and check again the improved deficiencies in the following year.

### 5.3.4 Continued Improvement of Supplier

In 2021, we conducted sustainability onsite audit for 104 critical tier 1 suppliers, and adopted the results of RBA VAP onsite audit of eight suppliers; VIS also conducted onsite audit for all high-risk tier 1 suppliers (seven in total, accounting for 1% of all tier 1 suppliers). All critical tier 1 and high sustainability risk tier 1 suppliers completed improvement of deficiencies within given time. After assessment, all complied with VIS regulations and none supplier has been ceased supply cooperation with VIS.

### 5.3.5 Common Good for Supply Chain Partners

VIS continues to strengthen suppliers' capability to face the every-changing trends of sustainability through onsite visits, guidance, and education and training, helping suppliers to establish awareness and capability of sustainability for enhancement of sustainability.

#### Business Continuity Coaching Project

To keep our promise to customers regarding steady supply of goods, VIS has established the Business Continuity Plan and the Aftermath Recovery Plan, reinforced employee training and conduct periodic drill exercises, we also looked at risk management of continuous operation of supply chains as a competitive advantage. VIS demands its suppliers to actively report on post-disaster impacts and restoration plans, and implement relevant investigations and management mechanisms according to the situation in order to reduce the risk of supply interruption, thereby achieving the purpose

of continuity management. In 2021, both Japan and Taiwan experienced frequent earthquakes, and VIS immediately conducted investigation and took responsive measures, so that we were able to immediately provide customers answers whenever they had inquiries.

## Education and Training

The onsite visits executed regularly over the years were suspended due to the COVID-19 pandemic in 2021; nonetheless, VIS still compiled new learning materials and distributed to 1,598 suppliers, with which VIS conducted direct transaction. The teaching materials provided detailed explanation on the content of the VIS Supplier Code of Conduct, while also compiling and listing audit deficiencies commonly seen in the environment, social, and governance aspects in the semiconductor supply chain in recent years, offering suppliers attending the training some lessons to learn from. This enabled suppliers to quickly identify the potential blind spots in the practices of sustainability promotion and proved the effectiveness of sustainability training. In the future, VIS will expand the scale to organize large-scale Supplier Day event for more in-depth supplier interactive guidance.

## Common Good: Joint Forces with Supply Chain to Spread Love to Remote Areas

VIS believes that our people are the roots of our country and the foundation of corporate sustainability. VIS has firmly remained true to its belief and stance of "never give up on any child," and strived to fund students in remote areas and of indigenous descent over the years. To promote corporate

sustainability and local common good, VIS invited for the first time customers and suppliers that were interested to participate in the year-end charity activities in 2021, to jointly participate in the year's social welfare organizations' charity programs, and care for senior citizens living alone, fund students in remote areas who were falling behind academically, children of indigenous villages, and indigenous youths living in urban areas (refer to 7. Common Good).

Visit website for related videos: [https://www.vis.com.tw/tc/csr\\_video](https://www.vis.com.tw/tc/csr_video)



Video "Catching The Children Schools Cannot"

## 5.4 Responsible Procurement

### 5.4.1 Responsible Minerals Statement

All foundry products produced by VIS in 2021 are 100% conflict-free, and all own foundry products have been labelled "Conflict-Free." As for the management of responsible minerals, VIS is in accordance with the requirements of Responsible Business Alliance (RBA, formerly known as EICC: Electronic Industry Code of Conduct), as well as the conflict minerals source disclosure regulations recently issued by the U.S. Securities and Exchange Commission (Rule 13p-1 of the U.S. Securities Exchange Act of 1934), to avoid purchasing conflict minerals (gold, tin, tantalum, tungsten, and other minerals that may be regulated in the future by the RMI (Responsible Minerals

Initiative) from specified countries (Democratic Republic of the Congo and neighboring countries). VIS has disclosed on its official website its conflict minerals management policy. Visit the link below for more details:  
[http://media-vis.todayir.com/20211019140353299895422\\_en.pdf](http://media-vis.todayir.com/20211019140353299895422_en.pdf)

### 100% Conflict-Free Label



### 5.4.2 Conflict Minerals Due Diligence Investigations

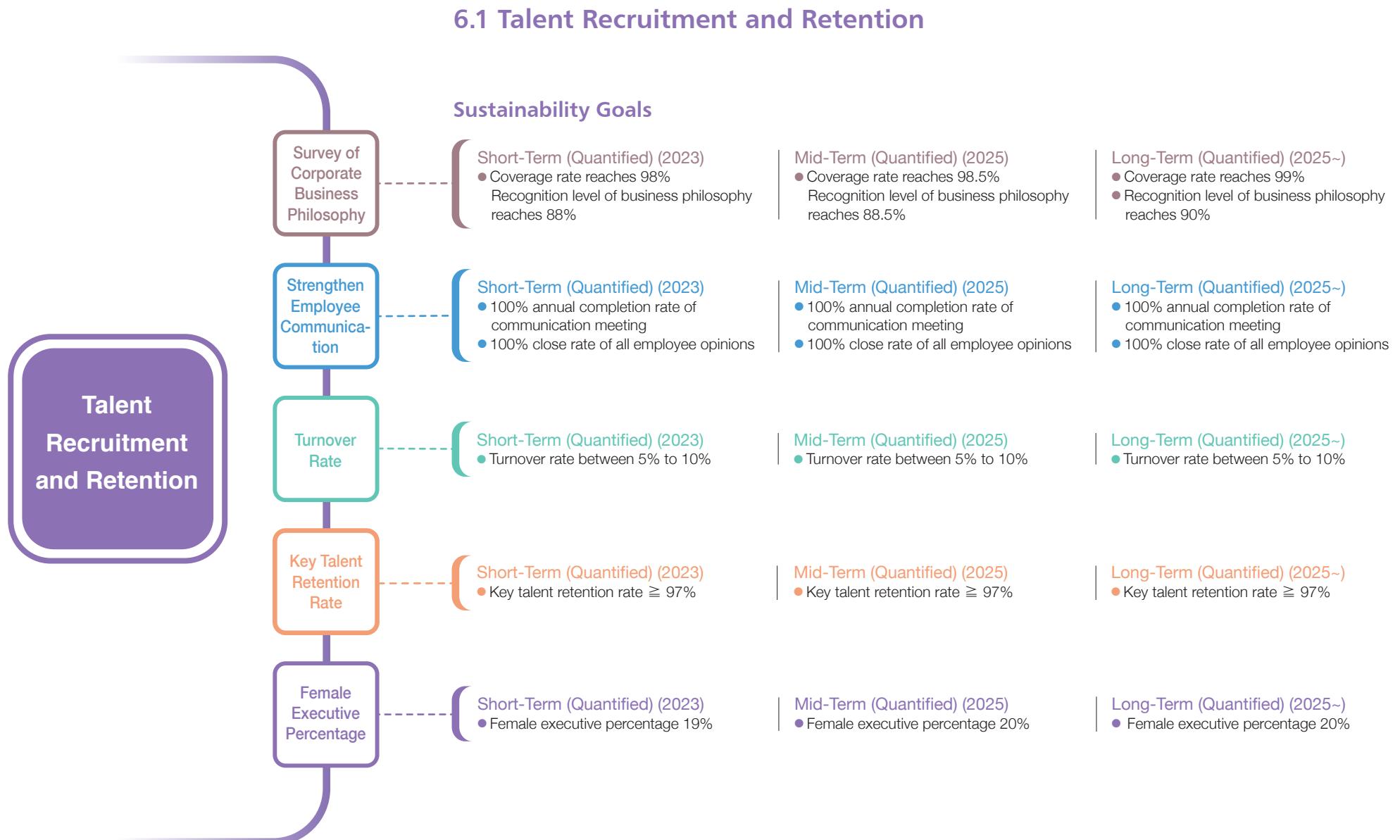
In addition to declaring conflict minerals management policies to suppliers, VIS requires all suppliers to assure their minerals are from certified refineries (Conflict-Free Smelter) that recognized by the RMAP (Responsible Minerals Assurance Process) of the international organization, RMI, establish a mechanism of reasonable certainty, exercise their due diligence, and acquire relevant certifications. For refineries not certified by the RMI, VIS required the refineries via suppliers to obtain certification from RMI or a third-party

audit organization, which will ensure that the minerals used by the VIS and its suppliers are all in compliance with due diligence investigations and responsible minerals management.

In consideration of customer concern over information on the management of conflict minerals, the procurement department provides the most up-to-date Conflict Minerals Reporting Template (CMRT) and Cobalt Reporting Template (CRT) on the official website of VIS Online to facilitate customer inquire, access and download the relevant management information.

In compliance with the revised RMI CMRT (Revision 6.1: 2021/04/28) and CRT (Revision 2.2, 2020/10/28), VIS completed related supply chain surveys and confirmed them in compliance with the regulations. To prevent procurement of conflict minerals from conflict regions, the latest CMRT tables and CRT template of VIS were disclosed on the VIS Online System for customers to make online queries. In support of the legislative spirit of the U.S. Dodd-Frank Act and to enhance ESG practices, starting from 2021, VIS has added the "Conflict-Free" label on the packaging of all own foundry products to declare that all VIS products do not contain conflict minerals.





Through performance review, VIS awards outstanding employees with promotions and raises; moreover, VIS offers competitive benefits to recruit and retain competitive talents. In terms of benefits, VIS advocates balance between work and life, and by organizing diverse company activities and health seminars, VIS establishes a friendly working environment. VIS also provides employees diverse channels to reflect their opinions, and holds trainings and classes to encourage employees to continuously enhance own capability and further develop personal career.

### Strategy



Through fair and open recruitment channels without discrimination, VIS seeks talented individuals who share a common goal with the company regardless of their race, gender, age, religion, nationality, or political views. We focus on an individual's character and skills; all employees must conform to the company's four core values: integrity, customer oriented, value oriented, and commitment.

### Commitment



Since its inception, VIS has always considered "talented workers" to be the company's most valuable asset. VIS has created a challenging, fun, and learning-oriented work environment to attract outstanding professional talents from various fields, thereby enabling the company to become a diverse, innovative organization with stable growth.

### Vision



To Be The Specialty IC Foundry of Choice

## Talent Recruitment Results and Goals

Results of VIS' deepening of connections with schools in 2021 include:

1. Six industry-academia collaboration projects in 2021.
2. A total of 25 students from renowned domestic colleges and universities participated in the summer internship program in 2021.

## Recruitment Strategy

### Short-term Goals

- (1) Deepen connections with schools: Enhance connections with target schools and organize a variety of on-campus activities.
- (2) Establish diverse recruitment channels: Enhance recruitment efficiency through social media, on-campus activities, and incubation institutions, and recruit talents from a variety of channels.

### Mid to Long-term Goals

- (1) Become top employer brand to attract outstanding talents.
- (2) Offer most competitive compensation to attract and retain the top talents, while also rewarding employees with outstanding performances and long-term contributions.

## Talent Recruitment and Retention

### Employer Brand Diverse Marketing

Employer brand is a major factor influencing talent recruitment, VIS is actively managing employer brand via various channels to explore the talent market,

nurturing future employees in the next 3 to 5 years. Methods adopted by VIS include homecoming by VIS executives to alma maters to promote the Company and share practical industrial experiences; inviting students of universities and graduate institute to visit the Company; gathering fans of recruitment fanpages via social media. VIS set up the "Vanguard International Semiconductor Corporation" fanpage to share company news, various employee activities, and recruitment information; by 2021, the fanpage has accumulated 4,712 fans. The main audience was between ages 18 to 44. Furthermore, the LinkedIn page, "Vanguard International Semiconductor Corporation," has accumulated 5,663 people in network. Both social media have become main channel of employer brand that reached out to job seekers and the public.

VIS adopts diverse employer brand marketing strategy, so that students, potential job seekers, and the public can understand the Company's business philosophy and corporate culture through various types of information, in aim to attract talents who share our vision.

### 2018-2021 Recruitment Cost

Unit: NT\$

Year	2018	2019	2020		2021	
	Fabs	Taiwan	Taiwan	Taiwan (Including Singapore)	Taiwan	(Including Singapore)
Average Cost	6,351	8,904	9,699	9,783	6,251	8,345

Note: Newly employee recruitment cost=Annual recruitment cost/annual number of new recruits.



### Summer Internship Program

In 2021, a total of 25 students participated in VIS Summer Internship Program. Through recruitment channels of university professors, internal employees, and social media, VIS selected outstanding students from Taiwan and abroad for internship program at the company's key development units. During the internship, the students were instructed by mentors, helping them to utilize what they learned in school, while also incubating potential semiconductor talents for the industry. To deepen the connections with outstanding talents, and recruit those who shared the same vision, VIS presented pre-offer letter for those interns with outstanding performances during the internship program; in 2020 and 2021, the pre-offer rates is more than 60%.

### Co-Op Program

Not only does VIS continue to develop more specific processes and technical platforms, we have also cooperated with domestic universities for research on manufacturing processes and component applications. The main collaborative

projects in 2021 were “Foundry Short-Term Wafer Start Optimization Project” and “Intelligent Master Production Scheduling of Semiconductor Manufacturing” with National Yang Ming Chiao Tung University. The partnership between VIS and Department of Industrial Engineering and Management, National Yang Ming Chiao Tung University entered year two, and the intelligent management tool for optimized short-term wafer start decision-making jointly developed by both parties in the last year had already been deployed by all fabs, and significantly improved employee efficiency and quality of decision-making, achieving great outcomes.

The “Foundry Short-Term Wafer Start Optimization Project” which was led by Professor Chang Yung-chia of Department of Industrial Engineering and Management, National Yang Ming Chiao Tung University. VIS would develop an effective intelligent management system that was capable of timely optimization in response to customer demand and shop floor changes across product lines through this project, which applies latest optimization algorithms to the scheduling of semiconductor manufacturing to help VIS implement its Intelligent MFG and Management, and effectively enhance capacity utilization and delivery management, creating values for its customers.

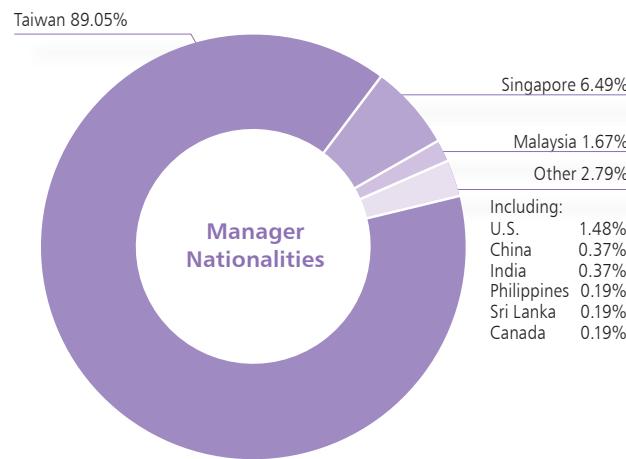
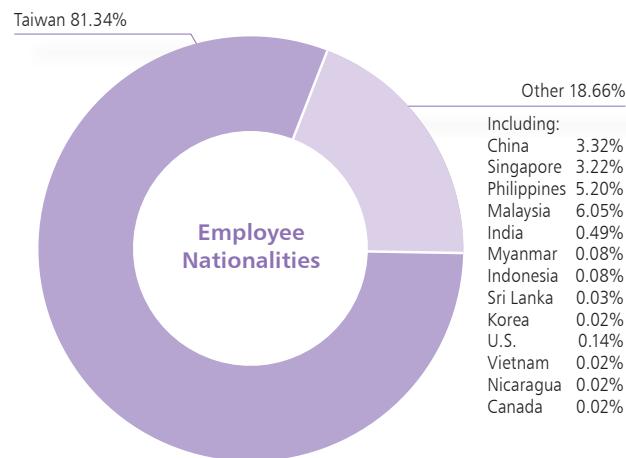
The “Intelligent Master Production Scheduling of Semiconductor Manufacturing” project, which was led by Professor Chang Yung-chia and Professor Chen Sheng-I of Department of Industrial Engineering and Management, National Yang Ming Chiao Tung University. This research

project combined mathematical programming models and heuristic algorithms to optimize the master production schedule under the premises that committed capacity allocation and order delivery date remained unaffected. Also, the system would be capable of flexibly adjusting the outcomes of scheduling based on actual production situation and changing demand. The tool developed by combining VIS’ real-time data system, the production experience and new algorithm was more accurate and practical.

VIS looks to continually introduce the energy of academic research through this research project in cooperation with Department of Industrial Engineering and Management, National Yang Ming Chiao Tung University, in order to enhance corporate competitiveness, and provide university students an opportunity to learn the actual operations within the semiconductor industry, nurturing future semiconductor talents.

### **Employment of Persons with Disabilities**

VIS has employed massage therapists with disabilities since 2009. In 2020, VIS created new positions of janitor in the factory area and administrative positions, and actively established high-quality and diversified job opportunities. In 2021, VIS offered 56 positions, accounting for 0.9% of total employees, and which was approximately 4% more than the regulatory requirement. In addition to having senior employees to provide persons with disabilities on-job instructions, VIS also invited local employment service agencies to design specific jobs for individual cases, and also visit and provide guidance to help them get used to the jobs.



## VIS Workforce

Complying with international human rights conventions, and human rights and employment related laws and regulations, VIS conducts hiring process: no child labor, and no discrimination against races, religions, skin colors, nationalities, ages, genders, sexualities, marital status, looks, disabilities, and other situations protected by laws. Also, VIS strives to create a friendly working environment that respects diverse groups for its employees from 14 countries around the world, fusing diverse cultures and continually facilitating exchange and interaction between employees of different ethnicities.

By the end of 2021, VIS had 6,333 total employees, and those working in Taiwan accounted for 85.4%, and those working in Singapore accounted for 14.6%. 95.1% of VIS employees were non-fixed term employees, whereas 4.9% were fixed-term employees. In terms of job positions, 539 were executives, 3,024 were professional workers, and 2,770 were technicians. Since a higher percentage of VIS employees worked in Taiwan, VIS employees' top five nationalities of origin are: Taiwan, Malaysia, Philippines, Mainland China, and Singapore; and the percentages of managers from the aforementioned nationalities are: Taiwan (89.05%), Malaysia (1.67%), Philippines (0.19%), Mainland China (0.37%), and Singapore (6.49%).

## Workforce Distribution

Category	Employment Type	Male		Female		Group Subtotal and Percentage	
		Number of People	Percentage of Group	Number of People	Percentage of Group	Number of People	Percentage of Total Workforce
Subtotal by Gender		3,206	50.6%	3,127	49.4%	6,333	
Nationality	Taiwanese	2,639	51.2%	2,512	48.8%	5,151	81.3%
	Foreign	567	48.0%	615	52.0%	1,182	18.7%
Position	Executives	436	80.9%	103	19.1%	539	8.5%
	Professional workers (indirect labor)	2,202	72.8%	822	27.2%	3,024	47.7%
	Technicians (direct labor)	568	20.5%	2,202	79.5%	2,770	43.7%
Status	Non-fixed term	3,080	51.1%	2,943	48.9%	6,023	95.1%
	Fixed-term	126	40.6%	184	59.4%	310	4.9%
Age	30 and below	610	53.5%	531	46.5%	1,141	18.0%
	30-50 years old	2,232	49.9%	2,240	50.1%	4,472	70.6%
	50 and above	364	50.6%	356	49.4%	720	11.4%
Education background	High school or below	421	23.0%	1,407	77.0%	1,828	28.9%
	University/College	1,579	53.0%	1,402	47.0%	2,981	47.1%
	Master's Degree	1,157	78.8%	311	21.2%	1,468	23.2%
	Ph.D.	49	87.5%	7	12.5%	56	0.9%

Note: This table includes VIS employees in both Taiwan and Singapore.

## Regional Workforce Distribution

Employment Type		Taiwan						Singapore					
		Male		Female		Group Subtotal and Percentage		Male		Female		Group Subtotal and Percentage	
Category	Number of People	Percentage of Group	Number of People	Percentage of Group	Number of People	Percentage of Total Workforce	Number of People	Percentage of Group	Number of People	Percentage of Group	Number of People	Percentage of Total Workforce	Number of People
	Subtotal by Gender	2,638	48.8%	2,770	51.2%	5,408	85.4%	568	61.4%	357	38.6%	925	14.6%
Nationality	Local	2,610	51.1%	2,501	48.9%	5,111	94.5%	29	72.5%	11	27.5%	40	4.3%
	Foreign	28	9.4%	269	90.6%	297	5.5%	539	60.9%	346	39.1%	885	95.7%
Position	Executives	386	80.9%	91	19.1%	477	8.8%	50	80.6%	12	19.4%	62	7%
	Professional workers (indirect labor)	1,844	72.4%	702	27.6%	2,546	47.1%	358	74.9%	120	25.1%	478	51.7%
	Technicians (direct labor)	408	17.1%	1,977	82.9%	2,385	44.1%	160	41.6%	225	58.4%	385	41.6%
Status	Non-fixed term	2,626	48.8%	2,760	51.2%	5,386	99.6%	454	71.3%	183	28.7%	637	68.9%
	Fixed-term	12	54.5%	10	45.5%	22	0.4%	114	39.6%	174	60.4%	288	31.1%
Age	30 and below	509	54.8%	420	45.2%	929	17.2%	101	47.6%	111	52.4%	212	23%
	30-50 years old	1,833	47.6%	2,015	52.4%	3,848	71.2%	399	63.9%	225	36.1%	624	67.5%
	50 and above	296	46.9%	335	53.1%	631	11.7%	68	76.4%	21	23.6%	89	9.6%
Education background	High school or below	233	16.4%	1,190	83.6%	1,423	26.3%	188	46.4%	217	53.6%	405	44%
	University/College	1,254	49.5%	1,280	50.5%	2,534	46.9%	325	72.7%	122	27.3%	447	48.3%
	Master's Degree	1,106	79.0%	294	21.0%	1,400	25.9%	51	75.0%	17	25.0%	68	7.4%
	Ph.D.	45	88.2%	6	11.8%	51	0.9%	4	80.0%	1	20.0%	5	0.5%

VIS has balanced distribution of gender of employees, where male employees accounted for 50.6% and female employees 49.4%. Due to factors such as nature of the industry and supply and demand of the job market, the majority of executives and professional workers were men, whereas most of the technicians were female. On the managerial level, male employees accounted for 80.9%, and female employees 19.1%; the percentage of female employees increased by 1% from the previous year.

### Female Employees Distribution

Year	2018		2019		2020		2021		
	No./Percentage	No. of Female	Percentage						
Overall Workforce		2,889	51.8%	2,758	51.9%	2,959	49.9%	3,127	49.4%
Management		63	16.2%	72	17.7%	87	18.1%	103	19.1%
First-level management (Section)		33	16.3%	35	17.1%	44	18.4%	54	19.5%
Middle Management (Division)		22	16.1%	27	17.5%	32	18.1%	37	19.2%
Executive Management (Department/Region)		8	16.3%	10	20.4%	11	16.9%	12	17.4%
Executives of Production and Revenue related Units		36	9.9%	41	12.2%	54	13.3%	74	15.4%
Employee in STEM (Note) -related positions		584	21.40%	586	22.10%	696	22.80%	790	24.10%

Note: STEM stands for Science, Technology, Engineering, Mathematics.

### Rate of New Hires and Turnover Rate

#### Domestic and Foreign Recruitment

By the end of 2021, VIS had 6,333 total employees. 1,320 new employees were hired and the rate was 21.5%. Of the new recruits, 56.6% were men and 43.4% were women. In terms of age distribution, most of the new recruits were aged 30-50 (49.6%), followed by those under 30 (48.3%), while new recruits 50 years old or older accounted for the lowest percentage at 2.0%. Moreover, the percentage of open positions filled by internal candidates in 2021 was 32%.

## 2018-2021 Percentage of Open Positions Filled by Internal Candidates

Year	2018	2019	2020	2021
Internal Transfer Rate	9%	58%	15%	32%

## 2021 New Employees by Nationality and Age

Category	Group	Male		Female		Group Subtotal and Percentage	
		Number of people	Percentage of the group	Number of people	Percentage of the group	Number of people	Percentage of the group
Nationality	Taiwan	512	57.3%	382	42.7%	894	67.7%
	Other	235	55.2%	191	44.8%	426	32.3%
Age	30 and below	332	52.0%	306	48.0%	638	48.3%
	30-50 years old	391	59.7%	264	40.3%	655	49.6%
	50 and above	24	88.9%	3	11.1%	27	2.0%
Total		747	56.6%	573	43.4%	1,320	100.0%

Note: New recruits refer to non-fixed term full-time employees who have completed the initial registration process.

## 2021 Rate of New Hires by Gender and Age

Category	Group	Number of New Hires	Ratio of New Hires in each Group
Gender	Male	747	24.2%
	Female	573	18.8%
Age	30 and below	638	59.7%
	30-50 years old	655	14.9%
	50 and above	27	4.0%
Total		1,320	21.5%

Note 1: Rate of New Hires of each Group = 2021 New Employees in each Group / {(Employees at Beginning of Year in each Group) + (Employees at End of Year in each Group)/2}

Note 2: Overall Rate of New Hires = 2021 New Employees / {(Employees at Beginning of Year) + (Employees at End of Year)/2}

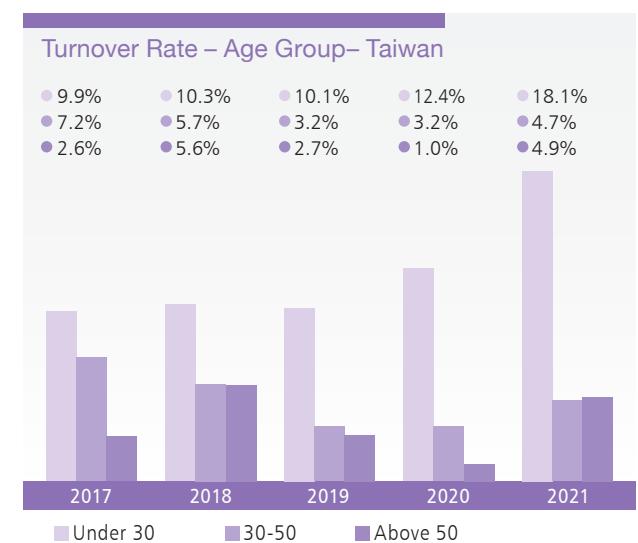
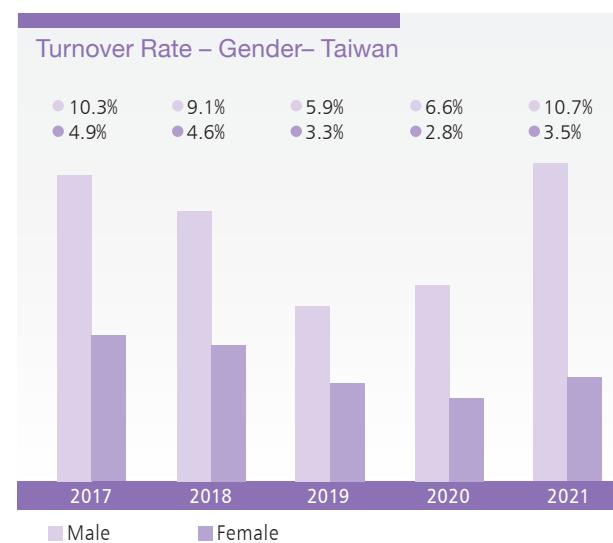
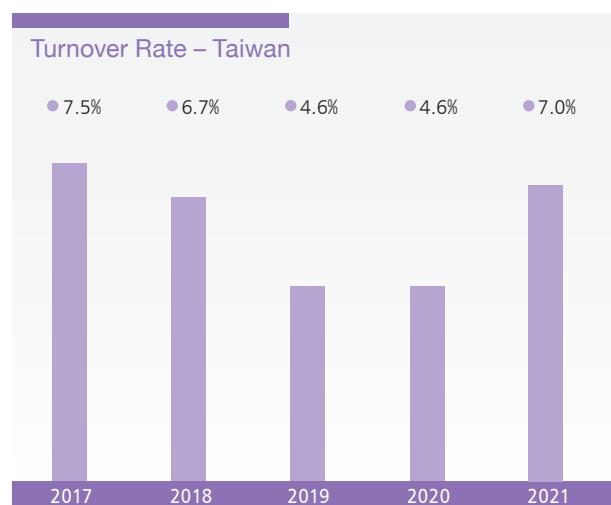
## Turnover Rate

In 2021, 368 employees had resigned (including 19 retired) and the turnover rate was 7.0%. For a company that exhibited continued performance growth, the results remained relatively stable and healthy. To examine the 2021 turnover rates more closely, the average turnover rate was 10.7% among male employees and 3.5% among female employees. By age group, the average turnover rate was 18.1% among employees under age 30, 4.7% among those between 30 and 50 years old; and 4.9% for employees 50 years of age or older.

Year	2017		2018		2019		2020		2021	
Gender/Item	Number of people	Turnover rate								
Male	254	10.3%	237	9.1%	154	5.9%	165	6.6%	274	10.7%
Female	127	4.9%	126	4.6%	94	3.3%	75	2.8%	94	3.5%
Total	381	7.5%	363	6.7%	248	4.6%	240	4.6%	368	7.0%

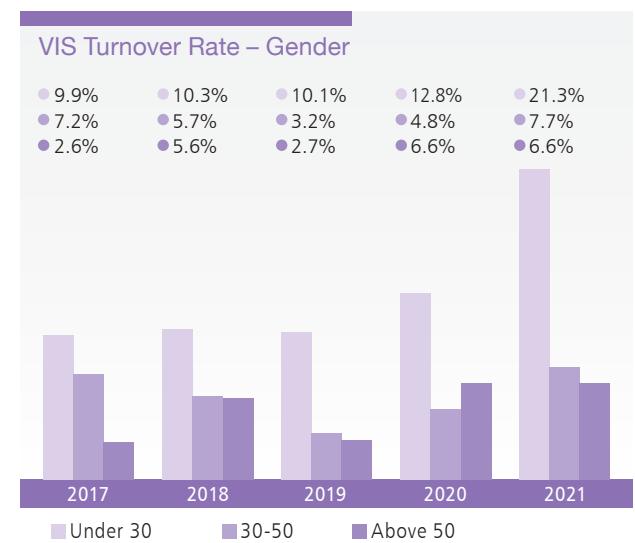
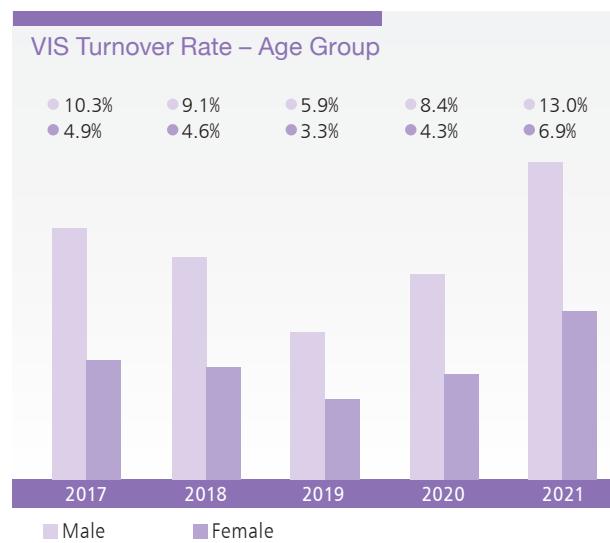
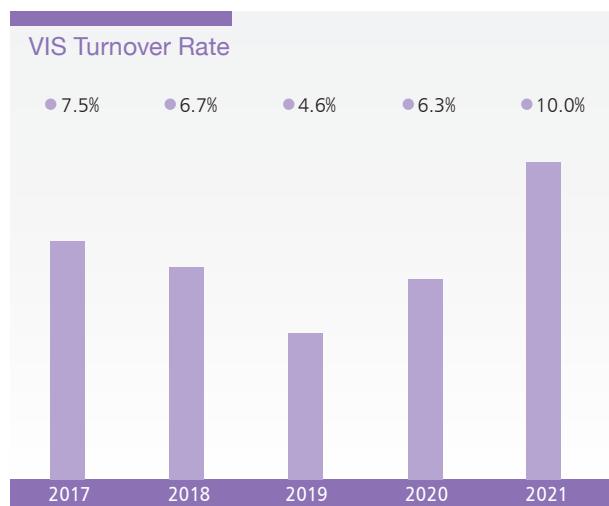
Note 1: Turnover rate for the year = Number of employees resigned during the year / {(Number of employees at beginning of the year) + (Number of employees at year-end) / 2}

Note 2: The turnover rate was calculated based on former full-time employees, and did not include.



Year	2017		2018		2019		2020		2021	
Age/Item	Number of people	Turnover rate								
Under 30	105	9.90%	129	10.3%	113	10.1%	114	12.4%	162	18.1%
30~50	268	7.20%	214	5.7%	124	3.2%	121	3.2%	177	4.7%
Above 50	8	2.60%	20	5.6%	11	2.7%	5	1.0%	29	4.9%
Total	381	7.50%	363	6.7%	248	4.6%	240	4.6%	368	7.0%

In Singapore, 242 VIS employees resigned in 2021. Compared to recent years, the 2021 turnover rate was significantly higher, due to limited human resource caused by the pandemic and proactive expansion of capacity by major companies in Singapore; with limited labor force, the companies competed for human resource by increasing salary.



## Compensation

### 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.

In accordance with the provisions of the Compensation Committee's organizational rules, its roles and responsibilities include: Formulation of the company's overall compensation policy and framework; formulation of the compensation and forms of payment to directors (including the chairman); formulation of the compensation, forms of payment, and incentives for long-term managers (including the company president); planning and executing performance evaluations for directors (including the chairman); planning and executing performance evaluations of managers (including the company president); and other matters designated or authorized by the Board of Directors.

### Overall Compensation

VIS regards its shareholders and employees as the company's most crucial stakeholders, and is committed to provide its shareholders with an above-average return on investments and its employees with above-average benefits compared to our competitors. Compensation is determined based on the employee's professional skills, understanding of responsibilities, job performance, and long-term dedication. To maintain the overall competitiveness of the company's compensation system, VIS conducts annual salary surveys to evaluate the market compensation standard and overall economic indicators, making appropriate adjustments for the employees. This allows employees to share the fruits of the company's operations. VIS

allocates no less than 10% of the company's annual profit for employee compensation, and the recipients include employees meeting certain criteria. In 2021, there were 14 managers at VIS, and 4,915 non-managerial full-time employees. Annual average salary was NT\$1,778 thousand, and the median was NT\$1,184 thousand. (In accordance with 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). The information above have been audited by Deloitte Taiwan. Employee compensation in 2021 was around NT\$2.39 billion, which was distributed after decision by the Board of Directors and approval by the Shareholders Meeting, to encourage employees to continue contributing to the company. The overall compensation will not differ due to gender, age, race, religion, political view, and marital status, and all employees are treated equally and fairly. VIS respects the principle of equal pay for both genders. In 2021, the ratio of compensations of basic level employees was nearly 1:1.

### Ratio of Total Compensations of Male and Female Employees

	Year	2017	2018	2019	2020	2021
Managerial	Mid to High Level	0.95	0.94	0.91	0.92	0.97
	First-Level	0.95	0.98	0.95	0.98	0.93
Non-Managerial	Indirect (Note)	0.76	0.80	0.85	0.80	0.80
	Direct (Taiwanese)	1.03	1.05	1.03	1.03	1.04
	Direct (Foreign)	-	-	1.02	1.04	1.02

Note: Indirect non-managerial employees, due to nature of work, were mostly working in the engineering area, and were mostly men.

## Benefits System

The company offers benefits and leave policies superior to legal requirements, including insurance, flexible leave days, pension, emergency aids, wedding and child subsidies, funeral aids, birthday coupons, year-end party subsidies, discount stores, irregular group vacations, and club activity subsidies.

VIS also adjusted “pregnancy checkup leave,” and “pregnancy checkup accompaniment leave and paternity leave” to 10 days from 7 days stipulated by Labor Standard Act. Also, foreign and local employees enjoy the same benefits. There is no differential treatment to employees of different nationalities.

## Comprehensive Insurance

As specified by laws and regulations, the company provides all employees with labor and national health insurances to protect their basic rights and interests. Starting from their first day of work, employees are enrolled in the company's high-premium group comprehensive insurance policy, which includes life, accident, medical, and cancer insurances. The policy also covers the employee's spouse and children. The accidental insurance coverage can be extended to cover an employee's parents, so that employees enjoy full protection and can focus on their jobs.

## Leave Policies Superior to Legal Requirements

Type	Legal Requirement	VIS Policy
Leave	12 holidays annually	In addition to the 12 days, another 7 days of leave are given for flexible arrangement by employees
Special Holiday	Three days leave for those who have served over six months but less than a year	To care for new employees who have been with the company for less than a year, one day of special holiday is given to employees who have worked at VIS for at least two months

## Compensations and Benefits of Non-Managerial Employees

Unit: NT\$ thousand

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

Note 1: Average number of employees is calculated by averaging the number of employees in the year (Annual average number of employees = sum of employees at the end of each month/12)

Note 2: Employee compensation and benefits refer to compensation, bonus, and benefits

## Balance between Home and Work

To make a more friendly workplace and improve employee maternity benefits, VIS has provided colleagues with "Maternity Examination Leave" and "Paternity Checks and Paternity Leave" from the statutory 7 days to 10 days that are superior to the related laws. Furthermore based on individual's family situation, VIS employees can apply extra childcare leave according to the Employee Manual and HR Regulations. VIS also provides "consultation window" to assure employee's application is in compliance with the "Act of Gender Equality in Employment," and "Regulations for Implementing Unpaid Parental Leave for Raising Children".

For equal respect, those benefits mentioned above are also offered to those colleagues who has relationship in "diversified family" when adopting children.

In 2021, a total of 390 VIS employees were entitled to unpaid parental leave, among which 93 employees submitted applications and were all approved. In 2021, 24 employees returned from parental leave, and the reinstatement rate was 51.1%. Male employee reinstatement rate was 55.6%, and female employee reinstatement rate was 50%. The main reason for female employees not returning after unpaid parental leave was the need to take care of family (92.9%), whereas the main reason for male employees not returning was that they found another job (100%). Furthermore, the retention rate of those who had returned from unpaid parental leave in 2020 and stayed for more than a full year was 85.3%, 80% for male employees and 86.2% for female employees.

## Parental Leave and Reinstatement

Item	Total	Male	Female
2021 Number of Employees Entitled to Parental Leave (Note)	390	209	181
2021 Number of Applications	93	16	77
2021 Number of Actual Reinstatements (A)	24	5	19
2021 Number of Supposed Reinstatements (B)	47	9	38
2021 Reinstatement Rate (A)/(B)	51.1%	55.6%	50%
2020 Number of Actual Reinstatements (C)	34	5	29
2020 Number of Reinstatements and Stayed for more than a Year (D)	29	4	25
2020 Retention Rate (D)/(C)	85.3%	80%	86.2%

Note: Number of employees entitled to parental leave from 2019/01/01 to 2021/12/31.

## Retirement System

### Comprehensive Pension System

VIS complies with related laws and regulations to protect the retirement rights of its employees, regardless of the old scheme in compliance with "Labor Standard Act" or new scheme in accordance with "Labor Pension Act." VIS has also established an internal retirement forum to provide information related to new and old retirement pension schemes, as well as reminders of relative rights, helping employees with retirement planning. In 2021, 19 employees applied for retirement, and were all approved. Male retirees accounted for 37%, and female retirees 63%.

For employees who opt for the new scheme, the company allocates 6% of their salary into their personal Labor Insurance account every month; for employees who choose the old scheme, or those who choose the new scheme but still has seniority calculated in the old scheme, VIS has established a pension supervision committee according to related laws, and allocates 2% pension reserve every month.

By 2021, the fair value of VIS' pension fund asset was NT\$612.63 million; VIS has also recorded legally required future allocation as accrued pension cost. By the end of 2021, the amount was NT\$711.01 million. In addition to allocating pension reserve in accordance with the law, the company also consults with professional accounting consultants to calculate and verify the amount of allocated reserve in order to safeguard the rights of our employees in the future.

## Pension Schemes

The pension schemes VIS has planned for its employees include the defined benefit plan according to Taiwan's "Labor Standard Act" and defined contribution plan according to Taiwan's "Labor Pension Act" and local practices at oversea sites. The allocation and reserve of pension are explained below:

	VIS Method	2021 Pension Reserve Status
Defined Benefit Plan	<ol style="list-style-type: none"> <li>1. In compliance with "Labor Standard Act," VIS fabs in Taiwan pay retirees pension based on their seniority and the average salary over the last six months prior to their retirement.</li> <li>2. The allocated fund is entrusted to the Labor Pension Reserve Supervising Committee, and deposited in the committee's account at Bank of Taiwan.</li> <li>3. VIS fabs in Taiwan also commission actuarial consultant to review pension reserve plan in order to safeguard the rights of our employees in the future, and ensure sufficient allocation of fund.</li> </ol>	<ol style="list-style-type: none"> <li>1. Taiwan fabs allocate 2% of total employee salary monthly for pension fund.</li> <li>2. By 2021, the fair value of VIS' pension fund asset was NT\$612.63 million. The amount recognized in 2021 was NT\$13.34 million. VIS has also recorded legally required future allocation as accrued pension cost, and the amount was NT\$711.01 million at the end of 2021.</li> </ol>
Defined Contribution Plan	<ol style="list-style-type: none"> <li>1. According to "Labor Pension Act," VIS fabs in Taiwan has formulated rules government employee pension, and allocated pension reserve to personal accounts overseen by the Bureau of Labor Insurance.</li> <li>2. Overseas subsidiaries allocate a specific percentage of a local employee's monthly salary to pension fund management enterprises.</li> </ol>	Taiwan fabs allocate 6% of employees' monthly salaries as pension fund; including pension funds allocated by overseas subsidiaries, the 2021 recognized amount was NT\$370.53 million.



## Comprehensive HR Development and Incubation

To incubate professional talents meeting the company's needs and discover employee potentials, VIS has established a comprehensive talent development system according to VIS vision and strategic goals, providing learning resources such as training management system (Learning Passport), knowledge management platform and online learning platform, in order to tailor for each and every employee personal learning plan, providing them with comprehensive incubation class and diverse learning resources to further develop skills and enhance company competitiveness.

## HR Development

### Performance-oriented Management and Development

The company's performance management and development system is aimed to develop our employees' potential and strengthen the quality of our talents. Through cooperative participation, cooperation, on-going interactions, and communications between managers and their subordinates, we create an environment conducive to learning for continuous development of employees, and the company's strategic goals can be integrated with the employees' career objectives, thereby elevating an employee's individual performance as well as the overall organizational performance.

For the necessary management skills and share language of the management ability training roadmap for managers of different levels, VIS also organized a wide range of management classes and trainings, such as: new manager workshop, subordinate incubation and instruction, performance interview technique, effective motivation and communication and counseling, cross-departmental cooperation and situational leadership. In 2021, VIS organized 25 cohorts, which were participated by 645 employees, amassing a total of 3,930 hours of training, as VIS continued to enhance leadership of managers.

In 2021, VIS invited external lecturer for the "Building High-Performance Team" course, which was attended by a total of 32 mid to high-level managers. Through the course, the managers learned the key factors of managing high-performance team, how to dissect the possible problems

faced by the team during different stages of development, and how to enhance employee involvement through reasonable encouragement and motivation. The course helped the managers to gain more confidence in building and maintain own teams. This course has been included in the annual mid-level manager training plan, in aim to establish shared management language across departments while also continually helping the managers to lead their teams for further growth and development.

### Strengthen Employees' Interdisciplinary Capabilities

VIS established the Individual Development Plan (IDP) with mandatory and optional courses. Managers also provide training resources for employees based on the requirements in their current roles and continue to improve employees' expertise and skills in different periods. In addition, the company also supports employees' personal career development and expertise in their development. The company announced internal vacancies available for transfers and respects employees' transfers for the accumulation of diverse professional skills and to cultivate internal interdisciplinary talents.

For example, VIS continued to promote the Six Sigma Quality Trainings (Green Belt/Black Belt), and by 2021, VIS had incubated 11 black-belt and 341 green-belt experts, establishing sound quality improvement and problem-solving and analysis capability; these experts applied their knowledge on work and proposed guidance improvement projects, achieving a total of NT\$147 million in verified project benefits.

### 2021 Six Sigma Quality Training (Green Belt) Outcomes

Project Categorization and Actual Benefits	<p>Launched 5 projects listed below:</p> <ol style="list-style-type: none"> <li>1. Productivity enhancement projects:           <ol style="list-style-type: none"> <li>(1) Reduce (PR-432) photoresist residue rework rate by 5-10%</li> <li>(2) Increase (DFM) capacity, lowering the investment by 0.67 machine.</li> </ol> </li> <li>2. Yield rate enhancement projects:           <ol style="list-style-type: none"> <li>(1) Solve the problem of four returned batches of low yield rates (RMA).</li> <li>(2) Solve the issue of low yield rate (<math>V_t</math> shift), which had previously caused the problems of scrapped wafers (0.1%) and affected 10,000 wafers.</li> <li>(3) Solve customers' issue of low yield rate (3.7%) of high-voltage products, which had previously affected 8 batches of products.</li> </ol> </li> </ol>
Quantified Benefit (Amount)	<ol style="list-style-type: none"> <li>1. Increased productivity: annual benefit of NT\$2,260,000</li> <li>2. Enhanced yield rate: annual benefit of NT\$5,510,000</li> </ol> <p>Total annual benefit: NT\$7,770,000</p>
Participation Percentage of VIS Employees	1.42%

### Leadership Talent Development: Senior Management Development Program

Project Categorization and Actual Benefits	<p>Enhance senior managers' leadership, ensure continuity at key posts, establish leadership team.</p> <ol style="list-style-type: none"> <li>1. Evaluate managers with development potentials using talent selection and evaluation tools to participate in the program.</li> <li>2. Improve management thinking and provide leadership training.</li> <li>3. Development program includes mentor guidance, job rotation, overseas deployment, and external senior managerial training, from 2 to 3 years.</li> </ol>
Quantified Benefit (Amount)	<ol style="list-style-type: none"> <li>1. Provided mentorship targeting each individual manager's ability; a total of 16 managers participated in the program.</li> <li>2. Situational leadership training was held for a total of 22 participants. Total training hours reached 154 hours for enhancement of management leadership.</li> <li>3. Six program members have been promoted to important positions in the company and members of the management team.</li> </ol>
Participation Percentage of VIS Employees	0.25%

## Learning and Development

### Rich and Diverse Learning Resources

To cultivate the right professional talents needed by our company, VIS has established a comprehensive talent development system that focuses on novice, management, competence, profession, external, and self-development training programs. Furthermore, the company offers an e-Learning website, which includes 867 courses. Teaching materials are constantly being updated and includes topics on engineering technology, professional competence, management, and other professional courses. Through a complete learning mechanism with rich and innovative content, employees are able to expand their knowledge without limits on time and location. By learning at their own pace, employees can increase their competitiveness and create an autonomous learning culture for the company. By the end of 2021, 81,866 person-times have participated in the e-Learning courses.

In 2021, the total time allocated for internal training was 139,317 hours, and the total number of attendees was 122,697. On average, each employee received approximately 22 hours of training, and the total training cost was nearly NT\$7 million.

### 2018-2021 VIS Training Index Data

Year	Number of Employees	Total Training Hours	Average Training Hours	Total Number of Participants (Person-Times)
2018	5,579	152,171	27.28	128,964
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

### 2018-2021 VIS Training Index Data (By Employee Category) Unit: Hour

Year	DL	IDL	Managers	Average Training Hours
2018	13.94	41.49	27.29	27.28
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

### 2018-2021 VIS Training and HR Development Index

Unit: NT\$

HR Development Index	2018	2019	2020	2021
Average Training Fee for Full-Time Employees	1,247.44	999.55	1,177.13	1,199.0

### 2021 VIS Training Index Data (By Gender)

Gender	Number of Employees	Total Training Hours	Average Training Hours	Total Number of Participants (Person-Times)
Female	3,127	53,665	17.16	46,980
DL	2,202	32,652	14.83	28,950
IDL	925	21,013	22.72	18,030
Male	3,206	85,652	26.72	75,717
DL	569	7,925	13.93	7,649
IDL	2,637	77,727	29.48	68,068

Note: Different trainings are given according to nature of current position; also, the number of male engineers remains higher at the moment, and thus, the average number of training hours for male remains higher.

### 2021 VIS Trainings Introduction

A total of 396 physical trainings were held in 2021, only selected ones are listed below:

Type	Course Name	Content and Outcome	Person-Times
Engineering	New-Hire Engineers General Courses	Coordinate new-hire engineers general courses based on each fab's needs. Offer intensive training for new hires to enhance their engineering capability	2,509
Engineering	Introduction to AI	AI lectures were held to incubate AI seeds in each departments, laying a sound AI application foundation for the company	212
General	Teacher's Day: Communication Skills Seminar	Enhance internal lecturers' professional knowledge. Encourage them through posters and cards to raise level of enthusiasm, and show gratitude to their hard work	183

Type	Course Name	Content and Outcome	Person-Times
Quality	Six Sigma	Through the quality improvement course, engineers understand quality tools and learn how to apply them. The course trained 28 seed trainees. This project achieves an annual benefit of NT\$7.7 million and continues to improve the company's quality and talent competitiveness	28
Management	Managers' Management Course	Classes are designed for managers of different levels based on competencies required, such as talent development, and personnel management, strengthening managers' management skills and competencies.	645



Train the Trainer – Through on-stage practices, the trainees learned how to make lectures effective, fun, and creative.



Management Course – Utilizing diverse tools to help attending managers to effectively make decisions.



Teacher's Day Seminar: Changing the World through Innovation



Quality Course: Six Sigma

## Human Capital ROI

Unit: NT\$ thousand

	2018	2019	2020	2021
(A) Revenue	28,928,094	28,286,072	33,131,202	43,951,087
(B) OPEX	3,013,562	3,423,398	3,840,078	5,049,955
(C) Employee Compensation and Benefits Expenditures	7,590,795	7,508,045	8,111,480	11,106,860
Human Capital ROI (A-(B-C))/C	4.41%	4.31%	4.61%	4.50%
Total Number of Employees	5,579	5,315	5,929	6,333

## 6.3 Human Rights

VIS supports all related international human rights regulations and prioritizes human rights when formulating related policies, announcing the VIS Human Rights Policy in October 2018. Regarding the formulation of labor-related policies, VIS formulates policies in compliance with or superior than legal and international human rights regulations, keeping VIS' Code of Conduct consistent with international norms. VIS also vigorously establishes positive relationship with employees, building a fun and challenging working environment.

### Human Rights Policy

VIS supports "United Nations Declaration of Human Rights" (UDHR) and complies with interpretations of international human rights guidelines, including "International Bill of Human Rights," "ILO International Declaration on Fundamental Principles and Rights at Work," "UNGPs," "OECD Guidelines for Multinational Enterprises," and "UNGC." VIS also takes actions consistent with the "RBA Code of Conduct" and comply with local laws and regulations

of its global sites of operation, in order to protect human rights and build working environment with dignity, realizing the company's core values and realizing "VIS Human Rights Policy," so all employees can receive the respect they deserve. Also, VIS demands all suppliers to comply with the "RBA Code of Conduct" for the formulation and implementation of related human rights policy and ask all supply chain partners to follow the same standards.

## Human Rights Risk Assessment and Mitigation Measures

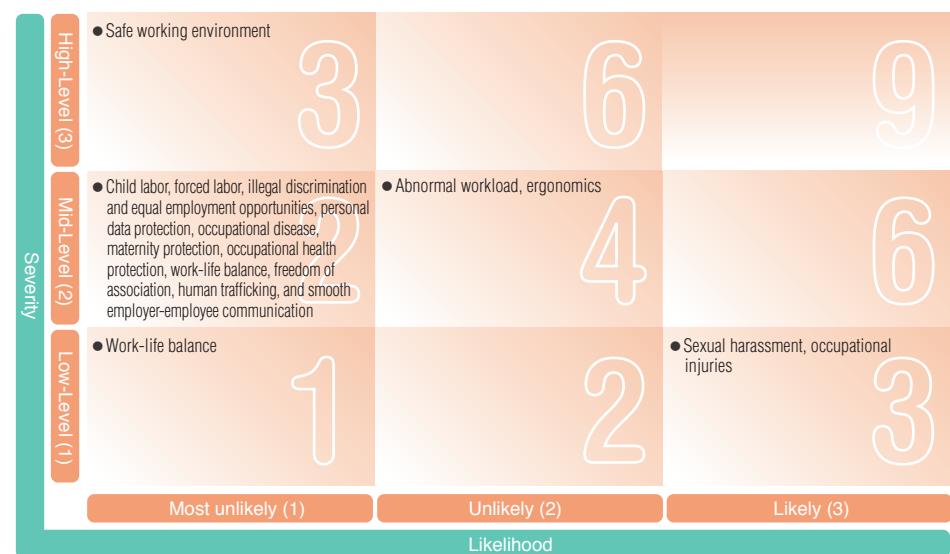
VIS promises to ensure workplace safety throughout the supply chain; all employees are treated with dignity and respect, and VIS operations promote environmental protection and adhere to ethics, constantly innovating and improving the programs. Every year, VIS adheres to related international human rights conventions and policies to establish the list of topics of human rights risk; targeting the topics on the list, executives of corresponding competent units (HR Division and Risk and Environmental Safety Management Department) will conduct risk assessment. To reduce human rights risk, VIS actively launches improvement plans to build quality working environment, and create a more challenging, safe, and enjoyable workplace. To implement related human rights education. VIS provides employees human rights protection training so that they understand more about their own rights.

In 2021, all unit executives of HR Division convened meeting in accordance with related international human rights conventions and policies, and established a list of human rights risk topics, which included 16 risk topics. The human rights risk map is the results of the risk assessment conducted by related competent units according to the likelihood and severity; in the 2021

human rights risk assessment, no topic was listed as high-level risk (score of 9); five were listed as mid-level risks (score 3-6): safe working environment, abnormal workload, ergonomics, sexual harassment, and occupational injuries; eleven were listed as low-level risks (score 1-2): child labor, forced labor, illegal discrimination and equal employment opportunities, personal data protection, occupational disease, maternity protection, occupational health protection, work-life balance, freedom of association, human trafficking, and smooth employer-employee communication.

## Risk Map

High-level risk (9); Mid-level risk (3-6); Low-level risk (1-2)



## Human Rights Due Diligence Procedure

Steps	1. Data Collection	2. Identify Aspect of Impact	3. Analysis	4. Execution
Method	Own responsibilities, value chain and related affairs, new commercial relationship business evaluation	Actual	Main causes, factors, and correlations	Integrated with procedures and operations
	Collect and study issues of risk groups, including employees, women, children, indigenous people, immigrants, their-party contracted workers, and local communities.	Potential	Scale, scope, and reparability	Remedial measures
	Channel of opinion reflection		Severity and likelihood	Communication
	Stakeholder feedback			

Human rights regulations are a part of due diligence investigation. The responsible unit formulates a checklist of due diligence, and related contents include implementation rules of risk evaluation, integrated human rights evaluation, and executive framework.

Affected Groups	Human Rights Topics	Prevention/Mitigation Measures	Remedial Measures	Number of sites with improvement plan and percentage of improvement
All Employees	Occupational Health Protection and Occupational Disease	<b>System</b> <ul style="list-style-type: none"> <li>“Zero accident, and no occupational disease” are goals of management. VIS complies with laws and regulations, and international conventions, in building a safe and healthy working environment.</li> <li>VIS offers employees health examination every year.</li> <li>Provide special health examination and carry out classified management according to results.</li> <li>Combining Corporate Values, health examination analysis, and employee health needs, VIS launches health promotion activities and employee assistance plan, encouraging employee participation and creating joint goals of healthy workplace.</li> </ul> <b>Training</b> <ul style="list-style-type: none"> <li>Compulsory occupational health protection courses.</li> </ul> <b>Communication</b> <ul style="list-style-type: none"> <li>Promoted through bulletin board and employee communication meetings.</li> </ul>	<b>Remedial Measures</b> <ul style="list-style-type: none"> <li>For employees who discovered abnormalities in health exams, arrangements are made for them to visit the fab doctors, offering them personalized health consulting; for employees with mid/high risks, medical aids and follow-up will be provided.</li> <li>For employees who discovered abnormalities in special operations health examination, arrangements are made for them to visit the fab doctors, offering them personalized health consulting and health education; they will be referred for medical aids and follow-up when necessary.</li> </ul>	• No risk sites upon evaluation.
All Employees	Abnormal Workload	<b>System</b> <ul style="list-style-type: none"> <li>Formulated VIS abnormal workload-triggered disease prevention plan.</li> <li>Conduct overload questionnaire surveys annually, which will be combined with results of health examination to compile a follow-up list for the prevention and management of work-related cardiac and cerebrovascular diseases.</li> </ul>	<b>Remedial Measures</b> <ul style="list-style-type: none"> <li>Proactively make arrangement for fab doctors to offer personalized health consulting and professional recommendations, helping employees to build a healthy lifestyle.</li> </ul>	• No risk sites upon evaluation.

Affected Groups	Human Rights Topics	Prevention/Mitigation Measures	Remedial Measures	Number of sites with improvement plan and percentage of improvement
All Employees	Forced Labor	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Respects local labor laws and regulations, as well as employees' free will to work. VIS never forces or coerces any employee for labor. All employees are voluntarily working at VIS, and can terminate the employment anytime.</li> <li>Employees can file appeals via channels of Ombudsman Mailbox and Employee Opinion Mailbox, where the persons responsible are CFO and head of HR Division respectively; HR Division will then handle the appeals.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Mediation and negotiation according to internal procedures.</li> </ul>	• No risk sites upon evaluation.
All Employees	Work-Life Balance for Physical and Mental Health	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Offer employees diverse art and culture, health, parent-child, and group activities.</li> <li>Provide Employee Assistance Program (EAP) that includes professional and medical mental, legal, financial, health, and management services.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Intervention of professional consultants to help employees with issues of law, finance, health, management, and mental health.</li> </ul>	• No risk sites upon evaluation.
All Employees	Freedom of Association	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Formulate Corporate Social Responsibility Manual, clearly stating that employees have the freedom of association according to local laws and regulations and VIS respect employees' organization of union according to legal procedures.</li> <li>Employee Welfare Committee encourages employees to participate in healthy recreational and welfare activities, formulating club management rules and offering funding.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Mediation and negotiation according to internal procedures.</li> </ul>	• No risk sites upon evaluation.
All Employees	Employer-Employee Communication	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Provide open communication channels, and care hotline.</li> <li>In accordance with labor-management meeting regulations, labor representatives are elected at each fab; employees can propose disputes to discuss with management resolutions at each quarterly labor-management meeting.</li> <li>VIS also holds at Chairman's Talk every six months for Chairman to communicate with employees.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Mediation and negotiation according to internal procedures.</li> </ul>	• No risk sites upon evaluation.
All Employees	Personal Data Protection	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Establish personal data protection taskforce to handle counseling, appeal, exercising of the right to use personal data, and emergency reporting.</li> <li>VIS personal data protection taskforce regularly conducts inspections and reviews, as well as convening meetings to enhance protection of personal data; internal and external audit units conduct legal compliance audits annually.</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Irregularly conducts promotion of personal data protection.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Mediation and negotiation according to internal procedures.</li> </ul> <p><b>Penalty</b></p> <ul style="list-style-type: none"> <li>Mediation and negotiation according to internal procedures.</li> </ul>	• No risk sites upon evaluation.

Affected Groups	Human Rights Topics	Prevention/Mitigation Measures	Remedial Measures	Number of sites with improvement plan and percentage of improvement
All Employees	Sexual Harassment	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Formulate sexual harassment management regulations, insisting on zero-tolerance for discrimination.</li> <li>Set up Anti-Sexual Harassment Mailbox, where the General Counsel is the person in charge.</li> </ul> <p><b>Training</b></p> <ul style="list-style-type: none"> <li>Include sexual harassment in annual required training.</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Promote through bulletin board and employee communication meeting.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Mediation and negotiation according to internal procedures.</li> </ul> <p><b>Penalty</b></p> <ul style="list-style-type: none"> <li>Penalty according to HR regulations.</li> </ul>	• No risk sites upon evaluation.
Women in pregnancy or one year after giving birth	Maternity Protection	<p><b>System</b></p> <ul style="list-style-type: none"> <li>“Maternity Health Care” Management Project assessed maternity health of employees who were pregnant or had just had a baby, and adjusted their workloads and positions.</li> <li>Establish “Maternity Health Care” Management reporting system.</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Promote “Maternity Health Care” Management Project through bulletin board and posters.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Arrange for women in pregnancy or giving birth health consulting, workplace safety evaluation, pregnancy and post-natal health instructions, and referral for medical assistance and follow-up when necessary.</li> </ul>	• No risk sites upon evaluation.
All Employees and Vendors	Ergonomics	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Regularly conducts operation analysis and hazard assessment targeting all employees and onsite vendors.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Regarding suspected cases of hazards, fab nurses will make arrangement for them to visit fab doctors, and conduct onsite inspection with Risk and Environmental Safety Management Department, proposing feasible improvement recommendations after analysis of procedures, tasks, and actions.</li> </ul>	• No risk sites upon evaluation.
All Employees and Vendors	Safe Working Environment	<p><b>System</b></p> <ul style="list-style-type: none"> <li>Install gas and liquid leakage detectors in fabs for real-time onsite monitoring; operational environment test is conducted every six months to ensure safe working environment.</li> </ul> <p><b>Training</b></p> <ul style="list-style-type: none"> <li>All employees participate in safety and health tasks, controlling ESH risks from the sources to facilitate safety and health; enhance safety and health responsibility cognition and cultivate safety and health culture through communication and education and training.</li> </ul>	<p><b>System Adjustment</b></p> <ul style="list-style-type: none"> <li>Strengthen promotion of ESH to employees and vendors.</li> </ul> <p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>Execute job selection and assignment and categorized health management by referencing health examination report and operational environment test.</li> </ul>	• No risk sites upon evaluation.

Affected Groups	Human Rights Topics	Prevention/Mitigation Measures	Remedial Measures	Number of sites with improvement plan and percentage of improvement
All Employees and Vendors	Occupational Injury	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• Regularly conducts hazard identification and risk assessment targeting all operations and items.</li> <li>• Association meeting must be held for all involved units prior to any construction to implement dangerous operation permission and onsite operation management.</li> </ul> <p><b>Training</b></p> <ul style="list-style-type: none"> <li>• Safety and health training included in required courses of new employees.</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Workplace safety promotion targeting all employees and vendors.</li> <li>• Promotion of employee occupational injury prevention.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>• Include occupational injury cases as follow-up items and propose improvement plans.</li> </ul>	<ul style="list-style-type: none"> <li>• No risk sites upon evaluation.</li> </ul>
Foreign Employees	Human Trafficking	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• Complies with local labor laws and regulations and conducts employment procedures accordingly, verifying identity documents of interviewees.</li> <li>• When employees report to the company, they have to sign employment contract, employment notice, and submit identity documents, to ensure all procedures are in compliance with laws.</li> <li>• When hiring foreign DL employees through legal brokers, VIS strictly verifies related documents to ensure compliance.</li> </ul>	<p><b>Penalty</b></p> <ul style="list-style-type: none"> <li>• VIS lowers the rating of or suspends brokers with major human rights violations according to laws and regulations.</li> </ul>	<ul style="list-style-type: none"> <li>• No risk sites upon evaluation.</li> </ul>
Employees under 18	Child Labor	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• Obeys labor laws and does not hire child labor.</li> <li>• Interviews are conducted to make sure that employees are at least 18 years of age, and review all documents and personal information when new recruits report to VIS.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>• Explain to the hiring unit and evaluate improvement plan according to individual cases.</li> </ul>	<ul style="list-style-type: none"> <li>• No risk sites upon evaluation.</li> </ul>
All Employees and Job Candidates	Illegal Discrimination, Equal Employment Opportunities	<p><b>System</b></p> <ul style="list-style-type: none"> <li>• Promote and implement internal control procedure, respect local labor laws. When reviewing job applications, VIS will not discriminate against anyone based on race, class, language, thought, religion, political view, nationality, birthplace, gender, sexuality, age, marital status, look, facial features, and disabilities.</li> <li>• Employees can file appeals via channels of Ombudsman Mailbox and Employee Opinion Mailbox.</li> <li>• Complies with all laws and regulations for its employment procedure and eliminates all discriminations.</li> </ul>	<p><b>Remedial Measures</b></p> <ul style="list-style-type: none"> <li>• Mediation and negotiation according to internal procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• No risk sites upon evaluation.</li> </ul>

## Employee Communication

VIS values employees' opinions and ideas, strives to establish effective communication channels. VIS two-way employer-employee communication, in order to build harmony employer-employee relationship and establish diverse channels for employees to reflect opinions. Executives are responsible for every channel, including independent directors, Chairman, President, Chief Finance Officer, General Counsel, director of HR and directors of the fabs, showing how much VIS values the opinions of its employees. From all the appeal channels, internal communication channels received 408 cases in 2021, including: 239 from "Speak Out," 142 from Employee Opinion Mailbox, 27 from Ombudsman Mailbox, and 0 from Anti-sexual Harassment Mailbox. All reported cases have been assigned to responsible units, and dealt with in confidentiality. Depending on the situation, an investigation task force would be formed. All channels of communication are disclosed on internal website, electronic bulletin board, and new-comer training materials, informing all employees.

Furthermore, VIS holds at least two Chairman's Talk every six months, including Manager Communication Meeting for employees above JG 35, and Town Hall Meeting for all employees. Seven Chairman's Talk were held in 2021. During the meetings, Chairman not only shared on company operations and future outlooks, but also replied to issues raised by employees prior to the meetings, in order to respond to their suggestions while conveying the thoughts of management.

## Frequency and Content of Diverse Communication Channels

Item	Frequency	Content	2021 Performance
Employer-Employee Meeting	Quarterly	Held at each fab.	VIS held a total of 12 sessions at 3 fabs in Taiwan.
Employee Feedback Channels	Irregular	"Speak Out," Employee Opinion Mailbox, Ombudsman Mailbox, Anti-sexual Harassment Mailbox, Audit Committee mailbox, Chairman mailbox, and President mailbox.	Received 408 cases, and reply rate of 100%.
Chairman Meeting	Six Months	Managers above JG 35, all employees	Held 7 Chairman Meetings, and around 1,900 employees from fabs in Taiwan and Singapore attended.

## Corporate Business Philosophy Survey

VIS has always cared for and valued employee opinions, and carries out improvements accordingly, in order to build a more harmonious working environment and enhance unity. To learn employees' recognition level of corporate business philosophy, VIS has cooperated with expert consultants to conduct the "Survey on Corporate Business Philosophy" since 2018, which will be conducted biennially. The 2020 survey included employees in Taiwan, Western U.S., and Singapore, where the response rate was 98.2%, achieving a recognition level of 4.42/5.0; compared to 2018 result, the recognition level increased by 0.03 points, and significant increase could be observed in all questions, showing that VIS employees highly recognized with and were highly engaged in (highly committed to) the company's business philosophy.

## Corporate Business Philosophy Survey Questionnaire and Results

The questionnaire consisted of two aspects: Business Philosophy and Employee Engagement, and a total of 51 questions. The Business Philosophy aspect included the 10 Articles of VIS Business Philosophy and the average recognition level of all employees was 4.42, higher than 4.39 in 2018, and 77.3% of employees recognized with the philosophy, compared with 77.5% in 2018. Among VIS employees, male employees had a score of 4.40, which was slight lower than female employees' 4.45; in terms of position, senior management had the highest score of 4.76, followed by mid-level management (4.52), and first-level management (4.47), with the lowest being non-management employees, averaging 4.41. As for Employee Engagement, the overall average was 4.42; female employees averaged a score of 4.43, slightly higher than male employees (4.41); in terms of position, senior management had the highest score of 4.88, followed by mid-level management (4.60), and first-level management (4.50), with the lowest being non-management employees, averaging 4.39.

Aspect	Article	Overall	2018		2020				
			Overall	Gender		Position			
				Male	Female	Non-Management	First-Level Management	Mid-Level Management	Senior Management
Business Philosophy Article 1	Upholding Ethical Business Practices	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%)
	Focusing on Core Business								
	Internationalized Operation with View on Global Market								
	Focusing on Long-term Business Strategies, Striving to Be a Perpetual Enterprise								
	Treating Customers as Partners								
	Building Quality into All Aspects of Our Business Compliance								
	Constant Innovation and Entrepreneurial Vitality								
	Creating a Dynamic and Enjoyable Working Environment								
	Establishing an Open Management Style								
	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%)

Description: 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.

## 6.4 Workplace Health Management

### Infectious Disease Response

To protect the health and safety of its employees, VIS Pandemic Prevention Taskforce has made public announcement on pandemic prevention policy and regulations, including COVID-19 vaccination appointment registration, at-home rapid test kit instruction and fab entry procedures, COVID-19 vaccination promotion, and COVID-19 prevention tips; also, based on the survey results, wellness center offers care and follow up on personnel. Also, VIS cooperated with the government to regularly check employees' vaccination status. By December 27, 2021, as many as 93% of all employees in Taiwan had received one dose; 82% had received two doses. VIS also promoted through various channels to encourage employees to get vaccinated as soon as possible for better protection! VIS proactively cooperated with the government's pandemic prevention policy to lower the risk of being infection.



State-funded COVID-19 Vaccination Appointment Registration



At-Home Rapid Test Kit Instruction and Fab Entry Procedures



COVID-19 Vaccination Promotion



COVID-19 Prevention Tips

### Health Management

VIS values employee health and proactively launches employee health promotion to build a safe and healthy workplace. VIS offers employees, including new hires, special operation staff, and all employees, health examination every year, which is more frequent than required by laws. Complying with laws and regulations, VIS has employed professional medical staff and onsite doctors to conduct employee health follow-up and management, provide health instruction, and assist with appropriate assignment of ill and injured employees.

For employees to timely monitor own health status, VIS introduced the health management system – “H2U Health Bank+” app, through which employees can search of past health examination reports and health curve over the year for health risk self-assessment. The app can also connect with National Health Insurance mobile platform to compile records of hospital visits and medication, as well as personal wearable devices to completely record health data such as daily sleeping pattern and number of steps. The app comprehensively tracks the health footprints of employees, so that they can “monitor own health anytime, anywhere, within own hands!”



H2U Health Bank+

2021 was a year VIS' promotion of workplace health earned the most recognition. Workplace health strategy aimed to lower employees' health risks and enhance health knowledge. To share with the industry VIS' philosophy of balancing company growth and sustainability, industry-leading innovative thinking, and precious experience of promoting workplace health, VIS proactively participated in health promotion and pandemic prevention related awards organized by Taiwan Centers for Disease Control, Occupational Safety and Health Administration, and Sports Administration. Through the collective effort of the entire company, VIS won recognition and appraisal of related government agencies in the areas of workplace health

service, enterprise sports promotion, and pandemic prevention, receiving the “Outstanding Healthy Workplace Promotion Entities – Excellence,” “Taiwan iSports Certification,” and “Enterprise Anti-COVID Alliance – Gold.”



Outstanding Healthy Workplace Promotion Entities



Taiwan iSports Certification



Enterprise Anti-COVID Alliance – Gold

## Special Care

VIS offers special operations health examination every year, so that all employees can feel safe working. In 2021, 252 employees in Taiwan were engaged in special hazardous operations (such as: noise, ionizing radiation, arsenic, nickel, and indium), and the examination rate was 100%. Regarding the results of hazardous operations health examination, no one needed Class III or Class IV management, and meetings with doctors were arranged for those requiring Class II management to get personal health instructions. A list of the work-related cardiac and cerebrovascular diseases prevention management was established using the results of the examinations, where

nurses arranged doctors to visit fab and to offer personalized consulting and suggestions, so employees could proactively establish healthy lifestyle. Also, VIS regularly conducts musculoskeletal and abnormal overload surveys to proactively offer employees related care, ensuring workplace safety.

“Maternity Health Care” Management Project assessed maternity health of employees who were pregnant or had just had a baby, and adjusted their workloads and positions. VIS also offers exclusive parking spaces for mothers, as well as nursing rooms, and practical and useful gift, My Deer linen blanket, to ensure the physical and mental health of pregnant, post-natal, and nursing employees, and achieve the purpose of maternity protection.



Fab Doctor Visit



Maternity Protection

## Health Care Program

VIS offers employees health examination every year. In 2021 Q4, a total of 4,571 employees in Taiwan attended, achieving an overall health examination rate of 96%. For those who discovered abnormalities, nurses would make arrangement for them to visit the fab doctors to offer personalized health consulting, enhancing the medical assistance for and monitoring of those with mid/high risks. In 2021, a total of 616 people visited fab doctors.

Disease prevention is also an important key to safety and health. VIS has combined health examination with influenza vaccination every year. VIS subsidized NT\$500/person for self-funded tetravalent flu vaccinations, and in 2021, with a total of 1,254 people were vaccinated, VIS subsidized a total of NT\$627,000.



Influenza Vaccination Poster

Health Examination Poster



Employee Health Examination



Vaccination

## Health Promotion

Modern people lead a busy life and often neglect healthy diet. VIS organized health seminar “Chinese Medicinal Care and Women’s Health,” inviting professional Chinese medical physician to teach participants how to take care of themselves. Through dietary therapy and acupoint massage, participants could improve own health. The seminar was attended by 32 people, shaping new health concepts together.

VIS also encourages its employees to exercise regularly, improving employees’ physical and mental health. In 2021, VIS launched the “World Health Year,” and allocated a budget of NT\$10 million to innovatively issue exclusive sports voucher for VIS employees. Each employee received a 2,000-point name-based sports voucher, and VIS employees could participate in external partners’ courses or internal sports activities based on own interest and need. The vouchers were hit and in 2021, VIS launched 38 sports classes in the fabs, and the vouchers were used by 1,981 employees.



With the pandemic heating up in May 2021, Level 1-3 alert was put in place and all classes, regardless of external or internal, were suspended. To make sure that VIS employees continue to exercise, the health center introduced online sports class. A total of 218 people participated, allowing VIS employees and their families to also exercise online during the pandemic, jumpstarting the “new sports lifestyle” and achieving the healthy effect of working out with families.



Chinese Medicinal Care and Women’s Health Seminar



Online Sports Class

## 6.5 Occupational Safety and Health

### Sustainability Goals



## 6.5.1 Environmental, Safety, and Health Policies and Management System

### VIS Environmental, Safety, and Health Policies

When it comes to the company's environmental, safety, and health policies, VIS places a strong emphasis on full participation by all employees, proactively establish sound interaction with and raise awareness of stakeholders, raise awareness and consensus including employees, customers, and community citizens, and performing due diligence prior to M&A; VIS upholds the core values of "honesty and practicality, commitment, innovation, and customer partnership," and strives for the goals of "zero accident and sustainable environmental development. VIS is also committed to conduct various ESH improvements. After being reviewed and signed by VIS Chairperson and President Leuh Fang, the latest policies are posted on the company's official website and the announcement board of each production plant. To ensure that each employee clearly understands the company's policies and works to achieve their objectives. The highest level of management assumes the ultimate responsibility of the operation of the ESH management system (including policies).

Information on VIS' environmental, safety, and health policies, and applicable scopes of safety and health/environmental management systems have been published on the company's website, for all stakeholders to access at any time. In addition, VIS' contractors are required to comply with the company's policies pertaining to safety and health management. To this end, VIS has incorporated various informational directives concerning health, safety, and environmental policies into the safety and health education training provided

to contractors, ensuring that all contractors which handle work for VIS clearly grasp the company's health, safety, and environmental policies. The URL is as follows: [https://www.vis.com.tw/tc/cg\\_major](https://www.vis.com.tw/tc/cg_major)

### Environmental, Safety, and Health Management System

Complying with ISO 14001 and ISO 45001 standards and requirements of ESH regulations, VIS establishes ESH management system. All Fabs in Taiwan have obtained the ISO 14001:2005 and ISO 45001:2018 third-party certification, and Fab VS1 in Singapore has introduced ESH management system, which is projected to be verified in May 2021; stakeholders such as suppliers and citizens can access the latest status on the certification process via the following link: [https://www.vis.com.tw/tc/press\\_document](https://www.vis.com.tw/tc/press_document)

Each department, based on various operations, products and services, process hazards, insurance company audit, expert recommendation, case studies from other departments or peer fabs, and regulatory requirements, appoints senior staff member to log and assess ESH risk and environmental aspects, and propose ESH plans for improvement targeting high-level risks and significant environmental items. The main implementations launched are listed below:

- Legal Compliance Identification: ESH department logs into websites like Laws & Regulations Database of R.O.C. to check the latest ESH regulations and other requirements, in order to ensure that VIS complies with the aforementioned laws and regulations as well as requirements of other stakeholder groups.

- ESH Risk Assessment and Formulation of Management Plans: Each unit appoints senior staff members (trained personnel in Singapore Fab) to log and assess ESH risk and environmental aspects, and propose ESH plans for improvement targeting high-level risks and significant environmental items. Taiwan Fabs: Risk and Environmental Safety Management Department outsources the implementation of environmental monitoring every six months in compliance with the law, and make public announcement of monitoring results and demands units with abnormalities to make improvement.

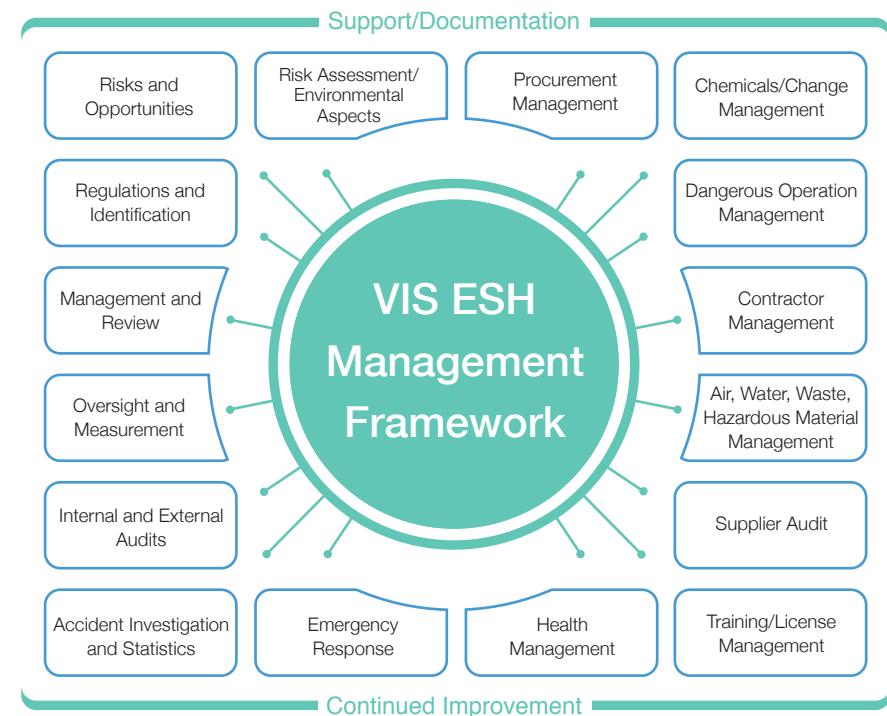
Singapore Fab: Comply with local laws and regulations, conduct industrial health inspection for hazardous chemicals related operations annually.

- ESH Performance KPI Contest (Annual Best Workplace Safety and Health Performance Award for Singapore Fab): Facility engineering and module engineering departments conduct ESH Performance KPI contest every six months (quarterly for manufacturing), including items of accidents and deficiencies, continued ESH improvement, and operational control, etc., where the winning units are presented banners and prize money. Singapore Fab's Annual Best Workplace Safety and Health Performance Award includes: monthly accidents and deficiencies, monthly inspection discoveries/closure rate, EHS items, EHS sharing, and meeting attendance.

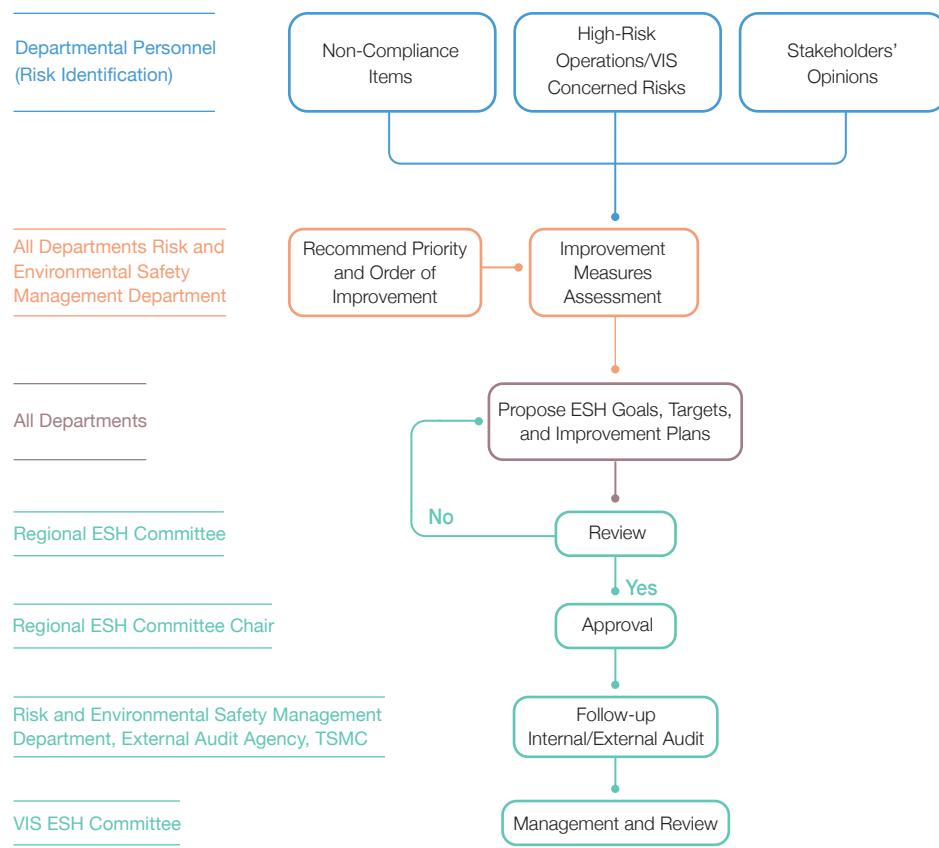
- Implementation of Internal and External Audits: Risk and Environmental Safety Management Department conducts semi-annual internal audits (annual internal audit for Singapore Fab), and commissions a third party for management system audit every year to ensure the effectiveness of the management system.

When abnormal events or errors take place, investigation system and CAR will be immediately launched, and unit responsible will be asked to make improvements. The environmental, safety, and health management system is implemented in accordance with PDCA method shown below:

### VIS ESH Management Framework



## ESH Organization Implementation and Operation Procedures



An important environmental policy of VIS is to implement green production to reduce environmental impact. In 2021, VIS fabs in Taiwan completed a total of 84 environmental improvement plans, mainly concerning waste reduction, energy conservation, and legal compliance, which included replacement of energy-saving/variable-frequency dry pump, extension of acid replacement timing, extension of tube cleaner HF & DI water, and reduced use of process chemicals and gases, such as ammonia water, HCL, IPA, H2O2, EKC270T, HF, and light barrier, from source, in order to lower the impact on the environment; also, VIS continues to purchase green products, including paper towel and photocopy paper, and use raw materials that do not contain banned substances, to lower environmental burden and impact.

Examples of important ESH plans executed by VIS fabs in Taiwan in 2021 are shown below:



F3 N-5900 Top of Nitrogen Gas Generator Expander  
(Risk Level: 3 → 5)





F3 Cooling Water Tank Roof Replaced with FRP Material Railing Installation (Originally Wooden Material)  
(Risk Level: 3 → 5)

The Singapore fab made 15 improvements according to the mid-year review of risk items, which included: expedite duct sprinkler installation on work, MAMS Fab/computer facilities/implant VESDA installation, license management e-system, reduction of carbon emissions, device monitoring improvement, implementation of ISO 45001 and ISO 14001; the Singapore fab also tracked VOC removal rate, process water recycling rate, and waste reuse rate.

#### •Hazard Identification, Risk Assessment and Accident Investigation

According to various operations within workplace and nearby operations of provided facilities and operation areas, including routine or nonroutine tasks, hazard classification (including physical, ergonomic, chemical, biological, socio-psychological hazards), planned or newly developed, new or adjusted activities, products, and services, targeting employees, contractors, dealers, visitors, contracted personnel, and related personnel of rental interfaces of plants, or other external personnel that have to enter the workplace, of

each responsible unit identifies safety and health hazards of the equipment, facilities, and production environment, while also considering risks of operations resulted from other human factors, including personnel behaviors/abilities; based on the results of identification, each responsible unit conducts improvement, risk and opportunity assessment, and operation control.

For all outsourced constructions or contracted operations in VIS fabs in Taiwan, contractors must also complete job safety analysis (JSA) before association meeting, to identify possible hazards and preventive measures in advance. Risk assessment and JSA results must to be promoted during the association meeting before the construction and daily toolbox meetings, so that all personnel involved understand clearly the hazards and important safety reminders relating to the construction.

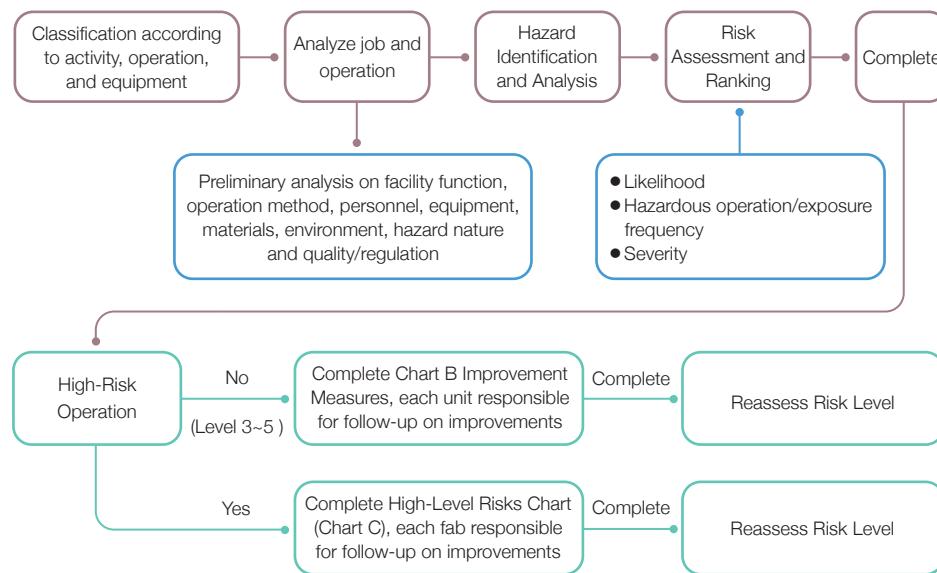
All outsourced or contracted operations at the Singapore fab require risk assessment of hazard analysis. At the toolbox meeting, contractors shall be informed the emergency evacuation plan of VS1, PPE requirements, scope of work, and method. Onsite inspection is required for all new VS1 contractors/service providers for them to get familiarized with the fab.

If any safety concerns arise during high-risk operations, any VIS employee has the right to make immediate inquiry, stop the operation, or notice emergency response center or the responsible unit of the operation site.

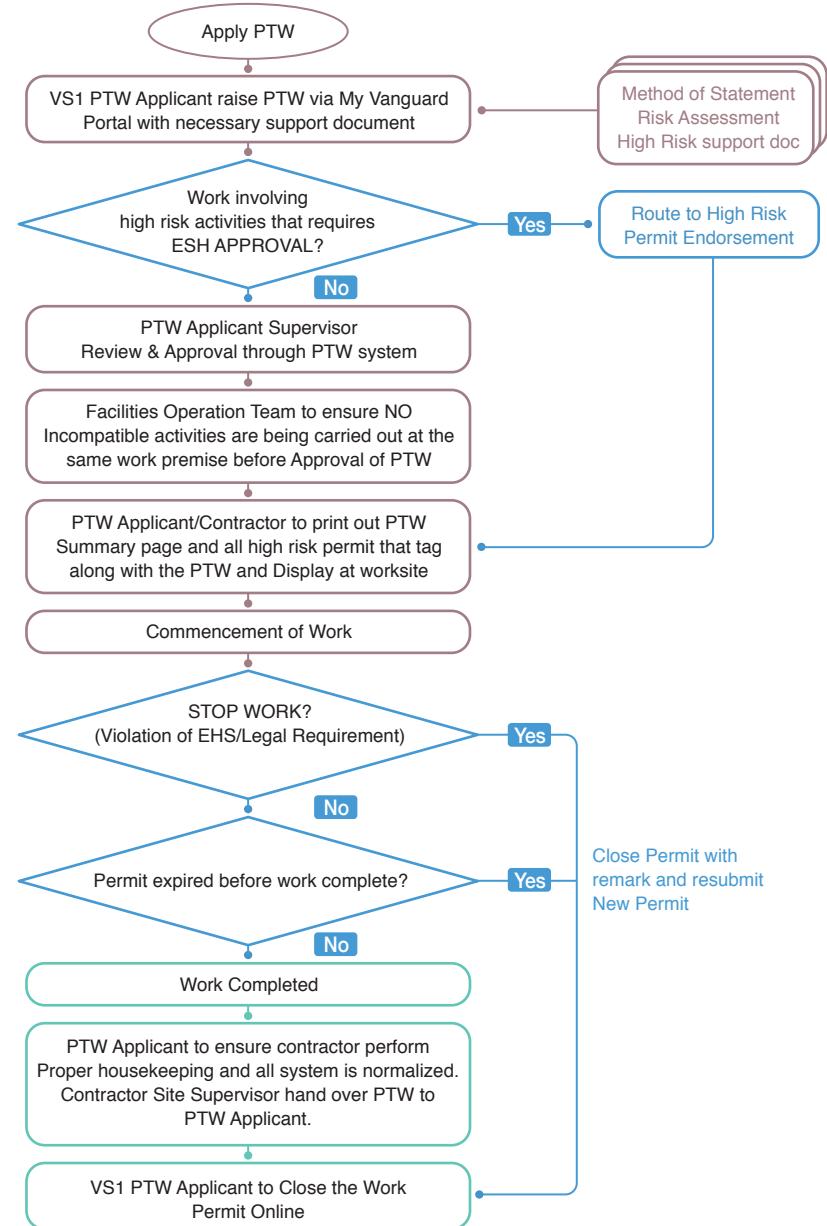
VIS has stipulated in the "Safety and Health Work Rules" (1T5-0026) that when employees discover "concerns of immediate danger" when executing tasks, they shall stop the operation and evacuate to a safe place, given

that they do not endanger other workers, and report to their immediate supervisors; the company cannot dismiss, reassign or retaliate those who exercise their right to refuse or stop work, or stop paying their wages during work stoppage, or impose any other penalties.

## Hazard Identification and Risk Assessment Procedures



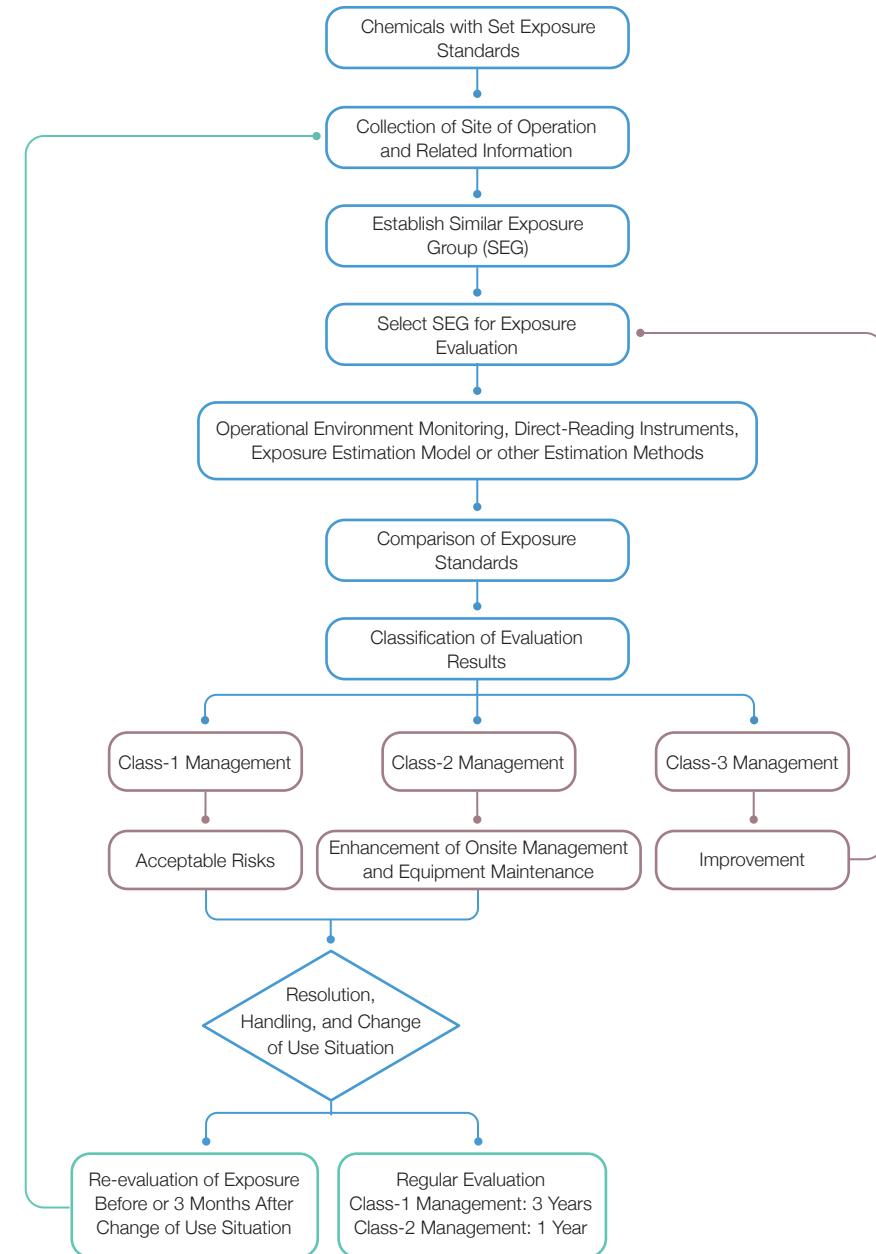
## VS1 Hazard Identification and Risk Assessment Procedures



If material risks or significant aspects are found through hazard identification, risk analysis, and environmental aspects, management plans must be formulated. ESH plans shall be reviewed and approved by supervisors, department ESH representatives, and risk management organization, of the proposing unit, and finally implemented upon approval by the chair of regional ESH Committee. Each fab will report the implementation result of ESH plans during the monthly ESH Committee meeting, and at the quarterly VIS ESH Committee meeting.

Regarding the hazardous chemicals used or stored in fabs, risk level is assessed based on level of impact on health, distribution, and usage quantity for classified management. When an operation involves changing chemicals at VS1, the technical document "Safety Management of Change" (1A1-0137) shall be followed. Assessment results and classified management procedures of chemicals with set exposure standards are shown below:

Each fab's Emergency Response Center (ERC) will organize related emergency response training and drill in accordance with "Emergency Response Training Implementation Rules" (1D1-007) every year; and has formulated "Emergency Response Handling Plan" (1A1-0083) as internal regulations. When an event takes place in the fab, ECR's responses and handling of the situation shall comply with various emergency response procedures; when gas leak or fire takes place in the fab, ECR will make announcement to evaluate the personnel in the area to a designated area, while trained ERT personnel will move into to confirm and handle the situation in protective gears, and then initiate reporting and event investigation by the fab and external competent authority in accordance with "Event Reporting/Investigation Rules" (1T5-0001). Improvements of all events/deficiencies will be followed up, and reported to committee members and labor representatives at fab and VIS ESH Committee meetings.



### ERT Drills, Sessions, and Number of Participants of Fab 1/2/3

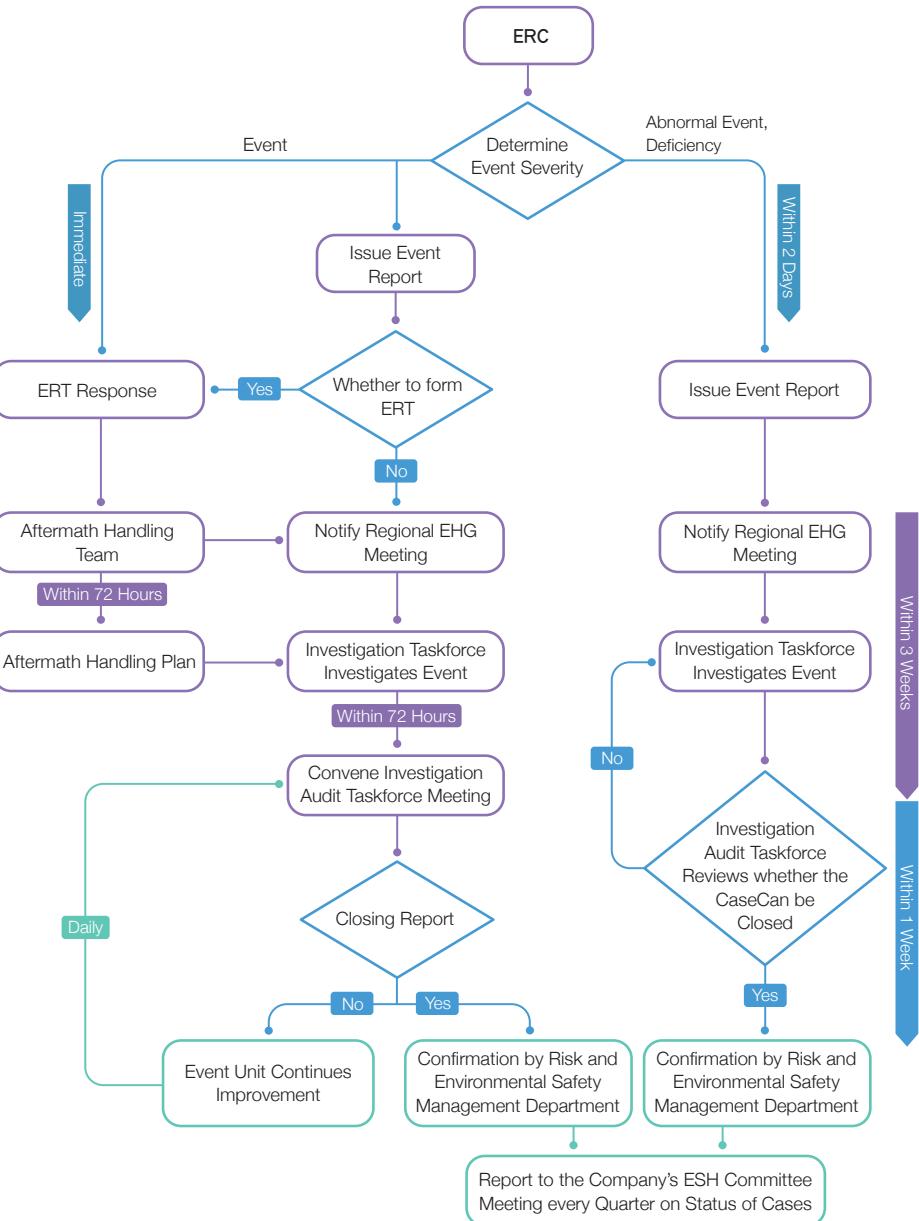
Training Items		Content	Hrs.	Planned Sessions	Executed Sessions	No. of Participants
Training	1. Fire Training	Fire equipment and distinguisher instruction	1	30	30	588
	2. ERT Commander Training	ERT Command Strategy	2	6	6	116
	3. ERT Leader Training	Coordination and operation of teams	2	8	8	166
Drill	1. ERT Drill	Fab emergency response drill	1	25	25	323
Summary				69	69	1,193

### RT Drills, Sessions, and Number of Participants of VS1

Training Items		Content	Hrs.	Planned Sessions	Executed Sessions	No. of Participants
Training	1. Fire Training	Fire equipment and distinguisher instruction	16	10	10	10
	2. ERT Commander Training	ERT Command Strategy	8	3	3	3
	3. ERT Leader Training	Coordination and operation of teams	8	3	3	3
Drill	1. ERT Drill	Fab emergency response drill	1	16	8	80
Summary				32	24	96

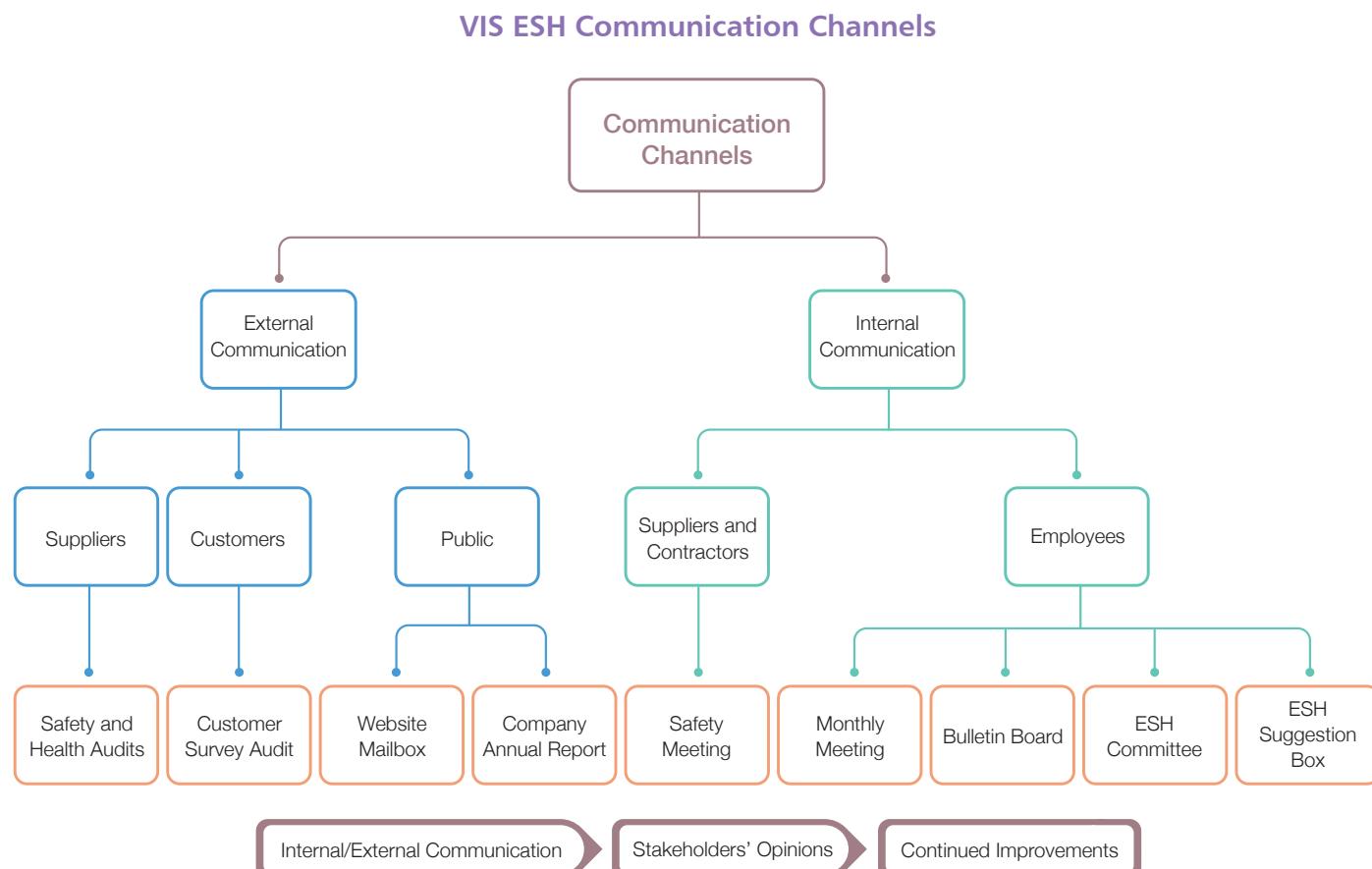
Note: Q3 and 4 trainings were suspended due to COVID-19 measures; evacuation drill was postponed due to COVID-19 measures.

### Event Investigation and Aftermath Handling Procedures



### • ESH Worker Participation, Consulting and Communication

As for communication channels of ESH related matters, designated personnel at the fabs provide around-the-clock emergency response consulting, and for related ESH issues, day shift engineers can be consulted. Communication channels include: TE online personnel monthly meeting, physical and electronic bulletin board, toilet literature, departmental ESH meeting, regional ESH meeting, ESH Opinion Mailbox, improvement proposal system, new recruit seminar, report to supervisors or ESH representatives, and electronic employer-employee communication platform. Also, when onsite vendors discover issues, they can immediately report to responsible engineers, or to the company through monthly hook up meeting at fabs in Taiwan; through supplier audit, directly communicate with vendor personnel regarding ESH issues. VIS boasts diverse communication channels, which are shown below:



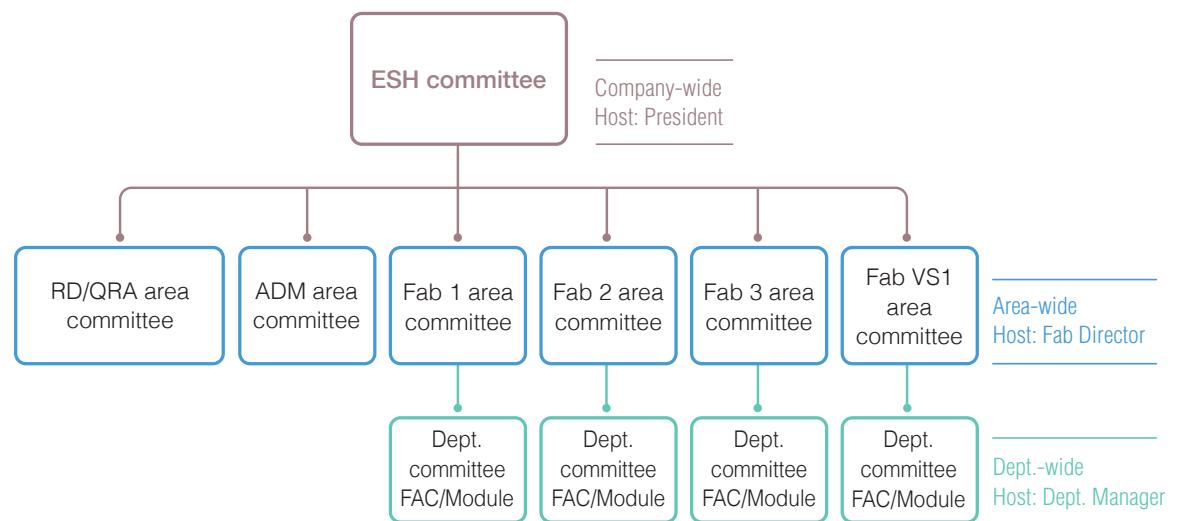
### •Safety, Health, and Environmental Protection Committee

VIS has established Occupational Safety, Health, and Environmental Protection Committee, where the president, unit heads, labor representatives, medical staff, and safety and health personnel regularly review the implementation of various related issues; also, depending on the nature of each unit, regional committees are established to target each department's operations to propose improvement plans and audit management performance, enhancing overall management level from top to bottom, while also conveying management principles to all levels of employees. The committee also formulate and execute plans according to VIS ESH strategy, and implementations are reviewed at quarterly committee meetings. Committee structure is shown below:

Committee Members: President (Management Rep), Fab Directors, ESH and Medical Personnel, Department Managers, and Labor Representatives of VIS (Accounting for more than a Third of the Safety and Environmental Committee members).  
Labor Representatives: Labor representatives elected at employer-employee meeting and representatives nominated by each regional committee.

In compliance with "Workplace Safety and Health Act," VS1 establishes Workplace Safety and Health Committee consisting of the management and employees; the law does not require labor representatives.

### ESH Committee Structure



Note: FAC (Facility Engineer), Module (Module Engineer)

### ● Personnel Included in ESH Management System

VIS has a total of 6,333 employees (fabs in Taiwan: 5,408; fab VS1: 925). The number of contractors or non-employees whose jobs/working environment are controlled by the organization is 608 (fabs in Taiwan: 517; fab VS1: 91), approximately 8.8% of all workers. The number of employees/contractors is the reported number provided by HR in December 2021.

### 6.5.2 Occupational Injury Statistics

In 2021, there were 8 cases of employee injuries and 0 case of contractor injury at VIS fabs in Taiwan, all of which were minor injuries, such as contusion or sprain, caused during operation; there were 2 cases of employee injuries and 0 contractor injury at VS1, which were primarily contusions or cuts. At the time of occurrence, employees were immediately cared for and asked to rest at home until full recovery before they can be reinstated. Furthermore, all aspects of the work site were managed and hardware facilities were inspected.

There were no cases of work-related fatalities in 2021. It indicates that VIS had effectively educated its employees about hazard awareness to help make improvements so that all employees could grow with the company and have the right to work in a safe, worry-free environment.

### Occupational Injury Statistics – Taiwan

	2017		2018		2019		2020		2021	
Total Work Hours	11,027,014		11,407,132		11,619,703		11,653,073		11,838,737	
Number of Occupational Injuries	Male	Female								
	3	5	3	3	3	5	0	5	2	6
VIS Occupational Injury Frequency (Note 1)	0.27	0.45	0.26	0.26	0.26	0.43	0	0.43	0.17	0.51
VIS Severity of Occupational Injuries (Note 2)	2	2	2	3	2	3	0	16	2	11
Total Injury Index (Note 3)	0.02	0.03	0.02	0.03	0.02	0.03	0	0.08	0.02	0.07

Total work days lost due to an occupational injury refers to the total number of days an employee is unable to work due to temporary or permanent occupational injuries; the total number of cases excluded traffic accidents occurred during commute to and from work.

Note 1: Occupational injury frequency rate = (Number of occupational injuries/Total work hours (including hours of overtime)) X 1,000,000

Note 2: Occupational injury severity rate = (Total lost days of occupational injury/Total work hours (including hours of overtime)) X 1,000,000

Note 3: Frequency-Severity Indicator (FSI) =  $\sqrt{(\text{Occupational injury frequency} * \text{Occupational injury severity rate}/1,000)}$

Note 4: No contractor occupational injuries from 2017 to 2021.

## Occupational Injury Statistics – Singapore

	2017		2018		2019		2020 (Note 1)		2021	
Total Work Hours	-		-		-		1,633,448		2,009,902	
Number of Occupational Injuries	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	-	-	-	-	-	-	0	2	1	1
VIS Occupational Injury Frequency (Note 2)	-	-	-	-	-	-	0	1.22	0.50	0.50
VIS Severity of Occupational Injuries (Note 3)	-	-	-	-	-	-	0	2	7	7
Total Injury Index (Note 4)	-	-	-	-	-	-	0	0.06	0.06	0.06

Total work days lost due to an occupational injury refers to the total number of days an employee is unable to work due to temporary or permanent occupational injuries; the total number of cases excluded traffic accidents occurred during commute to and from work.

Note 1: VS1 statistics began in 2020.

Note 2: Occupational injury frequency rate = (Number of occupational injuries/Total work hours (including hours of overtime)) X 1,000,000

Note 3: Occupational injury severity rate = (Total lost days of occupational injury/Total work hours (including hours of overtime)) X 1,000,000

Note 4: Frequency-Severity Indicator (FSI) =  $\sqrt{(\text{Occupational injury frequency} * \text{Occupational injury severity rate}/1,000)}$

Note 5: No contractor occupational injuries from 2017 to 2021.

### 6.5.3 Promotion of ESH Education

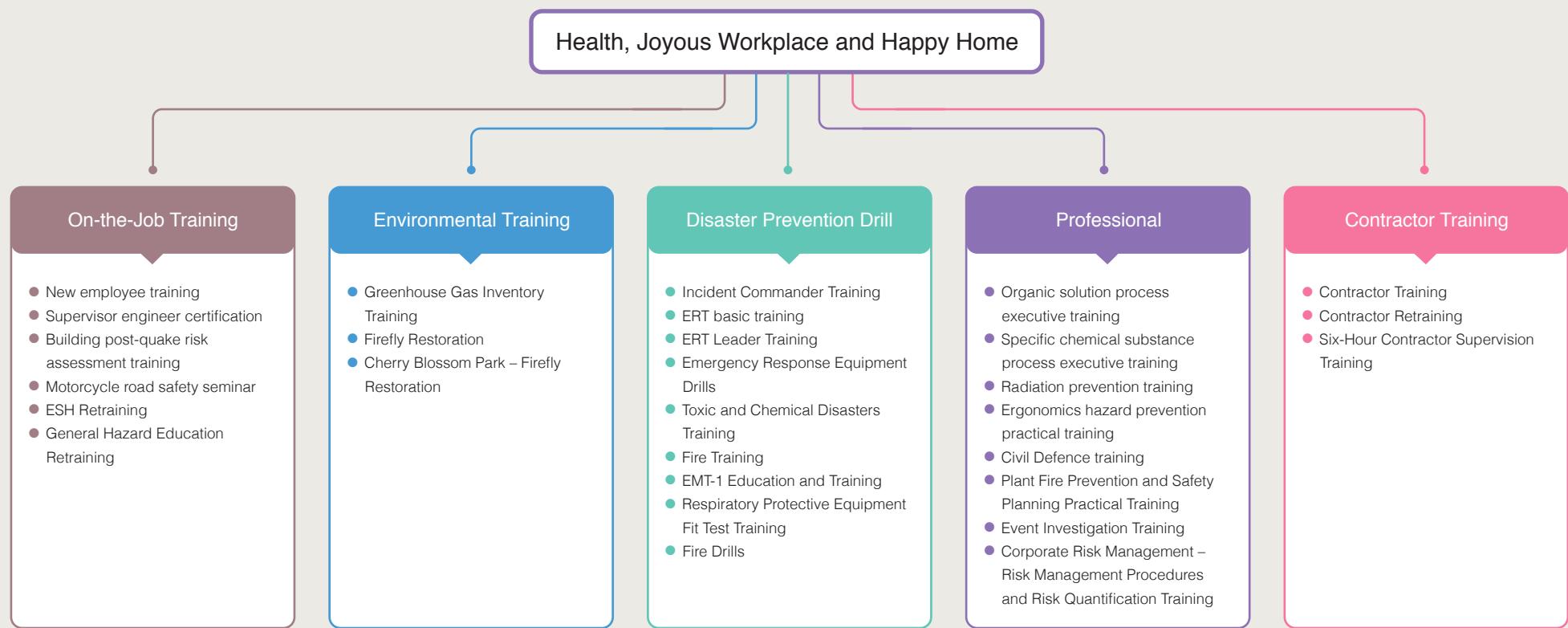
With the vision of an employee-oriented “Happy Enterprise” and support of senior executives, VIS actively promotes educational training and certification, enhancing employees’ safety awareness through learning, establishing safety culture, and finally achieving the vision of “health, joyous workplace, and happy home”.

Different types of trainings are organized according to ESH Training Guidelines and annual training plan in order to enhance every worker’s knowledge on hazards, protecting lives and health. Based on trainees, nature of work, and needs, there are four major types of trainings: new employee, dangerous machine and equipment operators, executives, and emergency response. Results of trainings are monitored through tests to enhance all workers’ awareness of hazards to ensure safety and health.

## 1. VIS Training Planning and Execution Process

- 1 Formulate Education and Training Plan for the Next Year
  - Training Required by Law
  - Employee ESH Training Guidelines (1T5-0003)
  - Training Related to Fire Prevention/Fire/Emergency Response
  - Professional Fire and Chemical Disaster Training
- 2 Training Management and Post-Training Result
  - Tracking Completion Rate
  - Test upon Completion of Training
  - Outcome Report
  - Submission of Certificates
  - Feedbacks via Learning and Development System
- 3 Education and Training Record Archiving, Approval Form Completion Control
  - Completion Registered on ESH Approval Form System
  - Set Re-Training Cycle
  - Appoint Officials at various Levels
- 4 Review Results of Annual Education and Training Evaluation
  - Completion Rate
  - Post-Training Questionnaire
  - Training and Re-Training of Various Certifications
  - Operational Needs (Ex. Upgrade of Management System, Onsite Safety Observation Training, etc.)

## 2. Types of Education and Training



Note 1: New employee training targets official non-fixed term employees, including those serving alternative civilian service, contract workers transitioning to full-time employees, reinstated employees, masseurs. Number of attendees in Taiwan: 260/Singapore: 286.

Note 2: For disaster prevention-related trainings and contractor training, refer to sections on "Emergency Response."

### 3. Photographs of Education and Training

#### Taiwan Fabs

1. On-job and Disaster Prevention Training: various ESH trainings were held based on nature of different operations.



ERT Commander Training (No. of Participants: 400)



ERT Leader Training (No. of Participants: 289)

2. Classification of ESH Education and Training: Classified ESH courses enhance professional skills of ESH personnel of different levels.



Organic solution process executive training  
(No. of Participants: 54)



Specific chemical substance process executive training  
(No. of Participants: 23)

#### Singapore Fab

1. On-job and Disaster Prevention Training: various ESH trainings were held based on nature of different operations.



First-Aid Personnel Training (No. of Participants: 45)



Emergency Response Drill (No. of Participants: 35)

2. VS1's physical classes were mostly suspended due to COVID-19.

#### 6.5.4 Contractor Management

Contractor management is one area VIS highly regards, All VIS contractors must sign "Contractor Construction and Safety Management Affidavit" and all contracted personnel must also sign "VIS Contracted Personnel Safety, Health, and Environmental Management Form" to fully understand necessary safety measures of the environment of contracted constructions, be responsible for all the safety and health related matters during the construction period, and commit to conducting self-inspections.

## Hazard Information and Education and Training

Operational hazards for all contracted works must be informed in advance, and identify possible hazards and preventive measures before, during, and after the operation.

- Association Meetings: Risk assessment and JSA results must be promoted during the association meeting before the construction. All contractor supervisors (including proxies) shall attend the meeting and sign meeting minutes. Meeting minutes must be read by the responsible persons of the contractor and subcontractor, where stamps of the contractor, subcontractor, and person responsible are needed, indicating that responsible person of contracting contractor and all supervisors understand clearly the hazards and important safety reminders relating to the construction.
- Daily Toolbox Meeting: At the daily toolbox meeting, supervisor must inform operating personnel all ESH related issues (including JSA), so that all personnel involved understand clearly the hazards and important safety reminders relating to the construction.

VIS held weekly education and training for contractors, informing various hazards, important notices, and regulations that must be complied with, so that every contracted operators understand that VIS values their life and safety.

## Contracted Personnel Qualification

Contracted operational personnel's qualification is strictly controlled:

- In addition to having labor insurance as required by law, as well as completing six hours of workplace safety training and obtaining necessary licenses, VIS also specially requires all contracted operational personnel in Taiwan to have the following qualifications:
  - (1) For those engaged in Level-1 high-risk operations, all personnel must have more than 2 years of related experience.
  - (2) For general constructions, contracted personnel must have at least one year of experience before obtaining long-term worker certificate.
  - (3) High-risk operational personnel must be over the age of 20 and recognized by contractors.
- VIS also requires all contractor supervisor and ESH personnel to have the following qualifications:
  - (1) All supervisors must be authorized by the responsible person of the contractor, and present letter of authorization.
  - (2) Contractor supervisor (for constructions requiring over 5 people) and ESH personnel (for constructions over 30 people) must have Class 3 Labor Safety and Health Manager qualification.

## Interconnected “e-Management Systems” Controlling Personnel Entering Fab through Electronic Key Card

Through the e-management systems, such as contractor management system, contractor hazard information, and construction safety permit application system, etc., contractors must first establish data of the company, personnel

information, and hazard information (such as association meeting minutes) first, and then have their data reviewed by designated personnel before they can enter the fab; in addition to the aforementioned qualifications, contracted operational personnel can only be qualified after they pass the "Contractor ESH Education and Training"; all the aforementioned systems are interconnected, and qualified supervisors, ESH personnel and operational personnel will show up on the list of "Construction Safety Permit Application System" for applicants to select/assign.

## Supervision of Contracted Operation

- VIS Employees Responsible for Contracted Operations must be Qualified "Supervisor" (special regulation of VIS)

For sound source management, VIS also requires all employees responsible for contracted operations to complete "Supervisor Training" and attend retraining every two years, in order for them to perform their job of supervision.

- Contracted Operations must Apply for Approval in Advance

To ensure safety for all operations, all high-risk operations and dangerous operations must be first applied. After the application was approved, a checklist can be printed for the contractor supervisor to check each item and inspect working environment, which will then be re-inspected by the responsible VIS employees.

- VIS Special Regulations Regarding High-risk Operations

Before key high-risk operations, all three parties, contractor supervisor, head of responsible VIS unit, and safety personnel, must make sure there is no issue before the operation can begin. Depending on the severity of the

construction, the outsourced agency may utilize dash cam to supervise the progress of the construction.

- Daily Monitoring of Operations

Risk and Environmental Safety Management Department will make sure that all protective measures are in place according for all the applied operations in the fabs at the morning meeting. VIS safety personal will inspect various toolbox meetings for random supervision (prior to construction). VIS ERC will monitor the progress and inspection (during and after construction) of all high-risk and dangerous operations. Even during morning meeting of each unit, all the fabs will still have safety personnel conducting inspection for loading and unloading of some chemicals and cargoes, ensuring all related operations are in compliance with regulations.

- Supervision by All

All fab directors, engineering unit heads, and labor safety representatives shall conduct inspections irregularly; if they discover any issues, they must make immediate correction and include the issues for follow-up improvement.

- Technological Enforcement

VIS utilizes the "Integration of CCTV Image Recognition System and AI" to check if employees are not wearing helmets or lifting elevated floor panels without fencing as required (accurate: 98%, see picture), effectively enhanced alertness of contractors.

- "Designated" Unit Responsible for Abnormal Situations

Any person can immediately report to Fab ERC when contractors are engaged

in unsafe practices. The responsible unit, upon receiving the report, will confirm the situation with related units, making immediate correction and carrying out systematic follow-up and improvement.



## Contractor Evaluation

VIS conducts contractor evaluation every year, and the results will be reported at each fab's ESH Committee Meeting and the company's ESH Committee Meeting, and submitted to procurement units as future procurement references.

## Contractor Health Management

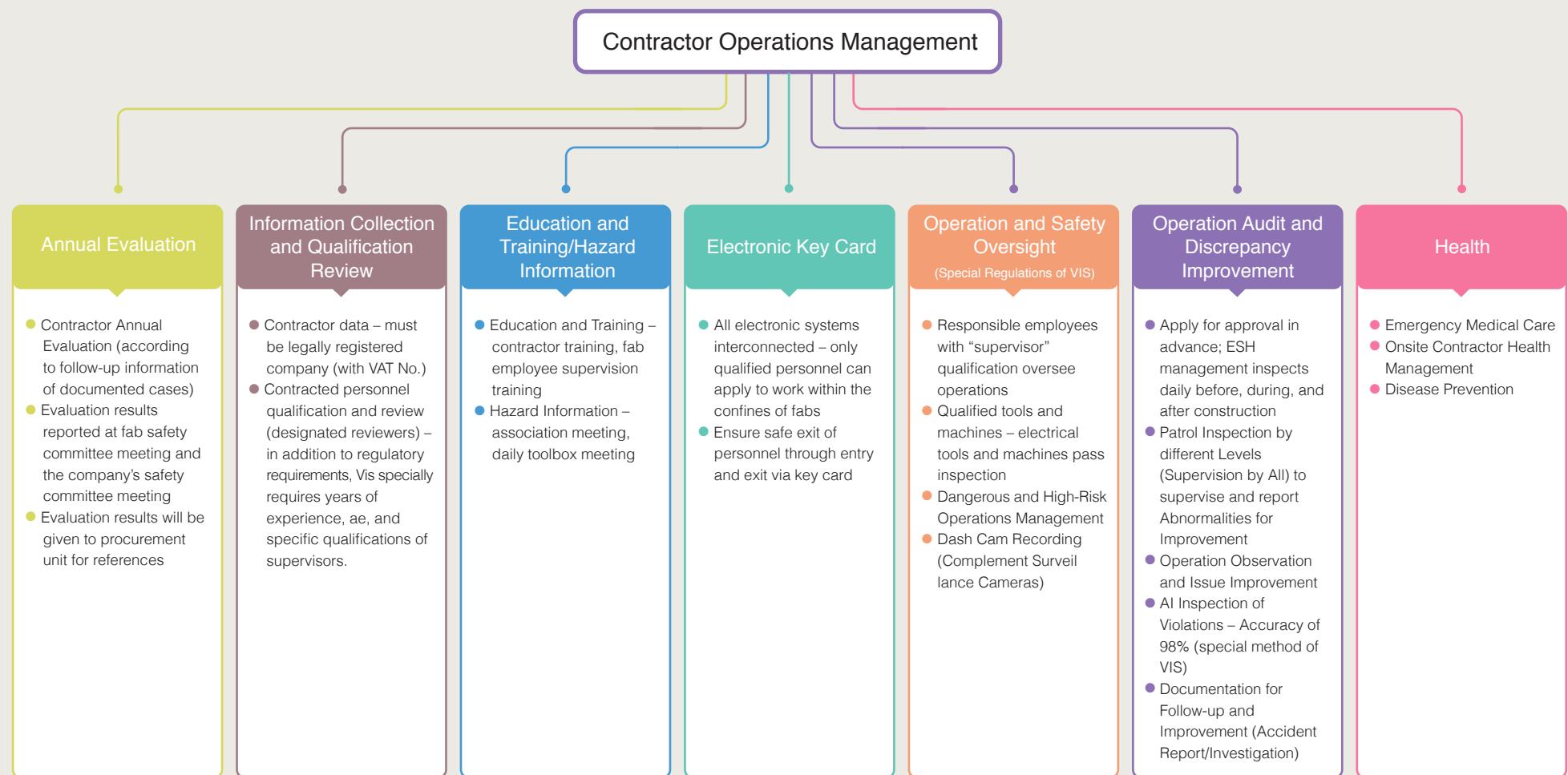
VIS also cares for contractor health management, and has established in Taiwan fabs health center with qualified first-aid personnel, EMT personnel, and equipment, offering immediate help when there is need of emergency care. For those who provided personal health information and written agreement with approval of contractors, VIS health center will conduct follow-up management and health instruction on those with

abnormalities found in health examination. During the pandemic, contractors are key targets of pandemic prevention and management, including: body temperature, and travel and contact history, which must meet the requirements of VIS Pandemic Prevention Committee before entering fabs; upon entering the fabs, related pandemic prevention measures must also comply with VIS regulations.

## "Hand in Hand" Program

VIS continues to implement the "Hand in Hand" program in 2021 to enhance performances of contractor ESH management. VIS will expand the ESH audit and guidance system from partners to all contractors after the pandemic, and normalize "Contractor Audit System," to narrow the gap between the level of ESH management at VIS and its contractors, and prevent construction accidents to achieve win-win situation.

## Contractor Operations Management





7

## 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.





VIS is a member of society, and only through improving the overall social environment can VIS enjoy sustainability and stability. To put the ideal of common good into action, VIS launched several common good projects under the regular review and supervision of VIS Corporate Sustainability Committee in 2021, and tried to expand the reach by inviting the supply chain and the public to participate, proactively responding to the UN SDGs; VIS hoped to create diverse positive influences on the society in aim to achieve the ideal of common good.

Driven by this ideal, and to effectively quantify the benefits brought by charity investment, VIS references the community investment evaluation mechanism of London Benchmark Group (LBG), and use the time, cost, and donations-in-kind, as indicators of the evaluation of charity action benefits and influences. This not only helps VIS examine the outcomes, but also serves as important references for future development of charity

strategy, allowing the company to more reasonably allocate resources and avoid repetition and waste. Moreover, VIS has focused even more on the disadvantaged people, and considered the right long-term benefits for them through interaction with them, improving the qualitative benefits and influences of each common good projects.

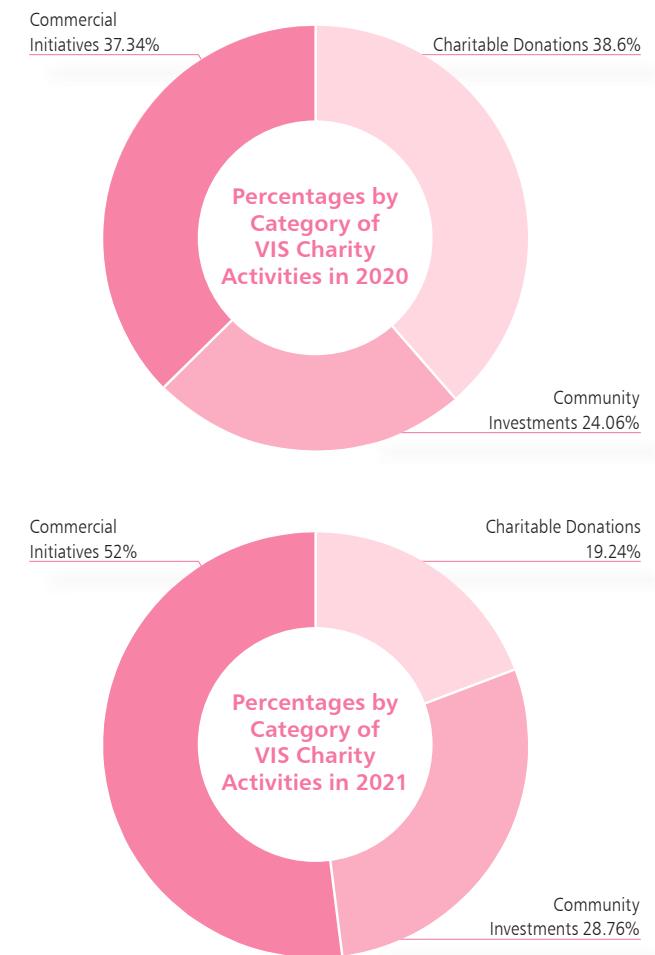
In 2021, VIS invested a total amount of NT\$33,912,783 in common good projects, among which cash contributions of NT\$27,538,624 accounted for 81.2%; in-kind giving amounted to NT\$5,696,189 and accounted for 16.8%; volunteering fund was NT\$520,490 and accounted for 1.53%; management overheads was NT\$157,480 and accounted for 0.46%. Based on types of activities, commercial initiatives relating to VIS' operations accounted for 52%, long-term community investments accounted for 28.76%, and charitable donations accounted for 19.24%.

VIS aided at least 15 charity groups with approximately 13,886 disadvantaged people in the year; VIS provided at least 23,220 sets of pandemic prevention supplies to 3,730 senior citizens living alone, homeless people, halfway house children, and social workers and domestic caregivers working on the first line. VIS also helped six charity groups to raise NT\$4,781,358 and offered 1,586 hours of environmental volunteering, as well as environmental education activities that accumulated 1,095 participants.

### Types of Contribution

Year	Cash Contributions		In-Kind Giving		Volunteering (Note)		Management Overheads		Total		Unit: NT\$
	Fund	%	Fund	%	Fund	%	Fund	%	Fund	%	
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, volunteering hours declined due to the COVID-19 pandemic in Taiwan.



## 2021 Social Welfare Priorities and KPIs

Priorities	Actions	Business Benefits	Social Benefits
Diverse Empowerment	<ul style="list-style-type: none"> <li>Launched the "Catching the Children Schools Cannot" fundraising and invited supply chain to participate.</li> <li>Donated NT\$1 million to "Junyi Academy" to fund the incubation program for teachers in remote areas over the next few years.</li> <li>Sponsored National Tsing Hua University's Sunrise Program, offering three financially challenged female students a NT\$100,000/year scholarship and inviting female executives to serve as mentors.</li> <li>To nurture future semiconductor equipment talents, VIS sent employees to Taitung, which suffers insufficient resources, to open special courses on semiconductor and offer internship opportunities and NT\$200,000 special scholarship to National Taitung College.</li> <li>To close the gap between academia and industry, Vis regularly holds summer internship program.</li> <li>VIS has entered long-term academia-industry cooperation with National Tsing Hua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University, and sponsors the Taiwan Semiconductor Industry Association (TSIA) Award and foundation.</li> <li>VIS has long cooperated with social welfare organizations to employ persons with disabilities, and worked with the organizations' employment centers for job consulting and design.</li> </ul>	<ul style="list-style-type: none"> <li>Established long-term recruitment channel.</li> <li>Enhanced candidates' professional competency, avoided possible gap between education and job after hiring, shortened the learning curve.</li> <li>Increased ratio of female candidates/employees</li> <li>Enhanced brand identity of candidates for more job applicants and higher offer acceptance.</li> <li>Enhanced employees' level of company brand identity.</li> <li>Responded to stakeholders' annual major topics (No.4: Talent Attraction and Retention; No.10: Social Engagement).</li> <li>Enhanced impression and exposure of non-enterprise opinion groups (NGO, media).</li> <li>Enhanced impression of schools and academic entities, and won awards (MOE silver medal).</li> </ul>	<ul style="list-style-type: none"> <li>Cooperated with social welfare organizations, to employ persons with disabilities, and offered more jobs than legally required. In 2021, VIS employed a total of 56 persons with disabilities.</li> <li>Sponsored eight academic institutions research fund and scholarship, encouraging them to engage in semiconductor R&amp;D and offer students professional training in advance. Totaled at NT\$9.1 million/year.</li> <li>Online teachers' training for school teachers at 10 remote schools in Miaoli. Invested NT\$1 million.</li> <li>Offered students internship opportunities and opened industry related courses in Taitung. Offered disadvantaged female students one-on-one guidance and scholarship, exceeding NT\$2.7 million/year.</li> </ul>
Environmental Protection	<ul style="list-style-type: none"> <li>Invited students of ErChong Elementary School to release fireflies into the wild.</li> <li>Invited students of ErChong Elementary School and Shuangxi Elementary School near Hsinchu Science Park. The students were also introduced to "beetles."</li> <li>Clean and maintain water sources of fabs and surrounding areas to restore ecosystem; launched four-year firefly restoration program to enhance biodiversity of adopted water source areas (Hsinchu Science Park Bureau's flood detention pond and Ke-Tzu-Hu Creek).</li> <li>Adopted surrounding public properties for greenification and pest and disease prevention, creating a total of 4.9 hectares of green public spaces (Cherry Blossom Park, Qianjia Park).</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced employees' level of company brand identity and cohesion. Employees accumulated 1,586 hours/year of volunteering.</li> <li>Participated in evaluation of sustainability constituents to increase investors' willingness of green investment (successfully selected to S&amp;P Global DJSI – World, and TIP Taiwan Sustainability Index).</li> <li>Helped to pass customers' ESG audit (over 25 in the year).</li> <li>Helped to comply with TWSE's evaluation and realized CSR, winning top recognition yearly (Top 5% honor in the 8th Corporate Governance Evaluation of TWSE- and TPEX- Listed Companies)</li> <li>Enhanced impression of local government and environmental protection agencies and won awards (EPA's "ROC Enterprises Environmental Protection Award – Silver Award" and Carbon Disclosure Project (CDP) B rating).</li> <li>Reduce operational risks caused by environmental issues.</li> <li>Responded to stakeholders' annual major topics (No.10: Social Engagement).</li> <li>Learned latest information and trends of the industry, enhanced ability of technical R&amp;D, research, and innovation, and enhanced sustainable competitiveness.</li> <li>Enhanced brand identity of candidates.</li> <li>Enhanced impression and exposure of non-enterprise opinion groups (local residents, NGO, media).</li> </ul>	<ul style="list-style-type: none"> <li>1,095 students and local residents participated in environmental education activities.</li> <li>Local waters received long-term maintenance, successfully restoring the ecosystem; release 2,500 to 3,000 firefly larvae to the wild annually to enhance the biodiversity of the waters.</li> <li>Local residents enjoy 2 green public spaces for recreational purposes, with a total surface area of 4.9 hectares.</li> <li>The public could listen to the radio program for free. With 52 episodes a year, the program explored over 10 UN SDGs.</li> <li>Farmers enjoyed a source of stable income with enterprises promoting and supporting their products.</li> <li>Arts organizations received enterprise sponsorship to develop and operate, whereas local residents enjoyed quality and affordable arts and cultural activities.</li> </ul>
Sustainability Initiatives	<ul style="list-style-type: none"> <li>Sponsored radio program "Focus on Taiwan," where the host invited experts in different areas to talk about UN SDGs related topics.</li> <li>Participated in 22 domestic and overseas associations and organizations.</li> <li>Sponsored K.T. Lee Memorial Forum.</li> <li>Purchased farmers' association gift boxes for employees.</li> <li>Sponsored 2021 TSMC Hsin-Chu Arts Festival - Ong Keng Sen X Wei Hai-min: A Thousand Stages, Yet I Have Never Quite Lived.</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced impression of local government and environmental protection agencies and won awards (EPA's "ROC Enterprises Environmental Protection Award – Silver Award" and Carbon Disclosure Project (CDP) B rating).</li> <li>Reduce operational risks caused by environmental issues.</li> <li>Responded to stakeholders' annual major topics (No.10: Social Engagement).</li> <li>Learned latest information and trends of the industry, enhanced ability of technical R&amp;D, research, and innovation, and enhanced sustainable competitiveness.</li> <li>Enhanced brand identity of candidates.</li> <li>Enhanced impression and exposure of non-enterprise opinion groups (local residents, NGO, media).</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced impression of local government and environmental protection agencies and won awards (EPA's "ROC Enterprises Environmental Protection Award – Silver Award" and Carbon Disclosure Project (CDP) B rating).</li> <li>Reduce operational risks caused by environmental issues.</li> <li>Responded to stakeholders' annual major topics (No.10: Social Engagement).</li> <li>Learned latest information and trends of the industry, enhanced ability of technical R&amp;D, research, and innovation, and enhanced sustainable competitiveness.</li> <li>Enhanced brand identity of candidates.</li> <li>Enhanced impression and exposure of non-enterprise opinion groups (local residents, NGO, media).</li> </ul>

Priorities	Actions	Business Benefits	Social Benefits
Care for the Disadvantaged	<ul style="list-style-type: none"> <li>•Organized year-end charity donation to raise fund for six charity groups.</li> <li>•Company made cash donations to 12 charity groups.</li> <li>•Organized Wishing Tree to realize dreams for underprivileged children.</li> <li>•Initiated the “replace donations with orders and spend a warm Mid-Autumn Festival with social enterprises” activity, encouraging all departments to procure gift boxes made by social enterprises or sheltered workshops.</li> <li>•Inviting charity groups, to set up booths in VIS fabs and provided employees coupons to purchase designated merchandise by charity groups.</li> <li>•Launched memorial merchandise sets for employees to purchase, and donated the money to social welfare groups.</li> </ul>	<ul style="list-style-type: none"> <li>•Responded to stakeholders' annual major topics (No.10: Social Engagement).</li> <li>•Enhanced employees' level of company brand identity and cohesion. Over 3,581 employees/year participated in fundraising.</li> <li>•Enhanced brand identity of candidates for more job applicants and higher offer acceptance.</li> <li>•Enhanced impression and exposure of non-enterprise opinion groups (local residents, NGO, media).</li> <li>•Applied for related awards of corporate sustainability (No.28 in CommonWealth Top Corporate Citizens, TCSA Top 50 Sustainable Enterprises: Electronics and IT Manufacturing – Platinum, and GCSA Sustainability Report Award – Bronze)</li> <li>•Reduce possible operational risks caused by infectious diseases.</li> </ul>	<ul style="list-style-type: none"> <li>•At least 15 charity groups received support and sponsorship, benefiting approximately 13,886 underprivileged people.</li> <li>•Raised fund for six charity groups, reaching NT\$4,781,358/year.</li> <li>•Filmed one charity video to help three charity groups with promotion, enhancing exposure.</li> <li>•3,730 senior citizens living alone, homeless people, midway home students, and social workers and domestic caregivers received at least 23,220 packages of pandemic prevention supplies.</li> </ul>
Care for Senior Citizens Living Alone Achieve Local Coprosperity	<ul style="list-style-type: none"> <li>•VIS Volunteering Program organized “Dining with Elders”.</li> <li>•VIS' subsidiary in Singapore also launched the “2021 The Boys' Brigade Share-a-Gift” charity event to raise gifts for elders to local NPOs.</li> <li>•Donated a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch.</li> <li>•Donated pandemic prevention supplies to senior citizens living alone, homeless people, and halfway home students, as well as social workers and domestic caregivers working on the first line.</li> <li>•Donated remote learning supplies to remote areas in Hsinchu and orphanages in Taoyuan.</li> </ul>		<ul style="list-style-type: none"> <li>•Donated contactless COVID-19 testing station, which worth NT\$5 million, for medical professionals and the general public.</li> </ul>

## 7.1 Social Welfare

### 7.1.1 Care for the Disadvantaged

#### Taking a Step ahead for the Disadvantaged – Year-End Charity Donation

VIS launched year-end charity donation in 2016, encouraging employees to donate to six selected charity groups. These six groups can be categorized into two types, including the “New Year with Elders” fundraising project that has been a fixture since 2018, and the 2021 theme – “Catching the Children Schools Cannot,” a special program targeting high-risk dropouts. VIS invites employees to support after-school companionship program that includes homework, arts, and sports, donating to three charity groups: Boyo Social Welfare Foundation (after-school remedial teaching for remote area children), Taiwan Vineyard Arts Association (tribal children art companionship program), and The World Community Service Association (urban indigenous youth Lions Amateur Boxing Club).

This year, VIS specifically invited Taiwan Vineyard Arts Association and The World Community Service Association, which are both small charity organizations with long-term dedication to after-school guidance for youth and children. Unlike more established and well-known charity groups, this kind of smaller

organizations were less known in the past, and had greater difficulty raising funds compared to larger groups, consequently experiencing financial difficulties. To help this kind of social welfare groups, and to expand the influences of the project beyond one-time donation, VIS filmed a charity video, which were uploaded to VIS website for public viewing, to help these groups to gain greater exposure and increase the possibility of smoother promotion and fundraising in the future.



VIS Chairman Leuh Fang (L) visits Lions Amateur Boxing Club and experiences boxing with Su Ching-wen, ROC representative at the World Amateur Boxing Championships.



In the charity video, VIS Chairman Leuh Fang said: "Every kid is a seed. They have own interests, nature, and potentials to be fulfilled. We want to do our part to help them grow up, so that they can live up to their full potentials in this diverse society. This is our vision."

Furthermore, VIS also invited for the first time interested customers and suppliers to freely support the selected six charity groups of the year. The customers and suppliers could directly contact the social welfare groups to communicate matters relating to donations and receipts without going through VIS, further expanding the circle of influence of the project.

The 2021 year-end charity donation received much support, raising a total of NT\$4,781,358 from VIS stakeholders, including its employees and the supply chain.

Upper／Children of Taiwan Vineyard Arts Association, one of the recipients of the year-end charity donation, show their bright smiles in VIS charity video.

Lower／VIS has sponsored Eden Social Welfare Foundation's Love – Chinese New Year Feast for many years. During 2021 Chinese New Year, the project benefited 485 people with disabilities or elders living alone, providing them healthy and hearty meals.

## 2021 VIS Year-End Charity Donation Projects

Unit: NT\$

Project	Social Welfare Group	Sponsorship Project Content	Amount	Total
Catching the Children Schools Cannot	Boyo Social Welfare Foundation	After-school remedial teaching for remote area children	1,317,033	2,478,359
	The World Community Service Association	Urban indigenous youth Lions Amateur Boxing Club	544,713	
	Taiwan Vineyard Arts Association	Tribal children art companionship program	616,613	
New Year with Elders	Huashan Social Welfare Foundation	Annual Year-End Banquet for People in Need	582,413	2,302,999
	Eden Social Welfare Foundation	Love – Chinese New Year Feast	651,973	
	Old Five Old Foundation	Embracing Senior Citizens Living Alone with Love	1,068,613	
Total Fund Raised				4,781,358

Care and Love during the Pandemic – Wishing Tree

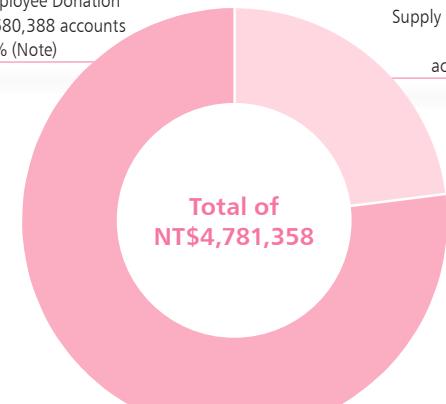
Due to the spread of the pandemic in 2021, halfway houses that have been supported by VIS had to suspend visits due to the government's restrictions, and also turned down volunteers. This protected the physical health of children, but lacking the opportunity to interact with the external world over a long period of time had negative impacts on their mental health.

After contacting and communication with these social welfare groups, VIS specially organized the “Wishing Tree” Charity Activity, inviting disadvantaged children and families from Blue Sky House, SOS Children’s Village of Taiwan, LOHAS Preschool and the Garden of Hope Foundation to make 166 wishes and VIS employees to adopt the wishes they wanted to help.

# Percentages by Category of VIS Charity Activities

VIS Employee Donation  
NT\$3,680,388 accounts  
for 77% (Note)

Supply Chain Donation  
NT\$1,100,970  
accounts for 23%



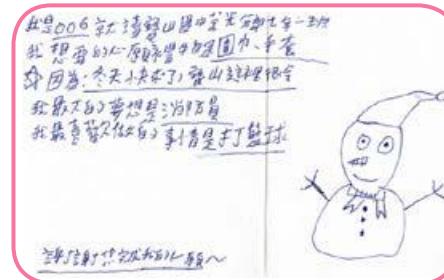
Note: 885 VIS employees proactively made 3,581 donations.



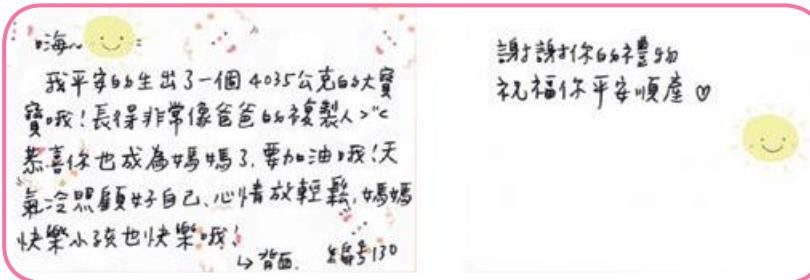
Left/VIS organizes the Wishing Tree activity, collecting 166 wishes from social welfare groups and inviting employees to adopt and realize these dreams of disadvantaged children or family.

Right✓Hand-written cards by VIS employees are wrapped together with gifts delivered to the children in Taipei, New Taipei City, Taoyuan, Hsinchu, and Miaoli, before Christmas.





The children write down wish cards and wait for VIS employees to adopt.



A Wishing Tree baby is born. The mother who received help writes a card to thank the VIS employee who adopted her wish.

VIS employees responded with enthusiasm to the Wishing Tree activity, as all 166 wishes were adopted within 24 hours. Cards hand-written by employees and gifts prepared by VIS conveyed our care to the children before Christmas; by writing thank-you cards, the children exchanged and interacted with the VIS employees who adopted their wishes.

Among the gifts, 18 of them were personally delivered to Blue Sky House in Baoshan Township, Hsinchu County, by VIS PR and volunteering program. That evening, VIS Volunteering Program head and Fab 1 Director Lee Ching-ying strictly followed the pandemic prevention rules and handed out the gifts; members of the volunteering program led the kids in magic performances and balloon class, and the children also showcased their break-dancing moves and musical talent. The volunteers and children spent a wonderful winter night together, which proved that the pandemic could not block our care and love.



A boy reads a hand-written card by a VIS employee.



A girl unwraps her gift.

Upper / After the cards that carry the caring thoughts of VIS employees are delivered to those who made the wishes, they also write thank-you cards back. Some children are too young to write, so they either draw a painting, or have their parents/social workers to write cards for them.  
Lower / VIS Volunteering Program head and Fab 1 director Lee Ching-ying (L4 in back) led VIS Volunteering Program and PR to deliver the gifts to young people of Hsinchu's Blue Sky House in person.





## Other Charity Auction and Procurement

In addition to the aforementioned charity projects, VIS also irregularly invited social welfare groups with long-term partnership to come to the company for charity sales and auctions, helping them to raise fund. For example, the Chinese New Year Market held before Chinese New Year invited social welfare organizations to sell handmade merchandise in VIS fabs, and launched corporate memorial merchandise sets for employees to purchase, raising a total of NT\$256,595. The fund was donated to Children Are Us Foundation for the "Companion with Love and Peace of Mind – Family Care for Mentally Challenged Children" project.

Before Mid-Autumn Festival, VIS initiated the "replace donations with orders and spend a warm Mid-Autumn Festival with social enterprises" activity, encouraging all departments to procure gift boxes made by social enterprises or sheltered workshops. Before Christmas, VIS held the "Christmas Market" activity, inviting six charity groups, including Sunshine Taiwan and Ji-Xian to set up booths in VIS fabs. VIS provided its employees coupons in small values and designated specific merchandise for employees to purchase. The event was participated by 2,884 people, and raised NT\$357,079.

## 7.1.2 Care for Senior Citizens Living Alone and Achieve Local Coprosperity

### Long-term Care for Local Neighborhoods

VIS' own social welfare organization—VIS Volunteering Program has long cared for community senior citizens living alone. Before the pandemic, VIS regularly organized the monthly activity of "Dining with Elders;" in addition to delivering meal boxes to senior citizens living alone, VIS also cared for their health and learned their needs through dining with them, offering their daily supplies and assistance. After the outbreak of the pandemic, to protect their health, VIS has cancelled the activity, replacing it by distributing facial masks to senior citizens.

Moreover, VIS' subsidiary in Singapore also launched the "2021 The Boys' Brigade Share-a-Gift" charity event during Christmas, donating 145 gifts for elders to local NPOs in Singapore.

In addition to VIS employees' volunteering work, VIS also made a special donation of NT\$100,000 to each of the 12 social welfare groups that shared long-term partnership with the company, including local social welfare organizations of each fab, such as Renai Children's Home, Blue Sky House, SOS Children's Village and LOHAS Preschool, doing our part for the local disadvantaged.

All the 145 gifts with extra have been delivered to Geylang East Home for the Aged on 6 Dec!

Thank you VS1 for bringing cheer to the less fortunate by fulfilling their Christmas wishes. We are so proud of you!

Wishing you all a Peaceful and Charitable 2022!



VIS Singapore donates 145 gifts during the 2021 The Boy's Brigade Share-a-Gift event.

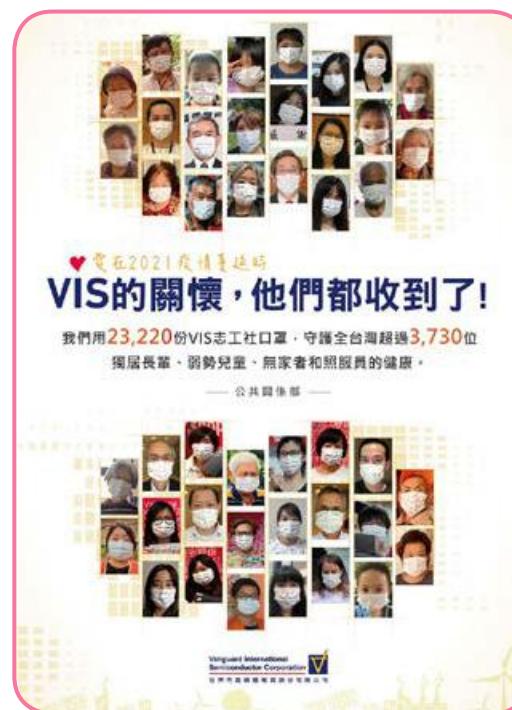


When the pandemic surged, Homeless Taiwan distributed pandemic prevention supplies, such as towels and masks, donated by VIS to 600 homeless people in the greater Taipei area in late night.

### Love in the Time of COVID-19 – Donation of Supplies and Goods including Contactless COVID-19 Testing Station

The COVID-19 pandemic spread in 2021 triggered a sense of insecurity of citizens, enterprises, and society. Through TSMC Charity Foundation, VIS donated a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch, which helped the hospital to conduct PCR testing and ensure safety and comfort of medical workers during testing. This contactless COVID-19 testing station was located within the NTU Hospital Hsinchu Branch, which was tailored to the hospital's needs. The station benefited all citizens in the Hsinchu area, offering faster and safer PCR testing.

VIS also donated pandemic prevention supplies, such as masks/mask zip-lock bags, forehead thermometers, shower towels, and remote teaching laptops, to social welfare groups that care for senior citizens living alone and homeless people, and halfway houses serviced by VIS volunteers, offering senior citizens living alone, homeless people, children of halfway houses, and social workers and domestic caregivers working on the first line sufficient pandemic prevention supplies during the pandemic.



In 2021, VIS donated a total of 23,220 masks, safeguarding the health of over 3,730 senior citizens living alone, disadvantaged children, homeless people, and caregivers.



VIS donates a contactless COVID-19 testing station to National Taiwan University (NTU) Hospital Hsinchu Branch

### 7.1.3 Diverse Empowerment

#### Encouraging Female to Work in Technology – Sunrise Program at National Tsing Hua University

Since 2017, VIS has sponsored National Tsing Hua University's "Sunrise Program" to provide NT\$100,000 scholarship to students from disadvantaged families, hoping to narrow the gap of educational resources caused by financial difficulties, so that these students could focus on studying. Also, to encourage women to work in the high-tech industry, VIS specially selected three female students studying in different disciplines and arranged for female executives to serve as their mentors in 2021, offering the students one-on-one assistance in the areas of academics, life, and career development. As the result, VIS was recognized with a silver medal by Ministry of Education.



VIS VP/CFO Amanda Huang (L3) and Associate VP of Research and Development Benjamin Liao (L4) dine with female VIS executives and students of NTSU Sunrise Program.

### Supporting Teachers in High-Demand Areas – Junyi Academy

To expand the scope of empowerment, "so that every kid, regardless of background, has an opportunity to be a lifelong learner," VIS further donated NT\$1 million to "Junyi Academy" in 2021 to fund the teacher incubation project for 10 schools in remote areas of Miaoli, supporting the teachers in high education demand areas. VIS also promoted volunteer empowerment for enterprises in Hsinchu Science Park, allowing more enterprise volunteers to access the free courses on the platform, accompanying students in remote areas to learn. This project also assisted the international promotion of course videos on Junyi Academy's platform.

### Bridging Academia and Industry to Achieve Win-Win Situation

#### Summer Internship Program for 25 Students

VIS offers summer internship opportunities to domestic and overseas students every year. VIS' 2021 summer internship program "Up Internship Program" came to a close in late August. The program selected 23 summer interns from seven universities and colleges in Taiwan, as well as two overseas interns from Indonesia and Hong Kong. The students each reported on own achievements during the summer internship program at the commencement, and after deliberation by company executives, three winners and three honorable mentions were chosen. The first prize went to Wen Sheng-ye from National Yang Ming Chiao Tung University, who made a report on "Image Auditing Automation – Trolley and Wafer Unboxing."

Moreover, in response to the need of future growth and the incubation of equipment-related talents in advance, VIS went over the Central Mountain Range to Taitung for the first time, and discussed cooperation with National Taitung College, offering an annual scholarship of NT\$200,000. VIS also sent

internal lecturers to teach in Taitung, and selected six students to participate in the summer internship program. The percentage of students from Taitung was only lower than National Yang Ming Chiao Tung University and National Tsing Hua University, as VIS strived to realize the common good philosophy of "saving opportunities for remote areas."

### Six Co-op Programs

VIS has entered long-term academia-industry cooperation with National Tsing Hua University, National Yang Ming Chiao Tung University, and National Sun Yat-sen University, and sponsors the Taiwan Semiconductor Industry Association (TSIA) Award and foundation, through which, VIS hopes to enhance its competitiveness through introducing the energy of academic research; also, VIS provides university students an opportunity to learn the actual operations of the semiconductor industry, nurturing future talents for the industry.

### Employment of 56 Persons with Disabilities

VIS has long cooperated with social welfare organizations, such as Charity Association of the Visually Impaired in Taiwan, Kang Sheng Visually Impaired Massage, Hsinchu Association for Welfare of Persons with Intellectual Disabilities, and The Children Are Us Foundation, to employ persons with disabilities, and worked with the organizations' employment centers for job consulting and design. In 2021, VIS employed a total of 56 persons with disabilities, higher than the 4% stipulated by the government, and strived to offer the disabled more diverse jobs and rewards and bonus higher than the market average.

### 7.1.4 Sustainability Initiatives

#### Focus on Taiwan

Beginning in 2015, VIS has provided annual sponsorship of NT\$2 million to IC Broadcasting Co., Ltd. to produce a series of broadcast programs of "Focus on Taiwan" to proactively promote UN SDGs and call for more people to participate. Through her expertise in journalism, the host, Ms. Shen Chun-hua, had already been incorporating UN SDGs with the programs topics since several years ago. In 2021, a total of 52 episodes were produced, interviewing professionals in the academia, industry, and social entities, including Professor Chen Chi-farn, project head of Sea Sensing Project at Center for Space and Remote Sensing Research, NCU; Professor Dai Chang-feng of Institute of Oceanography, National Taiwan University; Chang Nan-chi, former professor at Institute of Microbiology and Immunology, Yang Ming University; Senior VP Lyu Ping-chiang of National Tsing Hua University and expert of protein engineering and bioinformatics; Director Fu Li-chen of Center for Artificial Intelligence and Advanced Robotics, NTU; former EPA Minister Chan Shun-kuei; President Akuei Huang of Digitimes; Director James Hu of FocalTech; and founder Liu Anting of Teach for Taiwan. The guests joined Shen Chun-hua to discuss the most relevant topics in Taiwan and the world, such as COVID-19 pandemic, environmental protection, climate change, elimination of poverty, development of education, and the global chip shortage, and advocate at least 10 UN SDGs in plain terms.

In addition to broadcast in air, the episodes were also uploaded to the website of IC Broadcasting, as well as on-demand platforms like Apple Podcast, Google Podcast, and Spotify, to expand the program's reach and influences, triggering the discussion and raising the awareness of the industry on global sustainability issues.

## Focus on Taiwan Discussed 10 UN SDGs in 2021

UN SDG	Topic	UN SDG	Topic
SDG 12 Responsible Consumption and Production SDG 13 Climate Action SDG 14 Life below Water SDG 15 Life on Land	New Year on EIA! A Solution for the Dilemma of Industry and Environmental Protection	SDG 3 Good Health and Well-being SDG 5 Gender Equality SDG 10 Reduced Inequalities	Which Vaccine is Effective?
	You Can be a Green Collar! MIRDC Answers Your Questions		Is Domestic Vaccine any Good?
	Climate Change Indicators Stop Falling. Taiwan's Direction?		How to Maintain sound Mental Health during the Pandemic
	Global Alert! Climate Change in "Urgent Status"!		From Vaccines to IT – COVID-19 Prevention Technology
	High-Tech Sea Sustainability Sensing – From Satellite to Drone		Key Risk Management! Long-term Responses for Compound Disasters
	Climate Change? Human Factors? Save Coral Reef Now		Person beyond the Protection of Law – What Can a Stateless Person Do?
	Kuroshio Current and Wales and Dolphins – An in-depth Interpretation of Maritime Culture		Female Scientists – AI Cloud-Based Cloud Point Processing, from Architecture to Autonomous Cars
	From Pop Science, Pandemic Prevention to Eco Sustainability – All about Taiwan		Girl Power! Cooperate to Face the Crisis of Formosat-5
	Local Intelligence, Natural Landscape – Artificial Trails Connect the entire Island		Taiwan Can Help! Shelters on War-torn Borders
	Age Matters Not – The Power of Civic Action		Beware of Non-Relationship Society Caused by Loneliness!
	Increased Wastes from Deliveries! How to be Eco-Friendly?		Cute Service Robots! Warm Companionship for Elderly Citizens
SDG 2 Zero Hunger (Food Security) SDG 4 Quality Education SDG 8 Decent Work and Economic Growth	Labors Defy Fate, but Face Defeat by System	From USR to NPO, firmly Safeguards Every Tiny Glow	From USR to NPO, firmly Safeguards Every Tiny Glow
	Pineapple Chaos? Analyzing Taiwan's Export Deployment of Agricultural Produce		
	Global Chip Shortage and Semiconductor Industry's Development		
	U.S. Department of Commerce's Questionnaires Stir up Controversy in the face of Chip Shortage, How Should Taiwan's Technology Industry Deploy?		
	Learn from Future: Sustainable Future, Immediate Action		
	More Options for Education in remote Areas, Help every Child to Succeed!		
	Save Your Own Milk!		
	Customized Charity Food Box! Former MOD Spokesperson Saves Future Hope for the Underprivileged		
	The Great Rice Urn Project of Homecoming Youth		

## Earth Hour

VIS has participated in the Earth Hour activity in three consecutive years. In 2021, as production and safety remained unaffected, VIS simultaneously turned off unused lights in all four fabs in Taiwan and Singapore, saving a total of 161.85 kWh of power and reducing carbon emissions by 81.2487 kilograms.

Region	Power Saved (kWh)	Carbon Emissions (kg)
Taiwan	116.45	58.4579
Singapore	45.4	22.7908
Total	161.85	81.2487

Note: Calculated based on the Energy Bureau's 2020 annual carbon emission coefficient of 0.502 kg-CO<sub>2</sub>e/kWh

## Care for the Indigenous People and Cultural Heritages

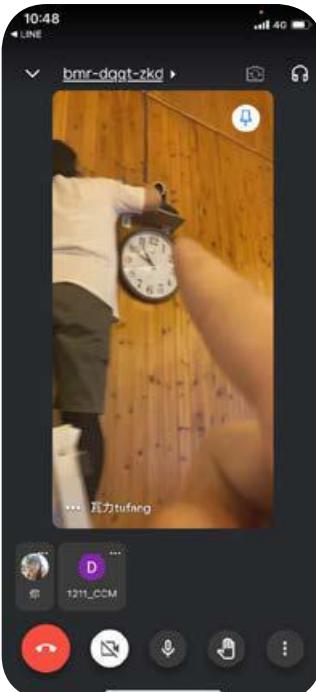
Despite the spread of COVID-19 in 2021, VIS continued to care for indigenous peoples, including:

### Donation of Masks to Smangus

During the outbreak of pandemic in 2021, VIS not only donated Smangus VIS masks, but also responded to the village's request and assigned IT department to help remotely resolve the issues of video-conferencing equipment, allowing those who could not return home due to the pandemic to worship with the priest in the church for spiritual support and comfort.

### Support Urban Indigenous People with Boxing Development

VIS not only supported those living in the villages, but also indigenous people in urban areas. The 2021 year-end charity donation supported The World Community Service Association, which provides assistance to indigenous families in urban areas, to provide after-school care for children and help young people struggling in school services like physical and mental development, employment planning, and career exploration. Since 2011, former national-team



VIS provides remote assistance for Smangus to maintain and repair video-conferencing equipment.

boxers have been brought in to lead boxing classes and organized the “Lions Amateur Boxing Club,” bringing many dropouts back to school and creating a new path for them to pursue further education, as the trainees could apply for higher education with their expertise in sports. The Lions Amateur Boxing club won female boxing champion of the 7th weight class at the 2021 National Intercollegiate Athletic Games, and became national representatives of Taiwan at the World Boxing Championships.

### Develop Arts Education for Indigenous Children in Taitung

The 2021 year-end charity donation was made to another indigenous group, Taiwan Vineyard Arts Association, in remote areas of Taitung. Since 2017, Taiwan Vineyard Arts Association has organized annual music and painting classes in remote villages in Taitung, guiding children in tribal villages to explore their artistic talents and leading their performances at achievements presentations. The children have gradually rediscovered smile and confidence through the process, and learned to express themselves and work in teams.

## 7.2 Environmental Protection

### 7.2.1 Community Building

Since 2019, VIS has adopted Cherry Blossom Park in Hsinchu City, and planted cheery trees and blue Japanese oaks known as “Ke Tree” in Hakka, which have become the unique features of the park. To build Cherry Blossom Park into an ecological bright spot and landscape in eastern Hsinchu, VIS proactively proposed to renovate the park and enhance its features, hoping to build the

1.09-hectare park and surrounding areas into a unique park and ecological zone as a destination for people to see cherry blossoms and a habitat of fireflies through planting various species of cherry trees and flowers, creating unique landscape, and combining with the adopted Ke-Tzu-Hu Creek and flood detention pond.

With an aim to “create a park with cherry blossom as unique feature,” VIS also considered the habits of residents and the microclimate of the park, and decided to build a new Cherry Blossom Park with featured landscapes like “Cherry Blossom Tunnel,” “Landscape Petal Swing,” and “Floral Fall Pavilion.” Upon review and approval by related agencies of the Hsinchu City Government, the construction began and is projected to be completed by mid-2022.

### 7.2.2 Environmental Education

VIS launched the four-year firefly restoration program in 2020, and is projected to release 2,500 to 3,000 firefly larvae to the wild annually from 2020 to 2023. Restoration of fireflies needs clean and unpolluted water sources, and no light hazard at night. VIS selected the flood detention pond by Cherry Blossom Park around VIS Fab2 as the restoration site. In addition to adopting and maintaining the park and Hsinchu Science Park Bureau’s flood detention pond, and cooperated with firefly expert Dr. Wu Chia-hsiung on preliminary ecological survey, and to optimize the environment of the firefly habitat.

On April 16, 2021, VIS held an evening event of firefly appreciation at the flood detention pond, where people were treated to a beautiful scenery of blinking fireflies in the sky. The event attracted over 400 participants. VIS employees also brought families with them, and VIS was honored to invite Hsinchu City Deputy Mayor Shen Hui-hong and Hsinchu Science Park Bureau Director-General Wayne Wang, and officials of the Second River Management Office, WRA, as well as students of LongShan Elementary School and Shi-Hsing Elementary School.

Lower left／Participation by officials and VIPs further brightens the event.

Upper right／VIPs enthusiastically capture the exciting pictures of the evening.

Lower right／Hsinchu City Deputy Mayor Shen Hui-hong and VIS VP Amanda Huang led participating children to wrap flashlights for firefly appreciation.





VIS volunteers and students release fireflies into the wild.

Also, VIS employees assumed the role of environmental volunteers, and carried out environmental education promotion targeting remote tribal villages, neighbor communities and schools, and the public through promotion, seminars, and activities, spreading this force from VIS to all corners.

In 2021, VIS continued to invite students of ErChong Elementary School near Hsinchu Science Park to release fireflies into the wild under the guidance of volunteering VIS employees. The students of ErChong Elementary School and Shuangxi Elementary School were also introduced to "beetles." Their impression was enhanced through the interactive learning experience and live samples of insects, hoping that the students could learn to love animals and treasure the ecosystem.

## Appendix

8

- About This Report
- 2021 VIS Sustainability Report GRI Chart
- AA1000 Assurance Statement

## Appendix 1

# About This Report

With CSR strategy as the core, this report describes Vanguard International Semiconductor (VIS) Corporation's perspectives and appropriate responses concerning topics that include the following areas during our continuous development: corporate governance, customer relations, a happy workplace, environmental protection, community involvement, etc.

## Period of Report

Data contained within this report are from the year 2021 (2021/01/01 to 2021/12/31).

## Parameters and Scope of this Report

The scope of disclosure in this report is based on the business activities of Vanguard International Semiconductor Corporation, disclosing mainly business activities in Taiwan (some data includes VIS business activities in both Taiwan and Singapore). Inconsistencies of scope of disclosure will be explained in the report. All financial figures in this report are presented in New Taiwan Dollars (NTD). Units used for calculating environmental safety and community involvement figures are customary units commonly used internationally.

## Reporting Principles

This report conforms to the Sustainability Reporting Framework (GRI Standards) of Global Report Initiative (GRI), the Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies, and the AA1000 Accountability Principles Standard (AA1000APS), while also referencing the principles of the "Task Force on Climate-Related Financial Disclosures" (TCFD) framework devised by Financial Stability Board (FSB).

## Report Management

Related information of this report was written by corresponding departments assigned by VIS Corporate Sustainability Committee Taskforce, and reviewed by supervisors for accuracy and completeness; the information was then collected and compiled into the report by the PR Division. Finally, the Board of Directors, chair of VIS Corporate Sustainability Committee, and senior executives of all departments reviewed the report and confirmed goals and directions of sustainable development strategy and major topics management guidelines.

## Report Verification

The 2021 VIS CSR Report was compiled in accordance with GRI Standards Core Option. SGS-Taiwan was commissioned for assurance in accordance with GRI Standards-Comprehensive and AA1000 Assurance Standard: v3 type 2 moderate-level assurance. Refer to Appendix 3 for the assurance report.

## Release Schedule of Report

VIS published its first Corporate Sustainability Report in 2015. In the future, VIS will publish Corporate Sustainability Report on a yearly basis.

Current release: Published in June, 2022

Previous release: Published in June, 2021

Subsequent release: Published in June, 2023

## Contact Information

For continued communication with stakeholders, we sincerely welcome you to contact us and offer your most valuable opinions.

Responsible Unit: VIS Corporate Sustainability Committee

Contact: Dana Tsai, Public Relations

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**Appendix 2****2021 VIS Sustainability Report GRI Chart****General Standard Disclosure**

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
<b>Organization Profile</b>				
102-1	Name of the organization	1.1 Company Profile	8	
102-2	Activities, brands, products, and services	1.1 Company Profile	9	
102-3	Location of headquarters	1.1 Company Profile	8	
102-4	Location of operations	1.1 Company Profile	8	
102-5	Ownership and legal form	1.1 Company Profile	9	
102-6	Markets served	1.1 Company Profile	8	
102-7	Scale of the organization	1.1 Company Profile	8	
102-8	Information on employees and other workers	6.1 Talent Recruitment and Retention	149	
102-9	Supply chain	5.1 Responsible Supply Chain	132	
102-10	Significant changes to the organization and its supply chain	1.1 Company Profile	9	
102-11	Precautionary Principle or approach	3.2 Risk Management	72	
102-12	External initiatives	4.1 Climate Change and Energy Management 5.2 Sustainable Supply Chain Management Strategy 6.3 Human Rights	103, 111, 134, 163	
102-13	Membership of associations	2.3 Materiality Analysis and Stakeholder Communication	47	
<b>Strategy</b>				
102-14	Statement from senior decision-maker	Letter from Chairman	2	
102-15	Key impacts, risks, and opportunities	3.2 Risk Management	72	
<b>Ethics and Integrity</b>				
102-16	Values, principles, standards, and norms of behavior	3.3 Ethics and Transparency	81	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
102-17	Mechanisms for advice and concerns about ethics	3.3 Ethics and Transparency 6.3 Human Rights	81, 169	
<b>Governance</b>				
102-18	Governance structure	2.2 Corporate Sustainability Management 3.1 Corporate Governance	19, 55	
102-19	Delegating authority	2.2 Corporate Sustainability Management	19	
102-20	Executive-level responsibility for economic, environmental, and social topics	2.2 Corporate Sustainability Management	19	
102-21	Consulting stakeholders on economic, environmental, and social topics	2.2 Corporate Sustainability Management	19	
102-22	Composition of the highest governance body and its committees	3.1 Corporate Governance	56	
102-23	Chair of the highest governance body	3.1 Corporate Governance	58	
102-24	Nominating and selecting the highest governance body	3.1 Corporate Governance	58	
102-25	Conflicts of interest	3.1 Corporate Governance	66	
102-26	Role of highest governance body in setting purpose, values, and strategy	3.1 Corporate Governance	54	
102-27	Collective knowledge of highest governance body	3.1 Corporate Governance	63	
102-28	Evaluating the highest governance body's performance	3.1 Corporate Governance	63	
102-29	Identifying and managing economic, environmental, and social impacts	3.2 Risk Management	69	
102-30	Effectiveness of risk management processes	3.2 Risk Management	69	
102-31	Review of economic, environmental, and social topics	3.2 Risk Management	69	
102-32	Highest governance body's role in sustainability reporting	About This Report	213	
102-33	Communicating critical concerns	2.2 Corporate Sustainability Management 3.1 Corporate Governance	24, 62	
102-34	Nature and total number of critical concerns	2.2 Corporate Sustainability Management 3.1 Corporate Governance	24, 63	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
102-35	Remuneration policies	3.1 Corporate Governance	65	Some information is subject to specific confidentiality regulations, and therefore VIS does not disclose related sensitive information
102-36	Process for determining remuneration	3.1 Corporate Governance 6.1 Talent Recruitment and Retention	65, 155	
102-37	Stakeholders' involvement in remuneration	VIS governance body does not seek stakeholders' opinions and take their opinions into consideration for remuneration		
102-38	Annual total compensation ratio	The matter is subject to specific confidentiality regulations, and therefore VIS does not disclose related sensitive information		
102-39	Percentage increase in annual total compensation ratio	The matter is subject to specific confidentiality regulations, and therefore VIS does not disclose related sensitive information		
<b>Stakeholder Engagement</b>				
102-40	List of stakeholder groups	2.3 Materiality Analysis and Stakeholder Communication	24	
102-41	Collective bargaining agreement	VIS union is open to employees and consists of a total of 54 members, accounting for 1% of total employees; each fab has own labor representatives (5/fab, total 15); each quarter, employee-employer meetings will be held, and prior to the meeting, all employees can submit proposals via internal system, which will be discussed by representatives of both sides in the meeting.		
102-42	Identifying and selecting stakeholders	2.3 Materiality Analysis and Stakeholder Communication	24	
102-43	Approach to stakeholder engagement	2.3 Materiality Analysis and Stakeholder Communication	28	
102-44	Key topics and concerns raised	2.3 Materiality Analysis and Stakeholder Communication	28	
<b>Reporting Practice</b>				
102-45	Entities included in the consolidated financial statements	Refer to VIS' 2021 financial statement		
102-46	Defining report content and topic boundaries	About This Report	213	
102-47	List of material topics	2.3 Materiality Analysis and Stakeholder Communication	25	
102-48	Restatements of information	No restatements of information in 2021		
102-49	Changes in reporting	2.3 Materiality Analysis and Stakeholder Communication	26	
102-50	Reporting period	About This Report	213	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
102-51	Date of most recent report	About This Report	214	
102-52	Reporting cycle	About This Report	214	
102-53	Contact point for questions regarding the report	About This Report	214	
102-54	Claims of reporting in accordance with the GRI Standards	About This Report	213	
102-55	GRI content Index	2021 VIS Sustainability Report GRI Chart	215	
102-56	External assurance	AA1000 Assurance Statement	224	

## Major Topics Disclosure

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
<b>1. Economic Performance</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	1.2 Financial Performance 2.3 Materiality Analysis and Stakeholder Communication	11, 35	
103-3	Evaluation of the management approach	1.2 Financial Performance 2.3 Materiality Analysis and Stakeholder Communication	11, 35	
201-1	Direct economic value generated and distributed	1.2 Financial Performance	12	
201-2	Financial implications and other risks and opportunities due to climate change	4.1 Climate Change and Energy Management	103	
201-3	Defined benefit plan obligations and other retirement plans	6.1 Talent Recruitment and Retention	157	
201-4	Financial assistance received from government	1.3 Tax Policy	15	
<b>2. Quality Management</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 3.5 Quality and Customer Service	41, 91	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 3.5 Quality and Customer Service	41, 91	
<b>3. Legal Compliance</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 3.3 Ethics and Transparency	36, 82	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 3.3 Ethics and Transparency	36, 82	
307-1	Non-compliance with environmental laws and regulations	3.3 Ethics and Transparency	84	
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	3.3 Ethics and Transparency 5. Responsible Supply Chain	82, 133	
<b>4. Information Security and Privacy Protection</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 3.2 Risk Management 3.5 Quality and Customer Service	40, 76, 97	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 3.2 Risk Management 3.5 Quality and Customer Service	40, 76, 97	
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	3.5 Quality and Customer Service	97	
<b>5. Risk Control and Management</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 3.2 Risk Management	39, 68	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 3.2 Risk Management	39, 68	
<b>6. Talent Recruitment and Retention</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 6.1 Talent Recruitment and Retention	44, 144	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 6.1 Talent Recruitment and Retention	44, 144	
401-1	New employee hires and employee turnover	6.1 Talent Recruitment and Retention	152	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.1 Talent Recruitment and Retention	155	
401-3	Parental leave	6.1 Talent Recruitment and Retention	157	
405-1	Diversity of governance bodies and employees	3.1 Corporate Governance 6.1 Talent Recruitment and Retention	59, 150	
405-2	Ratio of basic salary and remuneration of women to men	6.1 Talent Recruitment and Retention	155	
<b>7. Occupational Safety and Health</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 6.5 Occupational Safety and Health	46, 175	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 6.5 Occupational Safety and Health	46, 175	
403-1	Occupational health and safety management system	6.5 Occupational Safety and Health	176	
403-2	Hazard identification, risk assessment, and incident investigation	6.5 Occupational Safety and Health	179	
403-3	Occupational health services	6.4 Workplace Health Management	171	
403-4	Worker participation, consultation, and communication on occupational health and safety	6.5 Occupational Safety and Health	183	
403-5	Worker training on occupational health and safety	6.5 Occupational Safety and Health	186	
403-6	Promotion of worker health	6.4 Workplace Health Management	171	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6.5 Occupational Safety and Health	179	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
403-8	Workers covered by an occupational health and safety management system	6.5 Occupational Safety and Health	176	
403-9	Work-related injuries	6.5 Occupational Safety and Health	185	
403-10	Work-related ill health	No work-related ill health case as defined by laws and regulations occurred during the report period		
<b>8. Corporate Governance</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 3.1 Corporate Governance	38, 54	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 3.1 Corporate Governance	38, 54	
<b>9. Social Engagement</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 7. Common Good	45, 194	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 7. Common Good	45, 194	
<b>10. Supplier Sustainability Management</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 5. Responsible Supply Chain	37, 131	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 5. Responsible Supply Chain	37, 131	
204-1	Proportion of spending on local suppliers	5.2 Sustainable Supply Chain Management Strategy	135	
308-1	New Suppliers that were screened using environmental criteria	5.3 Supplier Management Mechanism	136	
308-2	Negative environmental impacts in the supply chain and actions taken	5.3 Supplier Management Mechanism	139	
414-1	New suppliers that were screened using social criteria	5.3 Supplier Management Mechanism	136	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
414-2	Negative social impacts in the supply chain and actions taken	5.3 Supplier Management Mechanism	139	
<b>11. Climate Change</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 4.1 Climate Change and Energy Management	42, 99	
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 4.1 Climate Change and Energy Management	42, 99	
302-1	Energy, consumption within the organization	4.1 Climate Change and Energy Management	107	
302-2	Energy, consumption outside of the organization	VIS has no related statistics		
302-3	Energy intensity	4.1 Climate Change and Energy Management	107	
302-4	Reduction of energy consumption	4.1 Climate Change and Energy Management	107	
302-5	Reductions in energy requirements of products and services	This disclosure index is not applicable to VIS products		
305-1	Direct (Scope 1) GHG emissions	4.1 Climate Change and Energy Management	109	
305-2	Energy indirect (Scope 2) GHG emissions	4.1 Climate Change and Energy Management	109	
305-3	Other indirect (Scope 3) GHG emissions	4.1 Climate Change and Energy Management	110	
305-4	GHG emissions intensity	4.1 Climate Change and Energy Management	110	
305-5	Reduction of GHG emissions	4.1 Climate Change and Energy Management	111	
305-6	Emissions of ozone-depleting substances (ODS)	VIS did not use ODS during the period of this report		
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	4.4 Air Pollution Control	123	
<b>12. Water Resource Management</b>				
103-1	Explanation of the material topic and its Boundary	2.3 Materiality Analysis and Stakeholder Communication	27	
103-2	The management approach and its components	2.3 Materiality Analysis and Stakeholder Communication 4.2 Water Resource Management	43, 114	

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
103-3	Evaluation of the management approach	2.3 Materiality Analysis and Stakeholder Communication 4.2 Water Resource Management	43, 114	
303-1	Interactions with water as a shared resource	4.2 Water Resource Management	115	
303-2	Management of water discharge-related impacts	4.2 Water Resource Management	115	
303-3	Water withdrawal	4.2 Water Resource Management	116	
303-4	Water discharge	4.2 Water Resource Management	118	
303-5	Water consumption	4.2 Water Resource Management	117	

## Other Disclosure

GRI Standard	GRI Content Index	Corresponding Section	Page No.	Note
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	3.3 Ethics and Transparency	82	
404-1	Average hours of training per year per employee	6.2 Human Resource Development	162	
306-2	Waste by type and disposal method	4.3 Waste Management	115	
306-3	Waste generated	4.3 Waste Management	116	
408-1	Operations and suppliers at significant risk for incidents of child labor	5.2 Sustainable Supply Chain Management Strategy 6.3 Human Rights	133, 163	

## Appendix 3

# AA1000 Assurance Statement



## ASSURANCE STATEMENT

### SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE VANGUARD INTERNATIONAL SEMICONDUCTOR CO., LTD.'S SUSTAINABILITY REPORT FOR 2021

#### NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS Taiwan Ltd. (hereinafter referred to as SGS) was commissioned by Vanguard International Semiconductor Co., Ltd. (hereinafter referred to as VIS) to conduct an independent assurance of the Sustainability Report for 2021 (hereinafter referred to as the SR Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented during verification (2022/03/07~2022/04/29). SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

#### INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all VIS's Stakeholders.

#### RESPONSIBILITIES

The information in the VIS's SR Report of 2021 and its presentation are the responsibility of the directors or governing body (as applicable) and the management of VIS. SGS has not been involved in the preparation of any of the material included in the SR Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all VIS's stakeholders.

#### ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognized assurance guidance, including the Principles contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) 101: Foundation 2016 for report quality, and the guidance on levels of assurance contained within the AA1000 series of standards and guidance for Assurance Providers.

The assurance of this report has been conducted according to the following Assurance Standards:

Assurance Standard Options and Level of Assurance	
A.	SGS ESG & SRA Assurance Protocols (based on GRI Principles and guidance in AA1000)
B.	AA1000ASv3 Type 2 Moderate Level (AA1000AP Evaluation plus evaluation of Specified Performance Information)

#### SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

Select specific reporting criteria included in the contract

#### Reporting Criteria Options

- 1. GRI Standards (Comprehensive)
- 2. AA1000 Accountability Principles (2018)

- evaluation of content veracity of the sustainability performance information based on the materiality determination at a moderate level of scrutiny for VIS, and moderate level of scrutiny for subsidiaries, and applicable aspect boundaries outside of the organization covered by this report;
- AA1000 Assurance Standard v3 Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018); and
- evaluation of the report against the requirements of Global Reporting Initiative Sustainability Reporting Standards (100, 200, 300 and 400 series) claimed in the GRI content index as material and in accordance with.

#### ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, interviews with relevant employees, superintendents, Sustainability committee members and the senior management in Taiwan and Singapore; documentation and record review and validation with external bodies and/or stakeholders where relevant.

#### LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts, Task Force on Climate-related Financial Disclosures (TCFD) and SASB related disclosures has not been checked back to source as part of this assurance process.

#### STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from VIS, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with ISO 26000, ISO 20121, ISO 50001, SA8000, RBA, QMS, EMS, SMS, GPMS, CFP, WFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

#### VERIFICATION/ ASSURANCE OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the specified performance information included in the scope of assurance is accurate, reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria.

We believe that the organization has chosen an appropriate level of assurance for this stage in their reporting.

**AA1000 ACCOUNTABILITY PRINCIPLES (2018) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS****Inclusivity**

VIS has demonstrated a good commitment to stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, investors, suppliers, sustainability experts, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns. For future reporting, VIS may proactively consider having more direct two-ways involvement of stakeholders during future engagement.

**Materiality**

VIS has established effective processes for determining issues that are material to the business. Formal review has identified stakeholders and those issues that are material to each group and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders.

**Responsiveness**

The report includes coverage given to stakeholder engagement and channels for stakeholder feedback.

**Impact**

VIS has demonstrated a process on identify and fairly represented impacts that encompass a range of environmental, social and governance topics from wide range of sources, such as activities, policies, programs, decisions and products and services, as well as any related performance. Measurement and evaluation of its impacts related to material topic were in place at target setting with combination of qualitative and quantitative measurements.

**GLOBAL REPORTING INITIATIVE REPORTING STANDARDS CONCLUSIONS, FINDINGS AND RECOMMENDATIONS**

The report, VIS's SR Report of 2021, is adequately in line with the GRI Standards in accordance with Comprehensive Option. The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics and boundaries, and stakeholder engagement, GRI 102-40 to GRI 102-47, are correctly located in content index and report. It is recommended to have more descriptions of the processes for evaluating the highest governance body's performances with respect to the governance of economic, environmental, and social topics, and actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental, and social topics (102-28). Reporting of workers' work-related hazards and hazardous situations, and an explanation of how workers are protected against reprisals (403-2) are to be described in future reports.

Signed:

For and on behalf of SGS Taiwan Ltd.

David Huang  
Senior Director  
Taipei, Taiwan  
07 June, 2022  
[WWW.SGS.COM](http://WWW.SGS.COM)



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