VisEra

VisEra

2023 ESG Report

ESG

CONTENTS

Message from the Chairman

To all stakeholders of VisEra:

Thanks for the support and concerns to our company. As the managers of VisEra, we deeply understand the business condition of the optical semiconductor chip manufacturing industry and the international emphasis on ESG (Environmental, Social, and Governance) activities for enterprises. In this fiercely competitive market environment, we have been continuously striving to ensure the long-term robustness and sustainability of our company's operations.

First, in 2023, while the pandemic gradually faded from people's lives, the world remains unsettled. Multiple geopolitical conflicts and political turmoil affect global situation. While the technology industry has received a significant boost from AI, several industries remain trapped in a cold winter, yet to experience the warmth of spring they deserve. Recapping significant technology news from the past year. For example: Taiwan ushered in the Carbon Pricing Era! The Carbon Emissions Trading Exchange officially unveils at the Kaohsiung Software Park, with the inaugural trading session commencing. Huawei unexpectedly launch its new flagship phone, the Mate 60 Pro, has sent shockwaves through the industry, prompting an upgraded version of the U.S. ban in retaliation. The battle of Generative AI giants has begun, with OpenAI unleashing an upgraded version of GPT-4, Microsoft's Bing Search and chatbot Copilot stepping up, and Google's AI robot Bard making its mark.

As a leading optical semiconductor manufacturer, VisEra is dedicated not only to meeting market demands, primarily from China, Europe, the US, South Korea, and Japan but also to providing high-quality products. We have successfully expanded our production capacity and achieved significant breakthroughs in technological innovation. These efforts enable us to maintain a leading position in this fiercely competitive market.

Our achievements in 2023 were as follows:

- TCFD risk and opportunity investigation seminar
- Employee commute carbon footprint check
- Increase two significant topics: corporate risk and talent development
- ESG Report third-party verification
- The first English edition of the corporate sustainability report has been published
- Senior executive VisEra ESG Workshop
- Received the National Occupational Safety and Health - Enterprise Excellence Award from Ministry of Labor
- Received the Science Park Carbon Reduction Excellence Award from National Science Council
- Joined the ESG Advocacy Group of E.SUN Financial Holding Co., Ltd.
- Fields Medals of VisEra
- VisEra was awarded the 2023 Foreign Investment Top 100 in Taiwan
- Received the Gold Award for Sustainability Reporting in the 16th TCSA Taiwan Corporate Sustainability Awards 2023
- VisEra's Longtan Plant achieved LEED Gold certification for green building
- Received the Silver Award in the Fifth National Corporate Environmental Protection Awards
- Ranked in the top 10% in the Ministry of Labor's proactive assessment of occupational health and safety indicators in corporate sustainability reporting
- "Carbon Pricing" working group of VisEra has been formed
- Commence the replacement of photoresists containing harmful substance PFHxA

We have set our ESG work plan for 2024:

- Adding real-time focal cases @ESG Website
- Introduce a significant topic of ESG: Geopolitical risk
- Retention activities specifically targeted towards young employees, e.g., childcare, on-the-job training, etc. and promoting a diverse, inclusive, and friendly workplace
- Formulate the company's carbon pricing strategy and corresponding measures to be adopted through "Carbon Pricing" working group
- Participate in domestic and international advocacy organizations related to ESG, such as RE100 and public associations and non-profit organizations
- The results of the corporate governance evaluation achieved a range of 6% to 20%
- Employee Stock Ownership Trust (ESOT)
- Promote ESG awards to expand participation among all employees within the company
- Improve KPIs for the important task group. For example, the gender pay ratio among employees; the employment ratio of people with disabilities; average training time; obtaining VAR/ disclosing the number of suppliers in ESG reports; patent/ confidential business objectives.

However, we realize that economic benefits alone are not sufficient. In today's corporate environment, there is an increasing emphasis on Environmental, Social, and Governance (ESG) activities for sustainability. In terms of the environment, we are committed to reducing our impact on it. We continue to invest in environmentally friendly technologies and processes to reduce energy consumption and carbon emissions. We also aim to reduce our consumption of natural resources as part of our operations. We pay attention to waste management and actively participate in recycling and reusing activities. We will further promote sustainable supply chain management to ensure that our suppliers and partners also adhere to the best environmental practices. These measures not only contribute to environmental protection but also bring long-term competitive advantages to our business. In the social aspect, we prioritize the well-being and safety of our employees. We are committed to providing a safe and healthy working environment, as well as offering our employees equal and fair opportunities for development. We encourage diversity and inclusivity, and provide training and support for career development. Furthermore, we also emphasize collaboration with the local community, participate in social responsibility projects, and contribute to the development of the community. In terms of corporate governance, we adhere to high standards of moral and ethical principles. We ensure the establishment of transparency and accountability systems, as well as guaranteeing adequate communication and feedback mechanisms, and continuously improving our governance structure and processes. We will ensure operational transparency of the company through regulatory compliance and internal oversight.

In July 2022, VisEra officially released its first ESG report, which introduced VisEra's commitment to sustainability. In summary, we will keep striving to integrate ESG initiatives into the DNA of our company to achieve our sustainable development goals. We believe that through continuous attention to ESG and proactive actions, we can not only contribute to society and the environment but also create durable values and competitiveness for the company. Thank you again for your support and attention to VisEra. We look forward to working with you hand in hand to build a more sustainable and prosperous future. VisEra upholds the motto of "brightening the environment, support the society, science-based governance, and technological innovation" for its commitment to ESG.

Chairman and CEO

Preface

- 1.1 Company Profile

- 1.2 Participation in External Initiatives, Organizations, and Associations

- 1.3 Sustainability Performance

- 1.4 Recognition and Honors

1　Preface

1.1　Company Profile

1.1.1　Ownership

VisEra Technologies Company Ltd. (hereinafter referred to as "VisEra" or "the Company") was established on December 1, 2003 as a joint venture of Taiwan Semiconductor Manufacturing Company Limited (hereinafter referred to as "TSMC") and a foreign partner. TSMC purchased the partner's shares in 2016 and VisEra is now a subsidiary of TSMC. VisEra aims to be one of the best and largest professional semiconductor optical component and manufacturing service provider in the world. In June 2022, the Company's shares were listed on the Taiwan Stock Exchange.

- Head office address: No. 12, Dusing 1st Rd., East Dist., Hsinchu City, Taiwan (R.O.C.)
- Stock Code: 6789
- Industry: Listed semiconductor industry; the Sustainability Accounting Standards Board (SASB) industry classification system categorizes it as "Semiconductors"
- Capital: NT$3.166 billion (as of December 31, 2023)
- Number of employees: 1,387
- Annual revenue of the year: NT$7.237 billion

- Locations of operations:

Location of operation	Address	Building area (unit:m^2)	Products
Hsinchu Plant	No. 12, Dusing 1st Rd., East Dist., Hsinchu City, Taiwan (R.O.C.)	64,652	Image sensors and micro optical components
Zhongli Plant	3F and 6F, No. 188, Zhongyuan Rd., Yongfu Village, Zhongli Dist., Taoyuan City, Taiwan (R.O.C.)	1,282	Micro optical components
Longtan Plant	No. 89, Longyuan 1st Rd., Longtan Dist., Taoyuan City, Taiwan (R.O.C.)	63,783	Image sensors and micro optical components

Note: Please refer to the 2023 Annual Shareholders' Meeting Report for important details about VisEra. You can find these under "Two. Company Profile" and " II. Company History."

1.1.2 Description of Main Products

VisEra focuses on the OEM of image sensors and wafer-level optical components and mainly engages in the image sensor production and services for back-end processes, including color filter manufacturing, wafer-level test services, and on-chip multi-film manufacturing. It is one of the few professional OEM manufacturers in the world that provides color filter process, micro lens process, and multi-film process and integrates technologies for use in product manufacturing.

Product Type	Technology Services	Main Product Markets
Image sensors	On-chip color filter and micro-lens technology Metasurface lens technology	Optical image sensors mainly used in mobile phones, automotive, surveillance, medical, ARVR, and other consumer electronics
Micro optical components	On-chip multi-film technology	3D sensors, multi-channel ambient light sensing components, proximity light sensors
	Integrated on-chip color filters and multi-film technology Metasurface lens technology Surface relief grating	Under-display optical fingerprint sensors, 3D sensors, light sensors, optical bio-sensor components and AVAR products
Others	Other services Micro displays	Low-temperature color filter and micro-lens, image sensor engineering and testing service, wafer-level quantum efficiency testing, wafer-level oblique incident light measurement system, optical simulation and design, photomask design service, process integration, and spectral conversion efficiency analysis
	Silicon photonics technology platform	The Silicon Photonics Technology Platform provides processes for fabricating optical waveguides, gratings, micro-lenses, and electro-optic modulators on silicon wafers, enabling the integration of active and passive silicon photonics components. It also offers simulation and measurement services for the development of silicon photonics chip processes for applications in optical communication, LiDAR, and physiological sensing.

Image sensor product foundry business

In recent years, customer products, whether in automotive, imaging sensors or smartphone imaging sensors, have been a trend towards 12″ development in the manufacturing process technology of color filter, and continuously pursuing improvements in sensing efficiency. Our company proposed exclusive optical structure design for color filter film in 2023, which has been mass-produced to enhance the quantum efficiency (QE) of small pixel spectra. Currently, we are also working on the development of the second-generation product, which is estimated to introduce to customers for mass production in the second half of 2024. Besides, we developed Nano Light pillars, nanometer microstructures for CIS, which have been successfully verified on 0.8um. Samples sent to major customers have also received positive feedback, aiming to improve QE (quantum efficiency) and sensitivity on mobile phones and automotive sensors. Expected to complete development by 2024.

Wafer-level optical components foundry business

- Continuously developing new-generation high-quality coating process technology for 3D sensing component products. This product has been verified and adopted by world-renowned manufacturers, and has been utilized in successive generations of products. It is still being shipped steadily currently.

- The newly developed multiple-channel light sensing coating technology has been verified and put into mass production in 2021 for use in various optical thin film products. In addition, many clients have adopted this technology. In terms of distance and 3D sensing technology, VisEra provides integrated technology for micro-lenses and narrowband filter multi-layer coating processes, simultaneously enhancing optical efficiency and achieving module thinning. Mass production goals have been reached.

- **Surface relief grating technology**

  AR/VR is regarded as the potential product of the next generation, and our developed SRG surface relief grating technology is considered to be one of the key factors in whether AR/VR can become a consumer-grade product. It enables the fabrication of optical routing structures within limited substrate area and thickness conditions.

- **Metasurface Technology**

  In the future, in addition to continuing refining existing color filter film and optical thin film manufacturing processes, the focus of new technological development will be meta-surface technology and biosensing chips for the next phase of market layout.

  Our Company will continue to develop various optical manufacturing processes to enhance integration efficiency, providing customers with excellent wafer-level semiconductor process optical component OEM services.

Distribution of revenue from main products

Unit: NT$ thousand; %

Year / Product Type	2019		2020		2021		2022		2023	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
● Image sensors	2,290,652	67.46	4,226,717	60.85	4,947,328	54.79	4,320,594	47.60	3,016,018	41.68
● Micro optical components	1,014,695	29.88	2,602,900	37.47	3,936,619	43.60	4,600,796	50.69	4,084,759	56.44
● Others	90,377	2.66	116,732	1.68	145,231	1.61	155,758	1.71	136,151	1.88
Total	3,395,724	100.00	6,946,349	100.00	9,029,178	100.00	9,077,148	100.00	7,236,928	100.00

Areas where the main products (services) are sold (provided)

Unit: NT$ thousand; %

Year / Region		2019		2020		2021		2022		2023	
		Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
● Domestic Sales		783,307	23.07	1,359,257	19.57	1,252,207	13.87	1,106,615	12.19	980,607	13.55
Export Sales	● Asia	2,570,952	75.71	5,531,112	79.63	7,695,926	85.23	7,877,133	86.78	6,187,301	85.50
	● Americas	14,792	0.44	15,490	0.22	25,975	0.29	42,209	0.47	52,161	0.72
	● Europe	26,673	0.78	40,490	0.58	55,070	0.61	51,191	0.56	16,859	0.23
	Subtotal	2,612,417	76.93	5,587,092	80.43	7,776,971	86.13	7,970,533	87.81	6,256,321	86.45
Total		3,395,724	100.00	6,946,349	100.00	9,029,178	100.00	9,077,148	100.00	7,236,928	100.00

1.2 Participation in External Initiatives, Organizations, and Associations

VisEra actively participates in activities of associations and industry organizations (e.g., seminars and conferences) to obtain information on the latest policies and developments in the industry and promote the exchange of ideas and development of the industry. In addition to related external initiatives, the Company also obtained silver-level certification in the Validated Assessment Program (VAP) of the Responsible Business Alliance (RBA) in 2021. The RBA-approved independent third-party audit company provides on-site audits of VisEra's facilities, with assurance for risk identification and implementation of improvements as well as a strong management system for worker management, integrity, health, safety, and environmental conditions to improve business operations.

01 Member — The Allied Association for Science Park Industries

The Company joined the Allied Association for Science Park Industries to promote the exchange of ideas in Taiwan's semiconductor industry, provide recommendations for the government's industrial development policies, and jointly enhance the competitiveness and sustainable development of the industry.

02 Member — Taoyuan City Industrial Association

Taoyuan City Industrial Association was established by Taoyuan City Government to strengthen the relationships between industries and promote the common interests of industries. By joining the Association, the Company promotes cross-industry communication, obtains new information, and helps increase the competitiveness of local industries.

03 Member — Institute of Internal Auditors, ROC

The Company joined the Institute of Internal Auditors, ROC to improve the business management system, maintain effective internal controls, and jointly promote the healthy development of the internal audit system in Taiwan.

04 Member — College of Electrical Engineering and Computer Science - Industrial Affiliates Program (EECS-IAP)

The College of Electrical Engineering and Computer Science (EECS) established the Industrial Affiliates Program (IAP) in 1998 with the aim of establishing close cooperation and interactions with the university, and turning academic research results into real applications through industry-academia cooperation. It is also one of the channels for enterprises to recruit talents, which can effectively improve the quality of industrial technologies and academic research.

05 Member — E. SUN ESG Sustainable Advocacy Action

E. SUN Bank and its like-minded corporate partners jointly launched a public initiative to promote the implementation of ESG principles and actions, and to drive the United Nations' Sustainable Development Goals (SDGs) towards a sustainable future. They aim to leverage greater influence and co-create a better society.

06 Member (Note) — RE100

The international Renewable Energy Initiative proposed by The Climate Group and the Carbon Disclosure Project (CDP) calls on businesses worldwide to collectively protect the natural environment. It advocates for the adoption of 100% green energy production to reduce carbon emissions and environmental pollution, addressing issues such as future fuel shortages and climate change, allowing businesses to sustainably operate in the long term.

Note: VisEra is a subsidiary of TSMC. As TSMC's boundary encompasses its subsidiaries for RE100 certification, VisEra is also recognized as a member of RE100.

1.3 Sustainability Performance

Corporate governance

in the top 6%- 20%
Evaluation score ranks

Excellent
Director's performance self-assessment score

>20 %
The director and corporate governance continuing education hours exceed the statutory requirement by

Product innovation

Around 700
accumulated patents

10 %
2023 R&D expenditures as a percentage of revenue

Responsible procurement

100 %
signing rate of the Supplier Code of Conduct for suppliers with a transaction volume of more than NT$1 million in new transactions in the current year and the previous year

69 %
Percentage of local procurement of raw materials

64 %
Percentage of local procurement of components

5 consecutive years
of commendation from Hsinchu City Government for outstanding performance in green procurement

Green production

13.9 million kWh
externally purchased renewable energy

Acquiring 13,903
Renewable Energy Certificates,which is equivalent to reducing emissions by 6,882 metric tons of CO_2

1.11 million kWh
Electricity saved (Hsinchu & Longtan Plants)

15.6 %
of renewable energy by the total electricity consumption in the entire plant area (Hsinchu & Longtan Plants)

Over 85 %
Process water recycling rate (Hsinchu & Longtan Plants)

93 %
Waste recycling rate (including Alternative Energy)

Employee relations

67 %
internal hire rate

82 %
highest internal promotion rate in five years

67 %
retention rate after parental leave

24 hours
average training hours per employee

0 cases
Number of occupational injuries

Corporate citizenship

1,134 hours
accumulated service hours since 2019

872 people
accumulated received services since 2019

626
donated shoe boxes as Christmas presents since 2019

1.4　Recognition and Honors

National Science and Technology Council（NSTC）
2023 Science Park Carbon Reduction Excellence Award

Taiwan Institute of Sustainable Energy
"16th Taiwan Corporate Sustainability Awards (TCSA) in 2023"：Sustainability Report Category for Electronic Information Manufacturing Industry-1st Prize

Taiwan Institute of Directors
2023 Foreign investment selection Taiwan Best-in-Class 100 Companies

Environmental Protection Administration, Executive Yuan
Silver award in the 5th National Enterprise Environmental Protection Award, winning consecutively for 2 years.

Ministry of Labor, Executive Yuan
2023 National Occupational Safety and Health Enterprise Benchmark Award

TAIWAN ARCHITECTURE & BUILDING CENTER
VisEra's Longtan Plant achieved LEED Gold certification for green building

⬆ 2023 National Occupational Safety and Health Enterprise Benchmark Award

⬆ Silver award in the 5th National Enterprise Environmental Protection Award, winning consecutively for 2 years.

⬆ 2023 Science Park Carbon Reduction Excellence Award

⬆ 2023 Foreign investment selection Taiwan Best-in-Class 100 Companies

⬆ "16th Taiwan Corporate Sustainability Awards (TCSA) in 2023"：Sustainability Report Category for Electronic Information Manufacturing Industry-1st Prize

⬆ VisEra's Longtan Plant achieved LEED Gold certification for green building

2 Implementation of Sustainability Management

- 2.1 ESG Management Framework

- 2.2 Materiality Analysis and Stakeholder Communication

- 2.3 Material Topic Management Strategies

2 Implementation of Sustainability Management

2.1 ESG Management Framework

VisEra established the "ESG (Environmental, Social, and Governance) Sustainable Development Promotion Committee" in December 2021 as the Company's highest decision-making body for sustainable development. The President serves as the chair and the Committee appoints a management representative to jointly review the Company's core business capabilities with senior managers of different fields and establish medium to long-term sustainable development plans. The ESG Sustainable Development Promotion Committee convenes quarterly reports to track the target implementation status, formulate ESG action plans, and continuous improvement measures, and reports the results and work plans to the Board of Directors each year. The Board of Directors considers the Company's future business strategies and proposes recommendations for implementation. In May 2023, the Committee reported the results of the Company's ESG operations in the previous year, the 2023 work plan, and the identification of potential significant ESG issues to the Board of Directors.

The ESG Sustainable Development Promotion Committee is primarily responsible for the establishment of the Company's long-term ESG development strategies. It also delegates responsibilities in environmental, social, and economic governance to six task forces including environmental protection, partnership relations, social engagement, friendly workplace, corporate governance, and value innovation, which identify relevant risks and opportunities, set goals, and develop strategies. Each task force holds regular monthly meetings and confirms the target achievement status and important work plans in the quarterly meetings of the ESG Sustainable Development Promotion Committee. The Committee also reached a consensus on the results in 2023 and the 2024 work plan. It formulated the plan for implementation.

ESG Sustainable Development Promotion Committee

Chairman

ESG Sustainable Development Promotion Committee
- Chair
- Management representative
- Executive Secretary

Green and environmental protection
(also including climate change)

- Industrial Safety and Environmental Protection Department

Partnership
(also including customers and suppliers)

- Material Division
- Business Development Department

Social engagement
(giving consideration to continuity and creativity)

- HR Department

Friendly workplace
(also including human rights protection)

- HR Department

Corporate governance
(also including legal compliance)

- Legal Department

Value innovation
(also including processes and products, industry-goverment-university-research cooperation)

- Color Filter Organization
- Wafer-level Optical Organization

Main duties Identify risks and opportunities/set goals/development strategies/promote activities/achieve performance/write reports/win awards (certification)

2.2 Materiality Analysis and Stakeholder Communication

2.2.1 Materiality Analysis Procedures

According to GRI 3: Material Topics 2021 of the GRI Universal Standards 2021, VisEra adopted the economic, environmental, and human-social (human rights) impact assessment methodologies developed by the Value Balancing Alliance (VBA), Harvard Business School's Impact-Weighted Accounts research program, and Business for Societal Impact (B4SI) to establish an impact-based materiality analysis process, identify critical issues for VisEra, and determine the boundaries and scope of sustainable information disclosure. This process also serves as the basis for setting long-term corporate sustainability objectives. In the process of drafting the 2022 Corporate Sustainability Report, we gathered feedback from 455 external stakeholders to learn about their concerns for VisEra's sustainability issues. When measuring the impact of sustainability issues on operations, 48 executives and employees participated in determining the significance of each sustainability issue to operations. We identified 12 material sustainability issues from the 24 sustainability issues and set medium and long-term sustainability management objectives.

During the Sustainable Development Committee meeting in 2023, we decided to conduct a comprehensive investigation and assessment process every two years regarding significant thematic scopes. In 2023, the committee maintained the 12 major themes identified in the previous year while considering issues of particular concern to stakeholders such as the parent company (TSMC), investors, and customers. Additionally, our company identified "Geopolitics" as a new major theme through the Risk Map method of Enterprise Risk Management (ERM). Therefore, adding geopolitics as a significant theme for 2023. Our company continues identifying and assessing the impacts of relevant issues on its operational activities in order to prepare for and prevent potential responses and impacts.

Phase 1: Inclusiveness

We compiled a list of 24 sustainability issues of concern to VisEra and accounted for international standards and regulations, sustainability investment ratings, and communication with stakeholders in the global semiconductor industry.

Phase 2: Materiality

VisEra uses the information in the stakeholder viewpoints, impact on VisEra operations, and impact sustainable development for the materiality analysis in the 2023 Sustainability Report. To obtain the opinions of different stakeholders, we used a questionnaire for the materiality survey and focused on influential stakeholders that have frequent interactions with VisEra. In terms of materiality, VisEra followed the requirements in the GRI Standards and determines the significance of issues based on the level of stakeholders' concern and impact on company operations. We also encouraged employees to identify the impact of each issue on the Company's operations and determine the significance of the issue.

Step**1** :
Verify communication targets

7
types of stakeholders

The parent company (TSMC), investors, employees, customers, suppliers/contractors, government and society (community, media, academic institutions, accountants) are VisEra's main communication targets.

Step**2** :
Compile sustainability issues

24
issues

Sources of sustainable development topics :
- International standards and regulations: GRI Standards, Sustainability Accounting Standards Board (SASB), United Nations Sustainable Development Goals (SDGs), Responsible Business Alliance (RBA)
- Peers in the global semiconductor industry: Collect information and practices on sustainability information disclosure of global semiconductor benchmark companies
- Stakeholder communication: Communicate with stakeholders on a regular basis or when necessary to obtain stakeholder feedback on sustainability issues

Step**3** :
Survey the level of concern

455
surveys

We used the survey to measure the level of stakeholder interest in sustainability issues. A total of 455 stakeholders participated in the survey :
- The parent company(TSMC) (4)
- Employees (405)
- Investors (2)
- Customers (6)
- Suppliers/contractors (29)
- The society (9)

Step**4** :
Impact on operations

48
employees

We invited senior executives, the task forces of the ESG Sustainable Development Promotion Committee, and junior employees totaling 48 people to participate in the materiality analysis to measure the impact of each sustainability issue on business growth, customer trust, talent retention, and risk response. We ranked the impact of each sustainability issue on the Company's operations to determine the significance of the issue.

Phase 3: Responsiveness

We expanded to the needs and expectations for disclosure of sustainability information of different stakeholders based on materiality analysis results and the themes and indicators in the GRI Standards. VisEra enhances the transparency of sustainability issues on different communication platforms including sustainability reports and company websites. The disclosure includes policies, organizations, methodology, effectiveness, and objectives.

Phase 4: Impact

We considered VisEra's business strategy, potential opportunities and risks in future operations, and the sustainability goals of the parent company (TSMC), defining 13 major issues as VisEra's priorities for promoting corporate sustainability. We set sustainability management goals, and regularly track and review the achievement of these goals in meetings.

Step 5 : Impact on sustainability

5
significant impacts

We determine the significance of sustainability issues in terms of economic, environmental and human (human rights) impact. VisEra's 19 executives and employees helped identify significant impacts and sustainability issues based on a sustainability impact evaluation methodology that focused on positive and negative impact, actual and potential impact, irreparability, and value chains.

Step 6 : Major topics

13
major issues

First, we produced VisEra's materiality matrix based on an analysis of the level of stakeholder concern and the impact of the issues on the Company's operations. We selected 12 sustainability issues from the results to form the basis of VisEra's 2023 Sustainability Report. In addition, we considered the issue of particular concern to the parent company, investors and customers, while used the risk matrix of enterprise risk management, "Geopolitical issue" were identified. Therefore, Geopolitical issue were added as a major topic in 2023, bringing the total to 13 major topics.

Step 7 : Determine disclosure boundaries

4
value chain tiers

VisEra's four value chain phases include procurement, optical design and semiconductor component production, testing, and customer use. They also determine the boundaries of sustainability disclosure to measure the impact of sustainability issues on the upstream and downstream phases.

Step 8 : Review disclosure contents

12
specific topics

We identified 13 major issues that 9 of these major topics correspond to the 12 GRI Standards, with sustainability information collected and disclosed according to the reporting requirements and management policies of each standard. Additionally, the management approach for the other 4 major topics defined follows a similar process.

Step 9 : Formulate long-term goals

13
sustainability goals

Following discussions among senior executives and the feedback from the Directors, sustainable management goals for 2025 have been formulated regarding 13 key themes. They included enterprise risk and business continuity management, innovation management, customer services and management, sustainable supply chain management, information security, climate strategy, energy management, water management, waste management, talent recruitment and retention, talent development, occupational safety and health, and Geopolitics.

Step 10 : Review the impact

4
meetings

Each task force holds regular monthly meetings and confirms the target achievement status and important work plans in the quarterly meetings of the ESG Sustainable Development Promotion Committee.

Sustainability impact review procedures

Note: The major topic identification process was continued from the pervious year. For the relevant information for ESG sustainability impact review procedures, please refer to

Material topics ranked by VisEra

Note: The major topic identification process was continued from the pervious year. For the relevant information for ESG Material topics ranked, please refer to

Relationship between major topics and VisEra's value chain (I)

Aspect	Major Topics	Corresponding GRI Standard	Impact on VisEra operations				Impact on sustainability				Impact of the issues on the value chain				
			Business growth	Customer trust	Talent retention	Corresponding risks	Industrial technology development	Create upstream revenue	Environmental benefits of products	Resource consumption	Improve the quality of life of employees	Procurement phase	Production	Product test	Customer use
Economic	Company risk and business continuity management	VisEra Customized topic, no corresponding to GRI standard	●			●	●	●			●		●	●	
	Geopolitics	VisEra Customized topic, no corresponding to GRI standard	●	●		●	●	●				●	●	●	
	Information security	VisEra Customized topic, no corresponding to GRI standard		●		●							●	●	
	Innovation management	VisEra Customized topic, no corresponding to GRI standard	●				●	●					●	●	
	Sustainable supply chain management	GRI 204: Procurement Practices 2016 GRI 308: Supplier Environmental Assessment 2016 GRI 414: Supplier Social Assessment 2016					●	●				●	●	●	
	Customer service and management	GRI 418: Customer Privacy 2016	●	●			●	●					●	●	●
Environmental	Climate strategy	GRI 305: Emissions 2016				●			●	●		●	●	●	
	Energy management	GRI 302: Energy 2016				●			●	●		●	●	●	
	Water resource management	GRI 303: Water and Effluents 2018				●			●	●		●	●	●	
	Waste management	GRI 306: Waste 2020				●			●	●		●	●	●	
Social	Talent recruitment and retention	GRI 202: Market Presence 2016 GRI 401: Employment 2016			●						●		●	●	
	Talent development	GRI 404: Training and Education 2016			●						●		●	●	
	Occupational safety and health	GRI 403: Occupational Health and Safety 2018			●						●		●	●	

Note: ● The issue has impact on operations or sustainable development

Relationship between major topics and VisEra's Sustainable Development Goals (II)

UN Sustainable Development Goals (SDGs)	VisEra ESG Major Issues													Related Contents
	Climate Strategy	Energy Management	Water resource management	Waste Management	Talent Recruitment and Retention	Talent Development	Occupational Safety and Health	Information Security	Innovation Management	Sustainable Supply Chain Management	Customer Services and Management	Enterprise Risk and Business Continuity Management	Geopolitical Risk	
SDG 1: No Poverty														End poverty in all its forms everywhere
SDG 2: Zero Hunger														End hunger, achieve food security and improved nutrition and promote sustainable agriculture
SDG 3: Good Health and Well-Being					●		●							Ensure healthy lives and promote well-being for all at all ages
SDG 4: Quality Education						●								Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
SDG 5: Gender Equality					●	●								Achieve gender equality and empower all women and girls
SDG 6: Clean Water and Sanitation			●				●							Ensure availability and sustainable management of water and sanitation for all
SDG 7: Affordable and Clean Energy		●										●		Ensure access to affordable, reliable, sustainable and modern energy for all
SDG 8: Decent Work and Economic Growth												●		Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
SDG 9: Industry, Innovation and Infrastructure								●	●			●		Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
SDG 10: Reduced Inequalities					●	●								Reduce inequality within and among countries
SDG 11: Sustainable Cities and Communities				●								●		Make cities and human settlements inclusive, safe, resilient and sustainable
SDG 12: Responsible Consumption and Production										●		●		Ensure sustainable consumption and production patterns
SDG 13: Climate Action	●													Take urgent action to combat climate change and its impacts
SDG 14: Life Below Water														Conserve and sustainably use the oceans, seas and marine resources for sustainable development
SDG 15: Life on Land														Protect, restore and promote sustainable use of terrestrial ecosystems
SDG 16: Peace, Justice and Strong Institutions					●									Promote peaceful and inclusive societies for sustainable development
SDG 17: Partnerships for the Goals										●	●		●	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

2.2.2 Stakeholder Communication

VisEra defines stakeholders as groups or organizations that affect or are affected by the Company. We identified seven major categories of stakeholders through the five principles of the AA1000 Stakeholder Engagement Standard (SES) (dependency, responsibility, influence, diverse perspectives, and tension.). We separate stakeholders into two major groups based on the manner of influence (direct or indirect). Direct stakeholders include the parent company, investors, employees, customers, and suppliers/contractors. Indirect stakeholders include society and governments. VisEra chooses different ways of stakeholder engagement based on the nature of the stakeholders, the issues of concern, and the purpose of the engagement.

Stakeholders	Contact information for the responsible unit	Communication mechanisms (Frequency)	Issues of concern in 2023
Parent company (tsmc)	• Finance Div. Miss Yeh ✉ Email Lilian_Yeh@viseratech.com	• Board of Directors (Quarterly) • Regular or ad hoc information communication • Subsidiary supervision	• Innovation management • Product quality • Corporate governance • Professional ethics • Geopolitics • Legal compliance • Sustainable supply chain management • Energy management • Company risk and business continuity management
Investors	• Finance Div. Miss Wu ✉ Email invest@viseratech.com	• Annual financial report (Quarterly) • Annual shareholders' meeting (Quarter 2) • IR meeting (Quarterly)	• Innovation management • Product quality • Corporate governance • Professional ethics • Geopolitics • Legal compliance • Sustainable supply chain management • Energy management • Company risk and business continuity management
Employees	• Human Resource Div. Mr. Chen ✉ Email Benson_Chen@viseratech.com	• Communication and work meetings of units • Manager communication meetings (Quarterly) • Labor-management meetings (Quarterly) • Employee grievance channels • Employee opinion email • Professional ethics and training	• Talent recruitment and retention • Talent development • Human rights • Financial growth • Diversity and tolerance

Stakeholders	Contact information for the responsible unit	Communication mechanisms (Frequency)	Issues of concern in 2023
Customers	• Sales & Marketing Div. Mr. Chen Email cf_sales@viseratech.com	• Telephone • Company mailbox • Official company website	• Innovation management • Product quality • Customer service and management • Talent recruitment and retention • Occupational safety and health • Geopolitics
Suppliers Contractors	• Material Management Div. Mr. Lee Email hank_lee@viseratech.com	• Hold regular supplier meetings to facilitate more harmonious and smooth cooperation between VisEra and suppliers • Contractor agreement organization meetings • Quality management meetings • Supply chain management and communication	• Company risk and business continuity management • Innovation management • Financial growth • Information security • Legal compliance • Talent recruitment and retention
Governments	• Legal Div. Miss Lin Email Julia_Lin@viseratech.com	• Communication meetings/forums/seminars or public hearings held by government agencies • Active communication with government agencies • Reports to government portal websites	• Occupational safety and health • Information security • Diversity and tolerance • Talent recruitment and retention • Talent development • Corporate citizenship
Society	• Human Resource Div. Mr. Chen Email Benson_Chen@viseratech.com	• Survey of opinions of the community and assessment of requirements • Communication meetings/forums/seminars with NGOs • Volunteer activities with in collaboration with NGOs • Company website	• Occupational safety and health • Information security • Diversity and tolerance • Talent recruitment and retention • Talent development • Corporate citizenship

Note: Apart from frequency specifically noted within parentheses, the Company communicates with stakeholders on all other topics on an ad hoc basis.

2.3 Material Topic Management Strategies

Geopolitic (New Add Topic in Y2023 · reference to chapter 8.5)

Responsible unit:Business Development Department, Marketing Department, Order and Production Planning Department | ESG@viseratech.com

Significance

VisEra Tech is a global enterprise that actively seeks new markets and customers to reduce overreliance on certain regional markets. Expanding product and service portfolio to meet broader customer needs.

Commitments

- Regularly analyze customer revenue distribution to come out strategy.
- Diversified customer development to reduce the problem of excessive revenue concentration.
- Through Sales EMS System and Legal Export control blacklist comparsion system to monitor whether customers be listed in trading entitily control list.

Strategy

- Regularly monitor customers' reveneue distribution status
- Develop customers in diverse regions
- Develop new markets and application

Goal

Short-term (2024):
Single customer % ≦ 40%

Mid-term (2027):
Single customer % ≦ 37%

Long-term (2030):
Single customer % ≦ 35%

Goal tracking

Customer's revenus distribution, new Customer development status, customer's EMS(Electronic Manufacturing Services) confirmation

Action Plan

Increase positive benefits
- Quarterly analyze revenue status
- Monthly anlyze customer sales demand forecast

Reduce negative impact
- Regularly discuss geopolitical risks with Legal team.

Communication mechanisms

Stakeholder categories
Parent company, customers

Communication channel
- Sales: Update Demand Forecast and secure order fulfillment status.
- Marketing/BD: Develop new customer, analayze market status.
- Central Planning/PC: Analyze Demand Forecast and secure Mass Production Scheduling to fulfil demand requirement.
- Accouting/Finance: Analyze revenue fulfillment status.
- Legal/Sales: EMS(Electronic Manufacturing Services) System maintenance and regulatory confirmation not violate any trade lists.

Innovation Management (Corresponds to Chapter 3.1)

Responsible unit:R&D Department | ESG@viseratech.com

Significance

Innovation management is employed to establish a favorable corporate brand image, create corporate advantages, integrate with the market economy development environment, enhance corporate competitiveness, and serve as the foundation for sustainable development.

Commitments

- Continuously increase R&D capabilities to maintain technological leadership.
- Assist customers, industries, and academia in interdisciplinary innovation.

Strategy

- Strengthen cooperation among industry, government, and academia, and actively cultivate an innovative culture to create a work environment conducive to innovation.
- Establish mechanisms to encourage colleagues to implement various innovations in their work and continuously enhance the organization's innovative vitality.

Action Plan

Increase positive benefits

- Management decision-making departments and R&D departments review R&D directions through regular meetings to ensure alignment with company business development strategies and continuously increase R&D capabilities.
- Continuously develop industry-academia cooperation to expand pipelines and diversity, and nurture talent to sustainably increase R&D capabilities.

Reduce negative impact

- Advocate the importance of protecting trade secrets and the impact on the company and individuals through educational training (mandatory courses).
- Strengthen the PIP mechanism to systematically control the protection of relevant confidential information.

Goal

Short-term (2024):
The number of trade secrets & patents reaches 47 per year.

Mid-term (2027):
The number of trade secrets & patents increases by 20% to reach 56 per year.

Long-term (2030):
The number of trade secrets & patents reaches 56 per year.

Goal tracking

- The number of trade secrets & patents reached 46 in 2023. The goal achievement rate is 100%.
- Utilize VisEra's internal trade secrets & patents review mechanism.
- Assign dedicated person to track the number of patent applications and the number of patents granted in relevant countries externally.

Communication mechanisms

Stakeholder categories
Parent company, employees, suppliers/contractors, customers, government

Communication channel
Convey through internal regular/ad hoc meetings

Customer service and management (Corresponds to Chapter 3.3)

Responsible unit:Customer Project Management Department | ESG@viseratech.com

Significance

Gain a comprehensive understanding of the customers' review of VisEra and focus on the improvement of the project from the root so that customers are satisfied with the services provided by the VisEra and are more willing to intensify collaboration.

Commitments

- Provide high quality products and services to meet customer demand.
- Implement strict controls to prevent the leak of customers' confidential information.

Strategy

- Actively respond to customer needs and feedback and report progress whenever necessary.
- Obtain information and understand customers' requirements and feelings through meetings, phone calls or emails, and respond to them in a timely manner.
- Implement email control mechanisms and strict PIP control to ensure zero leaks of customer information.

Action Plan

Increase positive benefits

- Learn about the potential needs and opinions of customers through regular meetings.
- Implement effective tracking and management of customer feedback through the VOC system.
- Use the NRTO (New/Re Tape out System) product modeling system to effectively assign plant resources and meet customer needs.

Reduce negative impact

Track and report problems to customers through RMA system, VOC system, and CCN system to reduce customer losses, prevent customer losses, or ensure timely repairs of damages.

Goal

Short-term (2024):
- 80 points or more in customer satisfaction.
- Zero "substantiated complaints concerning breaches of customer privacy and losses of customer data".

Mid-term (2027):
- 85 points or more in customer satisfaction.
- Zero "substantiated complaints concerning breaches of customer privacy and losses of customer data".

Long-term (2030):
- 90 points or more in customer satisfaction.
- Zero "substantiated complaints concerning breaches of customer privacy and losses of customer data".

Goal tracking

- 2023 goal achievement rate: 100%. (Refer to section 3.3 for details.)
- Annual survey on customer satisfaction rate.
- Regular review on whether there are customer complaints.

Communication mechanisms

Stakeholder categories　Parent company, employees, customers

Communication channel　Communication through regular/ad hoc internal meetings

Supply Chain Management (Corresponds to Chapter 4.1)

Responsible unit:Material Management Department | ESG@viseratech.com

Significance

With growing global emphasis on product safety and environmental health, any supply chain disruption can affect service/product delivery. Ensuring supply chain stability is crucial for safeguarding the long-term interests of the company and shareholders.

Commitments

At VisEra, we prioritize integrity and ethical standards to enhance supplier sustainability, fostering a positive cycle of influence.

Strategy

- Enhancing Supply Chain Resilience: Implementing ISO 22301 BCM to mitigate supply chain disruption risks.
- Enhancing Supplier Sustainability: Enforcing adherence to the "VisEra Supplier Code of Conduct," boosting labor rights, safety, environmental protection, ethics, and management system performance to minimize operational disruptions.

Action Plan

Increase positive benefits

- Key supplier's complete sustainability self-assessment questionnaires.
- Conduct thorough audits of suppliers.
- Strive to increase localization in raw material and component procurement.

Reduce negative impact

- Continuously assess new production bases and suppliers to mitigate supply chain disruption risks.
- Maintain regular communication with suppliers on market supply and demand dynamics and provide advance notice of procurement plans.
- Conduct annual scenario simulations based on current events.
- Evaluate suppliers annually based on sustainability assessment mechanisms.

Goal

Short-term (2024):
- Ensured 100% completion of signing the "VisEra Supplier Code of Conduct" by first-tier suppliers annually.
- Achieved 100% response rate to the "Sustainability Management Self-Assessment Questionnaire" from key suppliers.
- Enforced responsible mineral due diligence investigations by suppliers, ensuring a compliance mineral usage rate of 100%.
- Increased the proportion of locally sourced raw materials through diversified procurement, reaching 60%.

Mid-term (2027):
- Ensured 100% completion of signing the "VisEra Supplier Code of Conduct" by first-tier suppliers annually.
- Achieved 100% response rate to the "Sustainability Management Self-Assessment Questionnaire" from key suppliers.
- Enforced responsible mineral due diligence investigations by suppliers, ensuring a compliance mineral usage rate of 100%.
- Increased the proportion of locally sourced raw materials through diversified procurement, reaching 63%.

Long-term (2030):
- Ensured 100% completion of signing the "VisEra Supplier Code of Conduct" by first-tier suppliers annually.
- Achieved 100% response rate to the "Sustainability Management Self-Assessment Questionnaire" from key suppliers.
- Enforced responsible mineral due diligence investigations by suppliers, ensuring a compliance mineral usage rate of 100%.
- Increased the proportion of locally sourced raw materials through diversified procurement, reaching 65%.

Goal tracking

- The goal achievement rate in 2023 is 100%.
- Monthly review of raw material demand and supply plans during production meetings to ensure timely and adequate supply.
- Anticipating market demand changes and forecasts to ensure equipment and machinery supply in advance.

Communication mechanisms

Stakeholder categories
Suppliers, contractors

Communication channel
- Key suppliers fill out the sustainability self-evaluation questionnaire each year
- Ad hoc meetings with suppliers
- Audit, assistance, improvement, and follow-up

Climate strategy (Corresponds to Chapter 5.2)

Responsible unit:Resource Planning Organization: Materials and Resources Department, Industrial Safety and Environmental Protection Department, Plant Affairs Department | ESG@viseratech.com

Significance

The impact of climate change is closely related to business operations and the order in the human, environmental and ecological system. Mitigating the impact of climate change and avoiding the impact of climate factors on operations is a critical and pressing issue.

Commitments

Pursuant to the "Environmental Protection and Hazardous Substances Free Policy", we will focus on global climate change trends, assess their risks and opportunities, and allocate resources to implement effective energy conservation, water conservation, and other management measures.

Strategy

- Evaluate the frequency of climate-related risk events and the severity of their impact on the Company's operations with a Risk Map. Define the priority and risk level for risk management and adopt corresponding risk management strategies based on the risk rating.
- ESG Committee is responsible for comprehensive oversight and management, under which establishing a Carbon Pricing Task Force to formulate implementation strategies, including promoting carbon reduction, utilizing renewable energy, and enhancing climate resilience.

Action Plan

Increase positive benefits

Observe the Company's operations and developments of domestic and international climate and environmental issues. Review the Company's climate risk management status. formulate practical carbon reduction strategies to meet the conditions of a 1.5°C temperature rise scenario

Reduce negative impact

Establish contingency and recovery procedures for identified climate risks such as floods, droughts, earthquakes, etc., and familiarize with response and recovery methods for abnormal occurrences through training and drills.

Goal

Short-term:1 ~ 3 years (2024~2026)
- 0 days of interruption in production due to climate factors
- Percentage of renewable energy consumption within Hsinchu & Longtan plants ≥ 24%
- Developing greenhouse gas reduction targets based on scientific principles from 2026. (To set carbon reduction targets in line with the 1.5°C warming scenario.)

Mid-term:4 ~ 7 years (2027~2030)
- 0 days of interruption in production due to climate factors
- Percentage of renewable energy consumption within t Hsinchu & Longtan plants in 2030 ≥ 40%

Long-term: Over 7 years (After 2031)
- 0 days of interruption in production due to climate factors
- Percentage of renewable energy consumption within the entire company in 2050 is 100%
- The long-term goal of achieving greenhouse gas reduction as advocated by scientific principles will be accomplished by 2050

Goal tracking

- 0 days of interruption in production due to climate factors in year 2023. The goal achievement rate is 100%.
- The members of the carbon pricing working group are responsible for executing various carbon management objectives.
- The carbon pricing working group convenes quarterly meetings to review goal achievement and response measures.

Communication mechanisms

Stakeholder categories

Parent company, government, society

Communication channel

- Parent company: 1. Regularly provide environmental management indicators, including climate impact. 2. Distribute questionnaires to stakeholders to consult them on issues
- Competent authority of environmental protection: Distribute questionnaires to stakeholders to consult them on issues
- NGO environmental protection groups: 1. View information on the Company's official website 2. The Company does not consult them directly but responds to their inquiries

Energy management (Corresponds to Chapter 5.3)

Resource Planning Organization: Industrial Safety and Environmental Protection Department, Factory Affairs Department | ESG@viseratech.com

Significance

VisEra's main businesses include the manufacturing and process services for color filters for image sensor and tests of IC components. Externally purchased electricity accounts for the largest share of energy use in the production process with 87% while natural gas accounts for 12.9% and diesel accounts for 0.1%. Therefore, the main target for energy conservation is to reduce the use of electricity and natural gas. In routine operation and management, we must comply with requirements in energy regulations and set standards based on international norms. VisEra has always been committed to maintaining a high level of corporate social responsibility and fulfills its corporate citizenship obligations. To establish a sound energy management system, the company aims to improve energy efficiency and reduce greenhouse gas emissions to attain sustainable management and development.

Commitments

We will obtain ISO 50001 energy management system certification and aim to improve energy efficiency and reduce greenhouse gas emissions to attain sustainable management and development.

- It is the responsibility of all employees to continuously improve energy efficiency and reduce energy costs.
- We shall participate in external energy conservation organizations or activities to obtain new knowledge for improving management efficiency.
- We shall comply with domestic energy laws and regulations and commit ourselves to meeting advanced international energy standards and regulations.
- We shall support the use of energy-efficient products and services and the procurement of energy-efficient designs for energy services, products and equipment that may have a significant impact on VisEra's energy use.
- We shall provide relevant training programs and resources to increase employees' awareness of energy conservation and carbon reduction. We will actively communicate with employees of all levels and seek out partners.
- We shall engage and communicate with suppliers and contractors on energy issues to encourage them to improve energy efficiency.

Strategy

Action Plan

Increase positive benefits
- Review energy conservation technologies and optimization solutions for operation management.
- Actively purchase green electricity and reduce the use of gray power.

Reduce negative impact
Implement real-time monitoring for energy-related indicators and use automatic control system for immediate response to ensure that the operational efficiency complies with regulations.

Goal

Short-term (2024):
Electricity conservation rate of Hsinchu Plant and Longtan Plant >1.2%

Mid-term (2027):
Cumulative electricity conservation rate of Hsinchu Plant and Longtan Plant in 9 years (2019~2027) >10%.

Long-term (2030):
Achieve a 40% utilization of renewable energy in Hsinchu and Longtan plants by 2030 and attain RE100 by 2050.

Goal tracking
- Goal achievement rate in 2023: Please refer to 5.1.1 Environmental Management Mechanism for details.
- Track and review energy performance indicators every month.
- Submit the energy report, energy efficiency indicator report, and renewable energy obligation report every year.

Communication mechanisms

Stakeholder categories
Parent company, government, suppliers (Taipower, CPC Corporation, and renewable energy companies)

Communication channel
- Parent company: Regularly provide environmental management indicators, including energy management.
- Competent authority of energy: Regular reporting of related data.
- Energy supply company: 1. Apply for supply and sign signature. 2. Actively propose requirements and apply for Renewable Energy Certificates.

Water resource management (Corresponds to Chapter 5.4)

Resource Planning Organization: Industrial Safety and Environmental Protection Department, Factory Affairs Department | ESG@viseratech.com

Significance

Water resources are critical for the semiconductor production process. VisEra has adopted water risk assessment tools of the World Resources Institute (WRI) to identify the water risks in the area where the plant is located, using water availability, environmental discharge quality, and regulatory and reputational risk as key indicators. The results of the assessment for the Company's plant sites are all medium to low risk. VisEra actively implements water resource risk management by implementing the three main strategies of implementing water use plans, seeking opportunities to conserve water, and controlling pollution sources.

Commitments

- We will establish Enterprise Risk Management (ERM) mechanisms based on the standards in ISO 22301 Business Continuity Management System.
- Pursuant to the "Environmental Protection and Hazardous Substances Free Policy", we will focus on global climate change trends, assess their risks and opportunities, and allocate resources to implement effective energy conservation, water conservation, and other management measures.

Strategy

Implementation of water conservation programs and seeking opportunities to save water and control pollution pathways.

Action Plan

Increase positive benefits

Review optimization solutions for water conservation and waste water treatment.

Reduce negative impact

Implement real-time monitoring for environmental protection indicators and use automatic control system for immediate response to ensure that the wastewater discharge complies with regulations.

Goal

Short-term (2024):
Process water recycling rate of Hsinchu Plant ≧ 89.5%

Mid-term (2027):
Process water recycling rate of Hsinchu Plant ≧ 90%

Long-term (2030):
Process water recycling rate of Hsinchu Plant ≧ 90.5%

Goal tracking

- Goal achievement rate in 2023: Please refer to 5.1.1 Environmental Management Mechanism for details.
- Obtain data from water balance meters every day.
- Review and report process recovery rate every month.

Communication mechanisms

Stakeholder categories

Parent company, government, society

Communication channel

- Parent company: 1. Regularly provide environmental management indicators, including water resource management.
- Competent authority of environmental protection: Regular reporting of related data
- NGO environmental protection groups: 1. View information on the Company's official website 2. The Company does not consult them directly but responds to their inquiries

Waste management (Corresponds to Chapter 5.5)

Material Management Department | ESG@viseratech.com

Significance

VisEra is a subsidiary of the critical foundry supply chain of the parent company (TSMC). The hazardous industrial waste derived from materials used in the production process account for approximately 60% of the total waste. Any failure in management or disposal will directly cause significant pollution to the environment, indirectly damage the interests of customers and the Company's corporate image, and lead to negative perception of the Company in the society.

Commitments

We will implement ESG target management to strengthen the capabilities of our contracted waste disposal companies and jointly support environmental protection and the society.

Strategy

- Internal environmental protection units, procurement units, and waste management units select new eligible suppliers based on the six major criteria for the selection of waste disposal suppliers.
- Use high-quality suppliers approved by the parent company (TSMC).
- Work with the parent company (TSMC) to implement the annual inspections and assistance of the external waste disposal suppliers.
- Encourage waste disposal suppliers to obtain ISO 14001 and other environmental, safety, and health certifications.
- Establish legal constraints in contracts.
- Implement fairness in the procurement process.

Action Plan

Increase positive benefits

- Once qualified new suppliers are selected, the Company conducts onsite audits and visits prior to transactions to ensure that the actual onsite environment matches the evaluation information.
- Conduct annual visits, audits, and assistance activities for waste disposal suppliers in accordance with the annual inspection and audit regulations established by the parent company (TSMC).

Reduce negative impact

- Share management systems and methodologies, and follow up on recommendations to enhance corrections.
- Implement adequate response and tracking for the removal/disposal of waste by contractors.

Goal

Short-term (2024):
- Target number of cases in which the waste disposal company fails to comply with regulations: 0.
- Target total number of deficiencies for waste disposal in audits, inspections, and visits of outsourced waste disposal service providers: ≦ 3 cases.
- Annual overall waste recycling rate (including alternative energy) target: ≧90%.

Mid-term (2027):
- Target number of cases in which the waste disposal company fails to comply with regulations: 0.
- Target total number of deficiencies for waste disposal in audits, inspections, and visits of outsourced waste disposal service providers: ≦ 2 cases.
- Annual overall waste recycling rate (including alternative energy) target: ≧93%.

Long-term (2030):
- Target number of cases in which the waste disposal company fails to comply with regulations: 0.
- Target total number of deficiencies for waste disposal in audits, inspections, and visits of outsourced waste disposal service providers: ≦ 1 case.
- Annual overall waste recycling rate (including alternative energy) target: ≧95%.

Goal tracking

- The goal achievement rate in 2023 is 100%.
- Implement audits, inspections, and visits of waste disposal service providers each year and maintain records.

Communication mechanisms

Stakeholder categories

Parent company, suppliers, contractors, government

Communication channel

- Parent company: Provide results of visits and audits.
- Contracted waste disposal suppliers: Onsite audit and visits of waste disposal suppliers, onsite verification and communication with suppliers in accordance with the auditing standards, and tracking of improvements for any deficiencies/recommendations.
- Competent authority of environmental protection: Regular reporting of related data

Talent recruitment and retention (Corresponds to Chapter 6.1)

Human Resource Department | ESG@viseratech.com

Significance

Employees are VisEra's valuable partners. Through diverse recruitment channels, competitive and fair compensation packages, systemized training, and various incentives in order to attract valuable talents to join the VisEra team, and to fuel VisEra's continuous growth in sustainability.

Commitments

Provide diversified recruitment channel and retention strategy for the Company's key talents. Formulate a competitive compensation strategy and retirement package by benchmarking the industry's standards and practices. Provide multi-faceted incentive programs and subsidies.

Strategy

- Improve key and high-performance talents' retention.
- Actualize internal job rotation system.
- Build a friendly and inclusive workplace.

Action Plan

Increase positive benefits

- Improve key and high-performance talents' retention
  - Defined Key/High-performance talent
  - Key/High-performance talents' career planning and training
  - Key talents' retention package
- Actualize Internal Job Rotation
  - Implement internal job posting and application platform.
  - Optimized internal job rotation mechanism.
  - The employee who rotated to a new position will complete OJT (work review) within 3 months after rotation and review by the training committee by referring to the training database.
- Build a friendly and inclusive workplace
  - Design promotion system for factory workers.
  - Maternal health protection: The health center and the responsible department will engage in health care efforts with help from on-site doctors, and EHS to make sure the work environment is adequate for the pregnant employee, in addition to regular monitoring of the employee's physical/psychological conditions and health care knowledge from the date of pregnant to 1 year after labor.

Goal

Short-term (2024):
- Key Talent Retention Rate≥80%
- High-Performance Talent Retention Rate ≥ 72%
- Job fulfillment Rate from the existing employee ≥ 65%
- Rate of manager promoted from the existing employee ≥ 70%
- Job rotation to new position IPD (100% Completion)
- Return to work from suspension without pay≥ 50%
- Rate of migrant worker promotion≥ 2%

Mid-term (2027):
- Key Talent Retention Rate≥80%
- High-Performance Talent Retention Rate ≥ 75%
- Job fulfillment Rate from the existing employee ≥ 65%
- Rate of manager promoted from the existing employee ≥ 70%
- Job rotation to new position IPD (100% Completion)
- Return to work from suspension without pay≥ 60%
- Rate of migrant worker promotion≥ 4%

Long-term (2030):
- Key Talent Retention Rate ≥ 85%
- High-Performance Talent Retention Rate ≥ 85%
- Job fulfillment Rate from the existing employee ≥ 65%
- Rate of manager promoted from the existing employee≥ 70%
- Job rotation to new position IPD (100% Completion)
- Return to work from suspension without pay≥ 80%
- Rate of migrant worker promotion≥ 4%

Goal tracking

- Achievement rate in 2023:
  - Key Talent Retention Rate: 96% (Goal: 80%)
  - High-Performance Talent Retention Rate: 100% (Goal: 72%)
  - Rate of migrant worker promotion: 2.2% (Goal: 2%)
  - Job fulfillment Rate from the existing employee: 67.4% (Goal: 65%)
  - Rate of manager promoted from the existing employee: 82.1% (Goal: 70%)
  - Return to work from suspension without pay: 78.6% (Goal: 50%)
  - Job rotation to new position IPD (100% Completion)
- Regular and Periodic Report

Action Plan — Reduce negative impact — Regular and Periodic Report

Communication mechanisms — Stakeholder categories — Employees

Communication channel — Through internal regular/periodic meeting

Occupational safety and health (Corresponds to Chapter 6.4)

Resource Planning Organization: Industrial Safety and Environmental Protection Department | Human Resource Organization: Employee Relations Department | ESG@viseratech.com

Significance

Employees are the Company's most important capital. Building a safe and healthy workplace environment and implementing occupational disease prevention to protect the health of employees are the most important management tasks for upholding humanistic values.

Commitments

- We shall introduce the ISO 45001 Safety and Health Management System and TOSHMS Taiwan Occupational Safety and Health Management System to operate and maintain the occupational safety and health of the Company.
- Safety and Health Policy
  Our vision: We are committed to achieving zero safety incidents, building the best healthy workplace, and becoming a world-class company for ensuring safety and health.
  Our implementation strategy
  • Comply with or surpass domestic and overseas safety and health regulations and standards.
  • Focus on global safety and health issues, assess risks and opportunities, and invite employees or representatives in the Company to participate and provide opinions for building a good workplace environment.
  • Strengthen inherent safety designs and adopt strict safety and health management measures to prevent occupational hazards and enhance employee safety and physical and mental health.
  • Actively communicate and cooperate with customers and suppliers to jointly improve the safety and health performance of the supply chain.
  • Intensify the awareness, responsibility, and bearing of safety and health measures by all employees.
  • Share safety and health knowledge and experience with external parties and build partnerships with business partners, industries, governments, academia, and the entire society to build a safe and healthy workplace environment together.

Action Plan

Increase positive benefits
Implement chemical source management and hazard identification, implement work environment monitoring, chemical exposure, and classification management, and implement chemical management for maternal health protection. Reduce the risks of employee chemical exposure by eliminating, replacing, or using engineering controls and personal protective equipment.

Reduce negative impact
Organize onsite physician services each month to provide hazard assessments, special operation health examination rating management consultation and evaluation, physiological assessment for respiratory protection. Before diseases occur, we improve work methodology and work assignments to prevent occupational diseases caused by chemical exposure.

Strategy

- Strategy: We evaluate and prepare effective hazard prevention measures to prevent occupational hazards with preliminary review of chemicals and occupational safety and health risk identification and assessment methods before operations. The Safety and Health Committee also reviews the occupational safety and health management conditions. Plan: We will gradually set up a company-level Safety and Health Committee with the expansion of plant and increase in production capacity
- Plan: We will gradually set up a company-level Safety and Health Committee with the expansion of plant and increase in production capacity

Goal

Short-term (2024):
0 occupational disease caused by exposure to chemicals every year.

Mid-term (2027):
0 occupational disease caused by exposure to chemicals every year.

Long-term (2030):
0 occupational disease caused by exposure to chemicals every year.

Goal tracking

- Total of occupational diseases caused by chemical exposure was 0 in 2023. The goal achievement rate is 100%.
- Set the safety performance index (SPI) and track the implementation results each month
- Convene regular meetings of the Safety and Health Committee each month to review the occupational safety and health, occupational disease prevention, and the attainment of safety and health performance indicators.

Communication mechanisms

Stakeholder categories
Parent company, government, society

Communication channel

- Parent company: 1. Regularly provide occupational safety and health management indicators. 2. Distribute questionnaires to stakeholders to consult them on issues.
- Competent authority of environmental protection: Distribute questionnaires to stakeholders to consult them on issues.
- NGO occupational safety or human rights groups: 1. View information on the Company's official website 2. The Company does not consult them directly but responds to their inquiries.

Information security (Corresponds to Chapter 8.6)

Information Technology Department Information Security System O&M Unit | ESG@viseratech.com

Significance

The effectiveness of information security has a key impact on corporate governance, risk management, business continuity, and ensuring business competitiveness.

Commitments

VisEra established an information security management system based on ISO/IEC 27001 standards to ensure the effectiveness, confidentiality, and integrity of information security, maintain the Company's competitiveness, and protect the confidential information of customers.

Strategy

Establish, implement, and continue to improve the ISO/IEC 27001 Information Security Management System and the information security standards required by the parent company.

Action Plan

Increase positive benefits

Establish a dedicated information security supervisor and dedicated information security personnel to promote, coordinate, supervise, and review information security management matters. Establish an information security incident notification and response organization, identify information security risks, and implement information security risk improvement measures.

Reduce negative impact

Incorporate information security into the Company's ERM issues to identify potential risks and establish response and recovery procedures. Organize regular information security training, phishing email exercises, and disaster recovery exercises, and ransomware response exercises.

Goal

Short-term (2024):
Information security incidents each year: 0

Mid-term (2027):
Information security incidents each year: 0

Long-term (2030):
Information security incidents each year: 0

Goal tracking

- Total of Information security incidents in 2023 was 0. The goal achievement rate is 100%.
- Implement daily monitoring of IT Security & Anti Hacking KPI and conduct internal and external weakness scans and vulnerability detection.

Communication mechanisms

Stakeholder categories

Parent company, employees, customers

Communication channel

Regularly report the implementation status of information security to the Board of Directors or the management to ensure the appropriateness and effectiveness of operations. Regularly communicate with the Information Security Division of the parent company on information security issues and improve deficiencies.

Enertprise risk and business continuity management (Corresponds to Chapter 8.5)

Resource Planning Organization | ESG@viseratech.com

Significance

VisEra is a global enterprise. In addition to internal operations and activities, domestic and external conditions and changes in the environment have potential impact on the operations of the Company. It is critical for the Company to identify and respond to risks before they occur to prevent internal and external factors from affecting company operations.

Commitments

- We will establish Enterprise Risk Management (ERM) mechanisms based on the standards in ISO 22301 Business Continuity Management System.
- Business continuity management policy:

VisEra is a global enterprise and a key player in the semiconductor supply chain. We thus established and committed ourselves to maintaining proactive risk and crisis management mechanisms to protect VisEra and key stakeholders including our customers, for the sustainability of VisEra's operations. Our business continuity management plan includes:(1) a corporate culture of continuous improvement. (2) the ability to respond effectively and flexibly to relevant challenges. (3) dynamic self-examination and regular exercises to ensure effective implementation of plans and continuous improvement.

VisEra will uphold its commitment for uninterrupted business operations, which is the common responsibility for the management team and all employees.

Action Plan

Increase positive benefits

Observe the Company's operations and domestic and international developments with the Risk Management Committee and the methodology in ISO 22301. Review the Company's risk management status and estimate the risk trends for the next quarter.

Reduce negative impact

Establish contingency and recovery procedures based on strategy, business, and financial requirements as well as hazardous incidents and other risks for identified entirprise risks. Familiarize employees with contingency and recovery procedures for anomalies through training and drills.

Strategy

Strategy:
- Evaluate the frequency of risk events and the severity of their impact on the Company's operations with a Risk Map. Define the priority and risk level for risk management and adopt corresponding risk management strategies based on the risk rating

Plan:
- Regularly review the corporate risk and continuity of operations management policies and procedures documents, to keep up with developments, adjust the risk assessment methods based on practical operational requirements, and formulate appropriate improvement strategies.
- Intensify the enterprise risk management culture, enhance employees' collective risk awareness, and integrate risk management into their work.

Goal

Short-term (2024):
0 days of interruption in production due to climate factors, disasters, or labor shortages.

Mid-term (2027):
0 days of interruption in production due to climate factors, disasters, or labor shortages.

Long-term (2030):
0 days of interruption in production due to climate factors, disasters, or labor shortages.

Goal tracking

- Days of interruption in production due to climate factors, disasters, or labor shortages in 2023 was 0. The goal achievement rate is 100%.
- The risk management team regularly compiles and submits ISO 22301 work forms to their units for implementation.
- Convene quarterly Risk Management Implementation Committee meetings to review the attainment of goals and response measures.
- Report the status to the Risk Management Steering Committee and the Board of Directors each year.

Communication mechanisms

Stakeholder categories
Parent company, government

Communication channel
- Parent company: 1. Regularly provide implementation records of risk management 2. Distribute questionnaires to stakeholders to consult them on issues
- Business Management Committee: It discloses the Company's risk management information in accordance with the Risk Management Best Practice Principles for TWSE/TPEx Listed Companies".

Talent development (Corresponds to Chapter 6.2)

Human Resource Department | ESG@viseratech.com

Significance

Valuing talent development is essential for ensuring that a company can support and timely provide the necessary talent, corresponding skills training, and management team needs for sustainable development when facing long-term operational growth.

Commitments

VisEra values the professional competence of talents and the cultivation of talent pipelines. We plan a dual-track career development training blueprint and establish talent pipelines according to the functions of each organization and personnel levels. This aims to recruit and nurture talents for the company's growth.

Strategy

- Define courses for Individual Development Plan (IDP).
- Develop capabilities of future talent and build talent pipelines.
- Provide diverse learning resources and encourage employees to engage in self-directed learning.

Action Plan

Increase positive benefits

- Develop a training blueprint for management talents.
  - Define the training blueprint for management talents.
  - Promote diversified training modes for management courses.
- Implement individual development plan courses for professional talents.
  - Supervisors should set individual development plan courses, with new courses added annually.
  - Track the completion rate of IDP courses quarterly.
  - Internal transfers should complete On-the-Job Training (OJT) for the new position within three months after the transfer.

Reduce negative impact

HR regular reports or ad-hoc reports

Goal

Short-term (2024)

1. Completion rate of Individual Development Plan (IDP) courses: 100%
2. Completion rate of Firstline supervisor management demand courses: 80%
3. Execution rate of 8 cross-unit professional training courses: 90%
4. Total annual learning hours per employee: 25 hours

Mid-term (2027)

1. Completion rate of Individual Development Plan (IDP) courses: 100%
2. Completion rate of Firstline supervisor management demand courses: 85%
3. Execution rate of 8 cross-unit professional training courses: 95%
4. Total annual learning hours per employee: 28 hours

Long-term (2030)

1. Completion rate of Individual Development Plan (IDP) courses: 100%
2. Completion rate of courses for newly appointed supervisors: 90%
3. Completion rate of courses for key talents: 80%
4. Total annual learning hours per employee: 35 hours

Goal tracking

- Regular (ESG Group Meeting/Committee, Education and Training Committee) and ad-hoc reporting.

2023 Goal Tracking	2023 Achievement Status
Completion Rate of Individual Development Plan (IDP) Courses 100%	100%
Completion Rate of Firstline Supervisor Management Skill Courses 80%	90%
Execution Rate of 8 Cross-Unit Professional Training Courses: 90%	100%
Total Annual Learning Hours per Employee: 25 hours	24.4 hours

- Reason for not meeting the annual learning hours target: Due to a sharp decrease of 79% in new hires compared to the previous year, resulting in a reduction of 3387 hours in training for new employees.

  Improvement approach: Increase the number of both physical and online courses according to the training blueprint.

Communication mechanisms

Stakeholder categories

Employees, Parent company

Communication channel

Communicate through internal regular/ad-hoc meetings

3

Role in Sustainability

Product Innovation

- 3.1 Innovation management

- 3.2 Product quality

- 3.3 Customer Service and Management

3　Role in Sustainability — Product Innovation

3.1 Innovation management

3.1.1　R&D Management

R&D Management Strategy

In order to comprehensively enhance the strategic development and energy of innovation management, VisEra Corporation has established a Value Innovation Team under the ESG Sustainable Development Promotion Committee. In addition to continuously investing in advanced processes and innovative equipment to maintain technological leadership while also considering green energy and human factors improvement, we will strengthen cross-border cooperation between industry and academia and actively cultivate an innovative culture to create a work environment conducive to innovation. This will effectively enhance the competitiveness of the enterprise.

The contributions of products designed by VisEa Company to human society ▶▶

01　Image Sensors

Micro lenses can enhance imaging sensitivity by about **20%**, reduce power consumption, and increase sensitivity of color filter array to improve nighttime visibility

Smartphones
❶ High-resolution and small pixel technologies provide increasingly higher image resolution to meet human visual perception.
❷ Image recognition allows humans to have a deeper understanding of the surrounding environment more easily (e.g., search, shopping, and translation).

Self-driving Cars
Protect pedestrians and drivers for driving safety.

Internet of Things (IoT) Devices
❶ Smart recognition provides timely alerts and offers 24-hour peace of mind home monitoring technology.
❷ AI intelligent image analysis system provides road traffic safety monitoring and faster assistance in criminal cases and vehicle tracking.

Metaverse and Wearable Devices
Used to capture images of the surrounding scenes in life, combined with AR personal or commercial applications to overlay virtual messages on life scenes, such as navigation, to improve convenience.

Technological Medicine
Eye gaze tracking technology brings convenience to people with disabilities and major illnesses in their daily lives.

02　Light Sensors

10% saving of electricity

Smartphones
❶ Adjust screen backlight brightness to improve eye comfort under different lighting conditions.
❷ Automatically turn off the screen to extend the battery life of smartphones and save energy.

Self-driving Cars
Provide more comfortable and convenient automation settings for drivers (e.g., automatically turn on dashboard screens and headlights in low light conditions, rain detection and automatic wipers, activation of car safety airbags, and interior temperature regulation).

Internet of Things (IoT) Devices
❶ Smart applications enhance people's control over pollution
❷ Sustainable housing low-carbon innovation solutions (smart energy regulation).

Metaverse and Wearable Devices
Adjust the brightness and color temperature of AR/VR screen displays according to the living environment, helping to maintain eye safety and regulate the comfort of screen displays.

Technological Medicine
Light sensors on wearable devices use LED lights to illuminate blood vessels and measure changes in blood characteristics such as heart rate (heart rate sensor) or the absorption spectrum of hemoglobin and oxyhemoglobin in blood to infrared and red light (blood oxygen sensor) to detect changes in body characteristics, providing advance reminders and prevention.

03 3D Sensors

Optical coatings improve signal-to-noise ratio, increase by 3db, reduce laser intensity by **50**%, increase accuracy and anti-interference capability of identification.

Smartphones
3D facial recognition and optical fingerprint recognition protect user privacy (encryption, unlocking) and provide authentication basis for mobile payment.

Self-driving Cars
Establishing 3D images with LiDAR to upgrade the surrounding perception of self-driving cars.

Internet of Things (IoT) Devices
❶ Emerging contactless applications for epidemic prevention (gesture, distance detection).
❷ 3D sensors combined with AI analysis for real-time movement matching in fitness systems, monitoring and tracking physiological health data in daily life, and providing proactive health recommendations.

Metaverse and Wearable Devices
❶ Motion sensing devices, gesture control.
❷ 3D environmental modeling to enhance convenience in daily life.

04 Optical fingerprint recognition device

Microscopic lenses increase light input by 2-3 times, while colored filters enhance anti-counterfeiting properties

Smartphones
3D facial recognition and optical fingerprint recognition protect user privacy (encryption, unlocking) and provide authentication basis for mobile payment.

Self-driving Cars
Fingerprint unlocking adds driver identity verification and personalized operation interface settings.

Internet of Things (IoT) Devices
Miniaturized sub-screen optical fingerprint devices, providing longer standby time and safeguarding user privacy (encryption, unlocking) and mobile payments without affecting the layout of smartwatch batteries and the use of miniaturized screen devices.

05 Miniaturized Display Device

Improvements in the efficiency and brightness of miniaturized OLED/LED displays can provide up to **50**% increase in battery life.

Metaverse and Wearable Devices
Dedicated to developing lightweight, compact, high-color brightness screen displays, addressing user dizziness and providing an excellent wearing experience.

Technological Medicine
Miniaturized displays enable digital messaging and near-eye applications. In medical-grade applications, they aid visually impaired patients in reproducing partial vision on the retina.

06 Bio-Medical Chips

Miniaturization reduces chip costs by **30**%, offering a chance for **15**% of global cancer patients to receive early detection and effective treatment

Technological Medicine
❶ Utilizing VisEra optical bio-detection technology, biological fluorescence in reaction wells is focused through filtering elements and decoded via sensing chips, providing test chips for prenatal chromosome examination, cancer predisposition analysis, or rapid screening for infectious diseases
❷ Miniaturized optical bio-detection technology enables precise healthcare, paving the way for personalized medicine and portable diagnostic devices
❸ It enhances diagnostic efficiency for medical personnel and reduces user waiting time.

The contributions of products designed by VisEa Company to human society ▶▶

07 Silicon photonics technology

with over **50%** volume reduction and more than **30%** power consumption reduction

Self-driving Cars

Utilizing optical semiconductor processing technology on silicon wafers, traditional mechanical LiDAR functionalities are integrated onto chips the size of fingertips, achieving both volume reduction and power consumption reduction.

Internet of Things (IoT) Devices

By leveraging silicon photonics platform technology, electrical signals are converted into optical signals and transmitted on chips, effectively enabling low-power transmission of higher signal rates

Metaverse and Wearable Devices

Employing silicon photonics platforms, physiological sensing functions are carried out on wearable devices, capitalizing on the advantage of volume reduction.

Technological Medicine

Through silicon photonics integration technology, functions such as heart rate, blood oxygen, and blood glucose are integrated onto silicon chips for real-time measurement using non-invasive optical methods, assisting in self-monitoring changes in physiological states.

The contributions of products designed by VisEa Company to human society ▲

Research and Development Management Framework

VisEra Company boasts a professional management and R&D team with extensive experience in product strategy and positioning. We continuously monitor industry information and trends in raw material prices, maintaining close communication with customers to stay abreast of industry dynamics. This enables us to continuously develope new technologies and products, thereby strengthening our company's competitiveness.

R&D division organization:


```
General Manager (GM)
├── Color Filter Organization
│       └── Color Filter R&D Division
└── Wafer Level Optical Organization
        ├── Optical Thin-Films Application Division
        └── Wafer Level Optical R&D Division
```

Note: For details on R&D unit and its activities, please refer to 2022 Sustainability Report/Chapter 3.1.1 R&D Management.

Investment in Innovative Research and Development

VisEra is committed to technological innovation and research and development of proprietary technologies. In 2023, it invested approximately 730 million New Taiwan Dollars in R&D, accounting for 10.0% of its revenue. Over the past three years, it has steadily increased its R&D expenditure annually to develop key technologies and consolidate its leading position.

Investment in innovative research and development	2019	2020	2021	2022	2023
● R&D Expenditure (K NTD)	346,489	366,794	542,020	671,886	726,535
● Revenue (K NTD)	3,395,724	6,946,349	9,029,178	9,077,148	7,236,928
R&D Expenditure rate of Revenue (%)	10.20	5.28	6.00	7.40	10.04
R&D Personnel (P)	121	157	203	215	221
Total Employees (P)	931	1,230	1,380	1,445	1,387
R&D ratio of Total Employees (%)	13.0	12.8	14.7	14.9	15.9
Master's or Higher Degree/ R&D Personnel Ratio (%)	93%	93%	94%	95%	96%

Annual Product Innovation Achievements and Applications

Note: For detailed information on product innovation applications, please refer to VisEra's official website, Dedicated Optical Foundry/Main Product/Application.

Spotlight

Development of GPU High-Speed Computing Technology for Finite Time Domain Difference Method

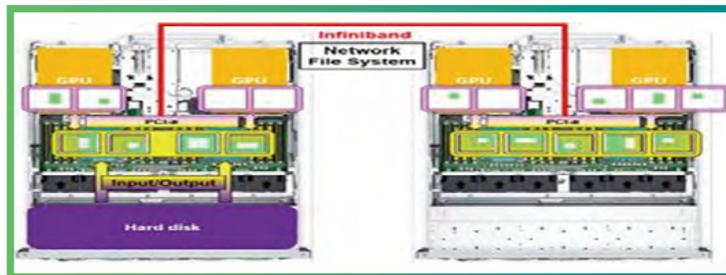VisEra has traditionally focused on the manufacture of optical components. However, in recent years, with the rapid advancement of nanophotonic technology, its pace has accelerated significantly. In the ever-changing future market, competition with global leading companies no longer relies solely on manufacturing capabilities; research and development innovation are equally crucial. There remain many unknowns in the principles of wave optics, and the scope of R&D innovation includes not only optical design but also challenges in measurement technology.

Additionally, in the optimization of meta-surfaces, apart from overcoming the physical limits of optics, the demand for computational resources has become more complex, posing a bottleneck for both international academic institutions and industries. Therefore, optimization directions not only require the development of accurate and fast computational models based on theoretical foundations but also efficient allocation of limited computer resources.

The theoretical development of nanophotonic technology is poised to disrupt the reliance on geometric optical products in the past. Its application scope includes hyperlens (for machine vision), metasurface dot matrix projectors (for detection and facial recognition), environmental sensors, AR/VR wearable devices, and color routers. If nanophotonic theory, GPU-FDTD high-speed computing technology, and measurement technology can be developed with mature mathematical models and experimental frameworks, coupled with manufacturing capabilities, VisEra's relevant optical products will undergo a revolutionary comprehensive upgrade. VisEra will be capable of providing customers with comprehensive OEM services from design to manufacturing.
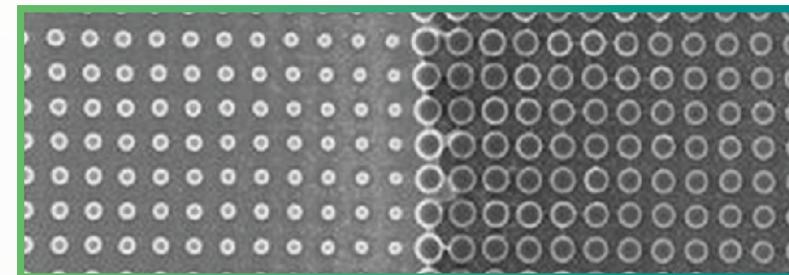

Development and Prototyping of Super-Resolution Lens Design Technology
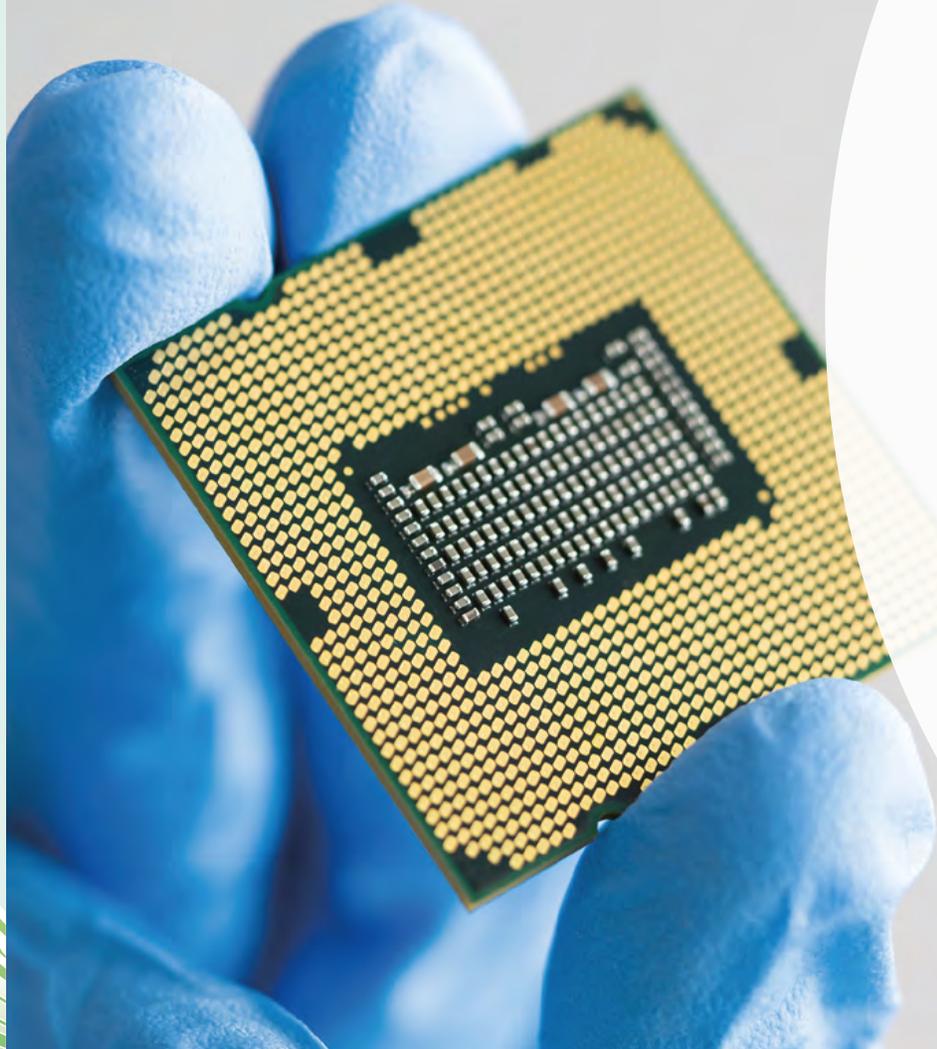
Lenses are widely used optical components, with optical products including smartphones, LiDAR, AR/VR glasses, etc. The miniaturization of optoelectronic components has become a demand in modern optical products. Traditional optical devices are generally bulky due to limitations in materials found in the natural world. However, in recent years, with the development of nanophotonics, sub-wavelength nanostructures can form a small and flat super-resolution interface using collective resonance to control the propagation behavior of electromagnetic waves. This brings significant benefits to the miniaturization of optoelectronic components. If future developments can achieve functions such as chromatic aberration and distortion correction, super-resolution lenses have the potential to completely replace bulky traditional optical devices, thereby greatly changing the ecology of optical products.

VisEra has rapidly developed in recent years in the field of super-resolution interface processing technology, becoming a key process supplier for internationally renowned optical manufacturers. Given the current trend, interest in super-resolution interfaces among potential large-scale customers continues to grow. If VisEra can provide both design and manufacturing services, it will facilitate smoother product development processes for clients, increasing their willingness to cooperate with VisEra.

If design technology can be successfully developed, it is expected to generate revenue for VisEra in the near future and further increase profit margins due to the uniqueness of the design technology. However, designing a super-resolution interface challenges the physical limits of optics, making its technological development quite difficult and challenging. Furthermore, optical manufacturers with top-notch design and production capabilities are rare both domestically and internationally, especially in nurturing design capabilities, which is particularly challenging. Although there is a prototype of internal design technology development, there is a lack of actual prototypes to verify design thinking.

The purpose of this project is to accelerate the development of super-resolution lens design capabilities and produce prototypes of super-resolution lenses that eliminate chromatic aberration and distortion for verification.

Spotlight

Applications and Challenges of Hypersurface Color Routers on Image Sensors

In recent years, the outstanding performance of hypersurface technology in the field of optics has attracted attention for its application on CMOS image sensors. Traditionally, in image sensors based on microlenses and optical filters, visible light waves uniformly enter RGB pixels. However, due to the bandwidth limitation of optical filters on pixels, the maximum theoretical sensitivity of each RGB pixel is only 33%, which means that over 60% of sensitivity is wasted. By replacing traditional microlenses with color routers made using hypersurface technology, visible light RGB waves can be "routed" to the corresponding RGB pixels, effectively increasing the sensitivity by approximately 2-3 times without increasing the volume of the image sensor.

However, there are still significant challenges and difficulties in designing, manufacturing, and applying hypersurface color routers on image sensors. These include the significant optical simulation resources and time costs during design, control of linewidths and variations during production, and the impact of incident angles of light sources on sensor performance during application. These are all issues that need to be addressed and resolved in this project.

The color router developed in this project has achieved preliminary results and has entered the stage of practical production verification. It is believed that besides enhancing the performance of image sensors, this project can also cultivate VisEra's capabilities in optical design and process optimization, thereby continuously improving VisEra's competitiveness against other international image sensor manufacturers.

3.1.2 Management of Intellectual Property Rights and Trade Secret

VisEra actively promotes intellectual property right (IPR) management plans, has established regulations governing the application, maintenance, and management of IPR that relates to patents and trade secrets, and prevents the leakage of R&D achievements and critical technologies through a stringent confidential information protection system, so as to comprehensively protect the Company's intellectual properties.
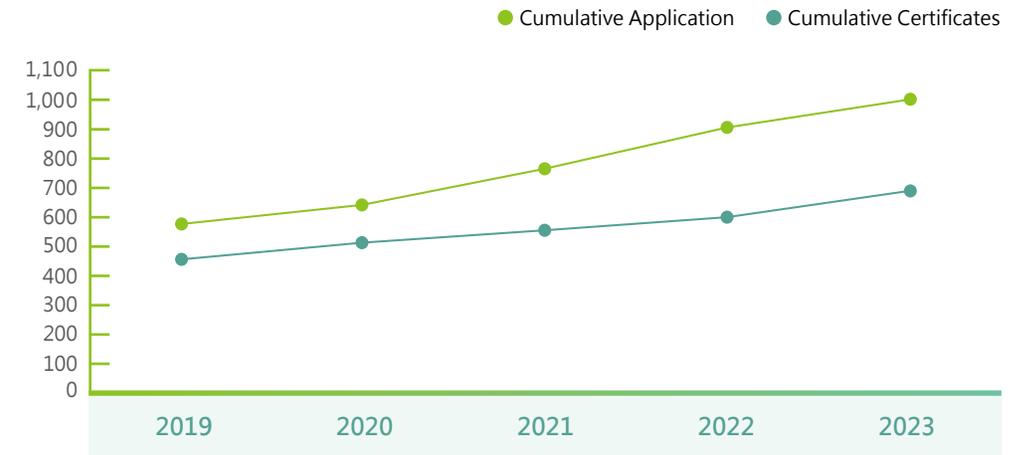
The Company implements strict confidentiality protection in accordance with the Proprietary Information Protection (PIP) Policy for the R&D results in all stages. We established detailed regulations on the use, disclosure, transmission, publication, and copying of related information. We also restrict the entry and exit of computer equipment, video camera or recording devices and mobile devices to prevent unauthorized disclosure or infringement of intellectual property. If the development of a technology meets the requirements for patent application, it will be submitted to the Invention Review Committee for a technical review. If it is approved, a patent application will be filed immediately to obtain a patent to protect the Company's technology.

VisEra established the Patent Management Regulations for the protection of patents. We set up an incentive system to encourage R&D personnel to actively apply for patents for their R&D results. We consider R&D results that are not suitable for patent applications as trade secrets.We maintain strict confidentiality and protection measures in accordance with the aforementioned PIP Policy, and we established a trade secret management system in January 2022 which also provides an incentive systemthat encourage R&D personnel to integrate and present technical information for production processes, technologies, formulas, procedures, or applications for production, sales, or operations that can be used for mass production or production improvement. After they are reviewed and approved by the Invention Review Committee, we award the R&D personnel with incentives based on the level of technology. We also implement a unified storage mechanism and assign dedicated personnel to manage the storage, access, use, and modification of such information to prevent unauthorized disclosure or infringement of such information. In 2023, over one houndred personnel has recived incentives related to technology development. Since 2023 is year of VisEra's 20th anniccersary of organization, we specially award special prizes to inventors of technology with excellence performances in oder to encourage their pride and company solidarity. Besides, in 2024 VisEra will award a "Best Technology Invention of the Year" prize to the most outstanding R&D personnel to set a good example and encourage others to work hard at pursuit of excellence.

VisEra has set patent strategies in countries including the United States, Taiwan, Mainland China, and Japan. Since the organization of the Company, we have obtained more than 700 patents and the number continues to increase. At the end of each year, the management team sets appropriate KPIs for intellectual property for the following year based on the R&D status in the R&D units of each organization, future business strategies, and patent strategies for each country. The indicators are used to encourage R&D within the Company, and the performance achievement rate has exceeded 100% in the past three years. At least once a year, the head of R&D or the head of legal affairs also reports on the current R&D progress and future R&D plans at the board meeting for the Directors to learn about the Company's plans for intellectual property rights. The report on the Company's intellectual property management plan will be provided at the board meeting in the second quarter of 2024. Since 2018, the number of VisEra's patent proposals and applications has exceeded 40 each year. To increase the efficiency of the employees' invention proposals, we completed the establishment of the proposal system in September 2021 and improved the system functions in 2022. We systematically streamlined the process and management of patent application, defense, and certification, and upgraded the system to the intellectual property case management system with the aim of achieving effective management of the Company's intellectual property rights. To help the management team and R&D personnel learn more about the intellectual property systems, future plans, and data acquisition, the Company organized digital training courses for intellectual property rights in 2023 to increase the quality and quantity of patents.

Patent Accumulation

3.1.3 Foster an Open and Innovative Corporate Culture.

VisEra Corporation is committed to technological innovation, aiming to strengthen its industry leadership position and safeguard hard-earned advancements in technology. To protect R&D achievements and enhance competitiveness, we employ incentive mechanisms to encourage R&D innovation. By integrating these mechanisms with the company's operational goals in patent applications, we foster a positive cycle of R&D innovation and corporate culture, laying a solid foundation for sustainable business operations.

Furthermore, while pursuing technological leadership, we also fulfill our social corporate responsibility. Through partnerships with esteemed academic institutions such as National Cheng Kung University, National Yang Ming Chiao Tung University, National Central University, and National Tsing Hua University, we engage in long-term and diversified industry-academic collaborations. In addition to leveraging the research and development capabilities of these institutions, we also contribute to the cultivation of excellent industry talents.

List of industry-academic collaboration projects in recent years

School Name	Innovation Outcome	Application
National Cheng Kung University	This technology will be applied to high-resolution thermal imagers.	❶ Biomedical sensors. ❷ Security applications
National Yang Ming Chiao Tung University	This technology will be applied to image sensors to improve the drawbacks of traditional image sensors.	❶ 3D sensing ❷ Wearable device sensors ❸ Machine vision
National Yang Ming Chiao Tung University	Collaborating on the design of micro-optical elements, providing CF/ML meta-surface structure designs.	❶ 3D sensing ❷ Wearable device sensors ❸ Machine vision
National Central University	Collaborating on wafer-level multilayer film coating design, entering the industry field of multi-wavelength optical filters.	❶ 3D sensing ❷ Wearable device sensors ❸ Machine vision
National Tsing Hua University	Collaborating on Meta-surface design and advance lithography technology	❶ 3D sensing ❷ Wearable device sensors ❸ AR / VR

School Name	Innovation Outcome	Application
National Cheng Kung University	Collaborate with VisEra Corporation to develop a new optical characterization technique for semiconductor materials. Based on this foundation, we will further design wafer-level optical components using photoluminescence mechanisms. The expected outcome is to solidify and advance our country's leading position in the semiconductor industry and talent cultivation. This project is rooted in STEM education and aims to conduct cutting-edge material research.	It actively fosters diverse talents to contribute to semiconductor engineering and provide intelligence for various applications such as smart 3C products, IoT, autonomous vehicles, while also nurturing high-level professional research.
National Central University	Collaboration on the design of near-infrared optical filter films and development of new materials	Near-infrared optical filter film
National Central University	Collaboration on the design of super-resolution surface micro-optical components and structures	Correction of the angle of incidence for large-angle light sources on CIS (Complementary Metal-Oxide-Semiconductor) chips, used to enhance the brightness at the edge of the CIS chip
National Central University	Collaboration on the design of super-resolution surface micro-optical structures	Enhancing the optical efficiency of CIS color filters, or directly replacing color filters and microlenses
National Central University	Collaboration on the design of super-resolution surface MIM (Metal-Insulator-Metal) micro-optical components	Replacing or enhancing the filtering efficiency of CIS in the IR (Infrared) band
National Central University	Developing design methods and prototyping for super-resolution lenses to verify theoretical models	❶ 3D sensing ❷ Wearable device sensors ❸ Machine vision

3.2 Product quality

3.2.1 Product quality

Helping customers with product development and mass production is one of VisEra's top priorities. VisEra's customer service team is committed to providing world-class services to customers, including product design consultation, project development assistance, and professional technical support. We establish good communication channels with customers and provide the highest level of protection for their confidential information. We are committed to serve as the most reliable partner for our customers.

VisEra invests in continuous quality improvement in every part of the Company to ensure complete customer satisfaction. If any defect or inconvenience is found, we communicate with customers immediately and implement all necessary measures to isolate the event. We uphold the following quality policy and invite all employees to cooperate with each other to achieve our goal of zero defects:

Service
Adopt a customer-centric approach to ensure complete customer satisfaction

Quality
Implement continuous improvements to provide customers with satisfying products

Cost
Improve efficiency and productivity and reduce production costs

Delivery
Implement timely production planning to meet customer needs

We have committed ourselves to the establishment and implementation of the ISO 9001 system to expand the applications of our products. We launched the Enterprise Resource Planning (ERP) system to integrate resource management for processes, batch control, equipment, masks, raw materials, and project control. We also launched the IATF 16949 quality management system for the automotive industry and implemented advance preparation by obtaining the ISO 13485 certification for the medical supply chain in 2019. The Company pursues continuous quality improvements to enhance competitiveness and achieve quality improvements across the board.

44

To strengthen VisEra's quality culture, the Quality Assurance Department organizes general quality courses for all employees each year and promote the use of the Eight Disciplines Problem Solving as the basic framework for the problem-solving steps of the Company. Our aim is to increase employees' awareness of quality and their use of quality assurance tools. We hope that the use of quality tools can help employees find opportunities for improvement in their work and propose valuable and effective response measures. We offered 59 digital courses and reading courses for quality management in 2023 for 998 attendees who passed the courses with 434 total training hours.

In addition, VisEra encourages all employees to actively participate in continual improvement programs. We organize the Continual Improvement Team Conference (CIT Conference) each year to provide a platform and rewards for exchanging ideas. We hope to create a corporate culture of high quality and continual improvement based on the spirit and activities for continual improvement.

Results of VisEra's CIT activities in the last five years

VisEra's Continual Improvement Activities	2019	2020	2021	2022	2023
CIT competitions (number of cases)	9	7	9	9	10
Total number of participants	81	97	112	108	110
Total estimated benefits (NT$ million)	43	167	213	100	77

3.2.2 Green Product Design

Green product design focuses on considering and minimizing the product's impact on the environment in the design process of the product while ensuring the quality and functional performance of the product. The core idea is to account for environmental protection requirements first and employ means such as choosing green materials, reducing energy consumption, reducing pollution emissions, and designing for recycling to achieve green and sustainable development of products.

VisEra focuses on green design (Design for Environment) and adopts Life Cycle Thinking (LCT) in the sourcing of production materials/manufacturing process/product transportation/product use/waste disposal process. We implement product design/process management and continual improvement in seven major categories. We have always spared no efforts in developing advanced/ efficient and environmentally friendly products. We continue to develop products that have low energy consumption and high performance with customers. We also implement conflict mineral management and hazardous material management with our influence on suppliers. In terms of our continuous efforts to improve the environmental friendliness of our products, we continue to set environmental safety and health performance targets, and promote waste reduction, resource reuse, and greenhouse gas reduction projects to support green design. We aim to reduce production costs, improve product quality, enhance the brand image, meet the needs and expectations of customers and consumers for environmental protection, and achieve sustainable development.

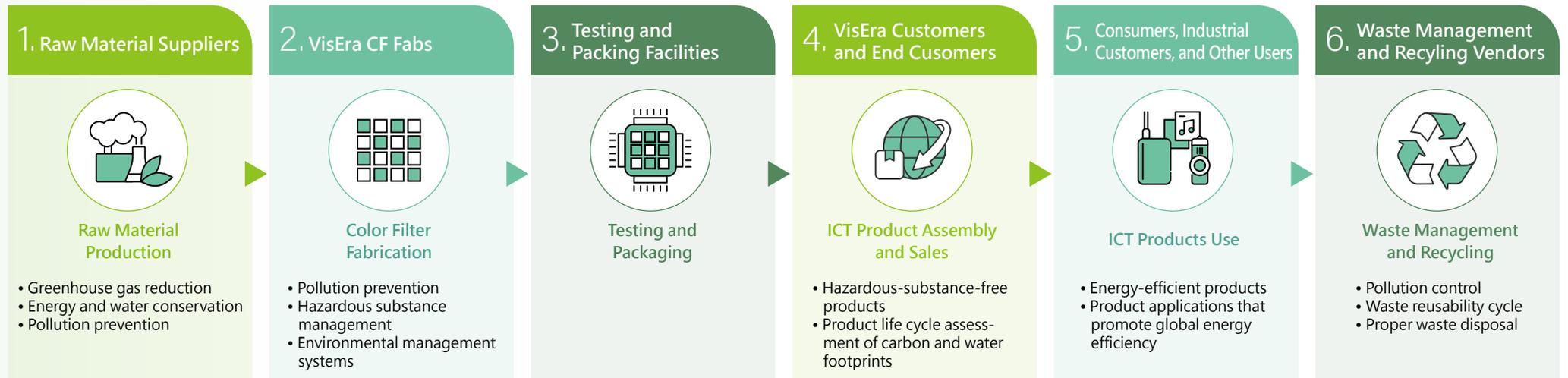| VisEra Green Design Matrix	Procurement	Production	Transportation	Product use	Recycle
Energy efficiency	●	●	●	●	
Greenhouse gas	●	●	●	●	
Material reduction	●	●	●		
Conflict minerals	●				
Hazardous substances	●	●			●
Waste reduction		●			●
Water consumption reduction		●			

3.2.3 Product Environmental Impact Assessment

VisEra adopts a sustainability approach to reduce the impact of products on the environment in all stages of its life cycle, including the production and transportation of raw materials, product manufacturing, testing, and packaging. We completed the first product life cycle, carbon footprint, and water footprint assessment in 2019 and obtained third-party certification for ISO 14040, ISO 14067, and ISO 14046 compliance. After the assessment, we found that GHG reduction should remain a strategy for VisEra to implement continuous improvements. In addition to increasing the ratio of renewable energy in electricity consumption, we shall also seek other strategies for reduction at the source. In 2023, supply machine parameters and scrubber overflow adjustments will be adjusted in response to production capacity needs; power-saving and water-saving measures will be simultaneously evaluated for factory equipment, as detailed in Chapter 5.3 and Chapter 5.4.

VisEra will review the product life cycle environmental footprint every three years to identify the risks and opportunities of hot spots in each phase. The information will be used as the reference or baseline for continual improvements of the environmental management system and provide actual contributions to the Company's business expansion and environmental sustainability.

Major hot spots of global warming:

Electricity consumption	
Account for of product carbon footprint	66.55%
Improvement plan	Implement energy conservation improvement projects.
2023 implementation results	Details are as explained in Chapter 5.3.
Directions for improvements	Continue to implement ISO 50001 energy conservation plans and introduce the big data intelligent ice machine project to find energy saving opportunities for the ice and water system.

1. Raw Material Suppliers

Raw Material Production

• Greenhouse gas reduction
• Energy and water conservation
• Pollution prevention

2. VisEra CF Fabs

Color Filter Fabrication

• Pollution prevention
• Hazardous substance management
• Environmental management systems

3. Testing and Packing Facilities

Testing and Packaging

4. VisEra Customers and End Cusomers

ICT Product Assembly and Sales

• Hazardous-substance-free products
• Product life cycle assessment of carbon and water footprints

5. Consumers, Industrial Customers, and Other Users

ICT Products Use

• Energy-efficient products
• Product applications that promote global energy efficiency

6. Waste Management and Recyling Vendors

Waste Management and Recycling

• Pollution control
• Waste reusability cycle
• Proper waste disposal

46

Midpoint Environmental Footprints Verified
(per 8-inch wafer equivalent/layer)

Climate Change Unit：Kg CO_2 eq

| 23.88% | 76.12% |

Particulate Matters Unit：Disease inc.

| 14.08% | 85.92% |

Eutrophication, Marine Unit：kg N eq

| 0.38% | 99.62% |

Land Use Unit：Pt

| 11.56% | 88.44% |

Ozone Depletion Unit：kg CFC-11 eq

| 18.55% | 81.45% |

Human Toxicity, Non-Cancer Unit：CTUh

| 3.89% | 96.11% |

Eutrophication, Freshwater Unit：kg P eq

| 2.38% | 97.62% |

Resource Use, Fossils Unit：MJ

| 100% | 0% |

Ionising Radiation, Human Health Unit：kBq U-235 eq

| 6.42% | 93.58% |

Human Toxicity, Cancer Unit：CTUh

| 13.06% | 86.94% |

Eutrophication, Terrestrial Unit：mol N eq

| 5.45% | 94.55% |

Resource Use, Minerals and Metals Unit：Kg Sb eq

| 1.63% | 98.37% |

Photochemical Ozone Formation Unit：kg NMVOC eq

| 8.09% | 91.91% |

Acidification Unit：mol H$^+$ eq

| 7.70% | 92.30% |

Ecotoxicity, Freshwater Unit：CTUe

| 7.27% | 92.73% |

Note: ■ Raw Material Acquisition Stage ■ Production Stage

ISO 14040 Product Life Cycle Assessment Verification Statement

ISO 14067 Product Carbon Footprint Verification Statement

ISO 14046 Product Water Footprint Verification Statement

3.2.4　Hazardous Substance Management

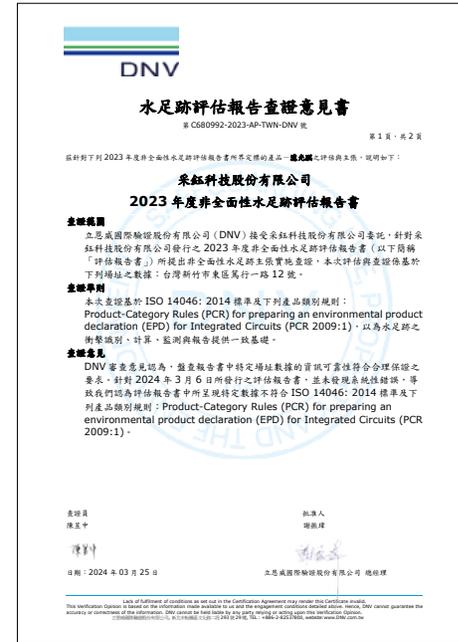VisEra established the QC 080000 hazardous substance management system to manage hazardous substances. We adopted the principle of minimizing the use of hazardous substances that are harmful to human health or pollute the environment. All products produced for customers meet international regulations and customers' requirements for the use of hazardous substances in products. VisEra also continues to promote replacement plans for hazardous substances in the production process. We require suppliers of process materials to provide statements to guarantee that their products do not contain substances harmful to the environment that are banned by international organizations and ensure that products meet the requirements of the customers as well as regulations such as the EU RoHS, REACH Directive. Materials must be 100% compliant with regulations and customer requirements for zero hazardous substances and may not use perfluorooctanoic acid (PFOA) and its related substance and N-methylpyrrolidone (NMP). We completed the evaluation and introduction of PFOA and NMP alternative materials in 2020, and no PFOA and NMP were used in 2021. We continued to evaluate/execute the PFHxA replacement program starting from 2022 and completed 6 photoresists (14%) PFHxA replacement in schedule in the end of 2023. We plan to complete the introduction of 100% PFHxA replacement materials (42 photoresists) by 2025.

The use and management of chemicals is closely related to environmental protection and sustainable development, and has been one of the focuses of various sustainability indicators in the international community. VisEra is committed to green and sustainable management, and we constantly optimize our production processes to reduce the chemical consumption per unit. We have completed 35 chemical reduction projects (average reduction of ~40%) by the end of 2023.

Product hazardous substance management procedures:

Audit
• Target achievement status
• Improve preventive measures for non-compliance
• Compliance with laws and regulations and customer requirements
• Continual improvement opportunities – replacement of potential banned/restricted substances

Plan
• Regulatory requirements and customer requirements for identification
• Establish VisEra's green procurement regulations and a list of hazardous substances
• Establish hazardous substance management targets and plans
• Identify hazardous substances used in the manufacturing process and establish management plans

Hazardous substance management system
quarterly management review

Review
• Internal audit of the hazardous substance management system
• Regulations for green procurement at the source meet regulations for hazardous substance management
• Appoint an impartial external third-party laboratory to inspect products for hazardous substances
• Supplier hazardous substance management audit

Implementation
• Use low-hazard raw materials in R&D
• Green procurement and environmental, safety, and health reviews for new materials and new suppliers
• Hazardous substance management training for relevant plant personnel
• Implement replacement plans for hazardous substances

Meet or exceed product hazardous substance management requirements in international regulations

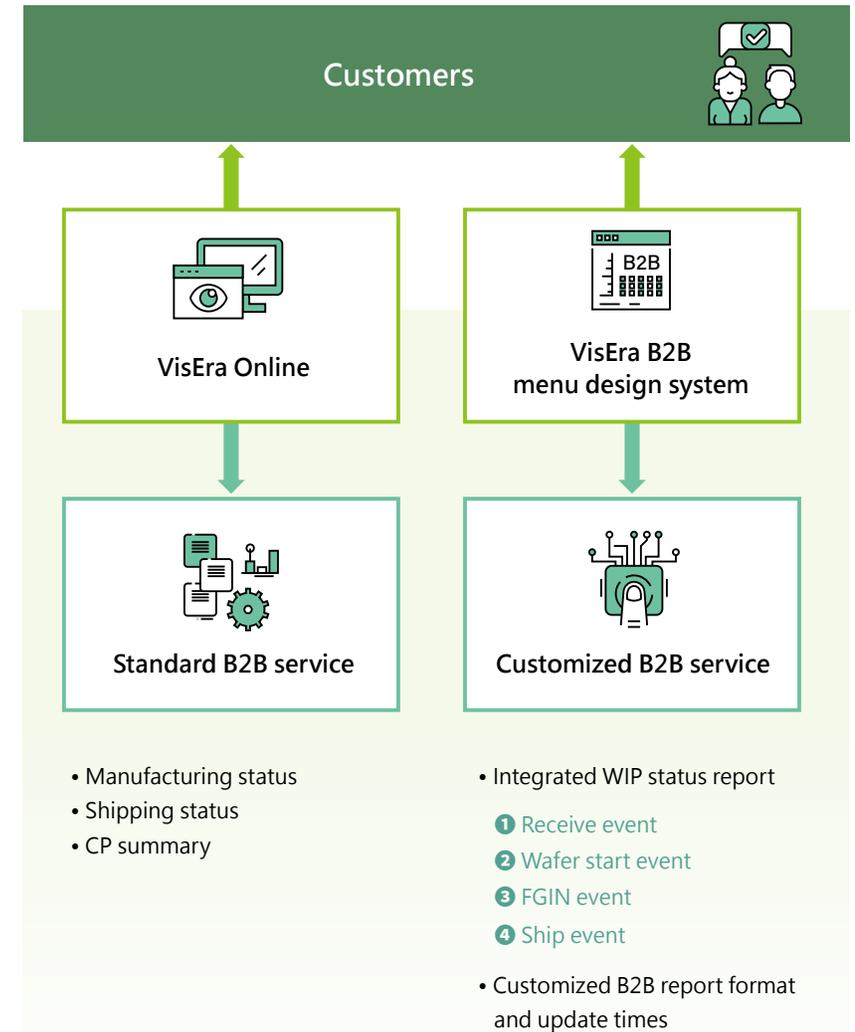| International regulations / customer requirements	Summary of requirements and restrictions	Regulatory compliance description
EU RoHS Directive (EU RoHS)	Product content restrictions include lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), diethylhexyl phthalate, diisooctyl phthalate (DEHP), benzyl butyl phthalate (BBP), dibutyl phthalate (DBP), and diisobutyl phthalate (DIBP). Please refer to the EU website for relevant regulations.	VisEra provides lead-free packaging processes for customers. However, certain customers still require the use of minute amounts of lead in bumps due to product characteristics. They are currently part of the EU RoHS exemptions and other substances banned in the EU RoHS are not used in VisEra's manufacturing process.
Product halogen-free requirements	• Bromine: 900ppm • Chlorine: 900ppm • Bromine + Chlorine: 1,500ppm	All VisEra products meet requirements
Control the use of perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) on the manufacturing process	• PFOS : 1,000ppm • PFOA : 1,000ppm	VisEra has completely banned the use of materials that contain PFOS and PFOA and no product contains the two substances
EU REACH Annex XVII - List of Prohibited and Restricted Substances	Please refer to the EU website for relevant substance control regulations	All VisEra products meet requirements
EU REACH Substances of Very High Concern (EU REACH SVHC)	Please refer to the EU website for relevant substance control regulations	All VisEra products meet requirements
Waste Electrical and Electronic Equipment Directive (WEEE)	Please refer to the EU website for regulations on the waste recycling rate of electronic and electrical equipment and products (e.g., computers and mobile phones)	The products manufactured by VisEra are wafer semiconductors, which form parts of electronic and electrical equipment components and are not directly governed by this regulation.

QC 080000 — Hazardous Substance Management System certification

3.3 Customer Service and Management

3.3.1 Customer Relationship Management

As our customer base grows and their B2B customization requirements increase, we are often constrained by limited IT manpower resources, resulting in extended development schedules when many customers issue requests at the same time. To shorten customers' wait time and increase customer satisfaction, the Company's Business Information Technology Section teamed up with the Purchase Order and Production Plan Unit in 2018 to jointly develop the "B2B Menu design system" designed to effectively reduce IT manpower development and time costs while enhancing customer IT services. They launched the "VisEra Online" platform on June 19, 2018 to provide customers' production lines with accurate and updated information for customers to monitor the product manufacturing schedule, expected delivery date, inventory of finished products, and shipments.

With this system, personnel of the Production Planning Unit can create standardized B2B templates in the "B2B Menu design system" based on the customer's customized fields and formats which cover all incoming and outgoing processes of the product. The information includes the basic transaction records such as delivery of materials, production, completion and inventory, and shipment. It can also be customized based on the customer's preferred points in time and transmission method for receiving B2B reports to meet the customer's needs. It helps customers keep track of the production status and reduces system tracking and inquiry time. It also reduces the time required for the internal development of customized B2B requirements and the time spent on waiting for resources from an average of one month to one week to complete customized B2B information delivery.

Customers

VisEra Online

VisEra B2B menu design system

Standard B2B service

- Manufacturing status
- Shipping status
- CP summary

Customized B2B service

- Integrated WIP status report
  ❶ Receive event
  ❷ Wafer start event
  ❸ FGIN event
  ❹ Ship event
- Customized B2B report format and update times

Customer Complain Notice

In addition, VisEra values the development of sustainable, equitable, and mutually beneficial relationships with customers. If customers have any comments or recommendations, they can contact the Company by telephone, email or the company website. The Company established the Customer Engineering Service Unit as the dedicated unit for processing customer complaints. We also formulated control procedures for processing customer complaints to protect the rights and interests of customers and improve the quality of customer services. In 2023, there were no substantiated complaints concerning breaches of customer privacy and losses of customer data.

In terms of the procedures for processing customer complaints, we adopted the Eight Disciplines Problem Solving (8D) (i.e., a team-oriented problem-solving approach) in which a dedicated customer complaint handling unit receives related feedback and immediately registers it in the system for case management and tracking. It is required to take preventive measures within 24 hours, submit the root cause analysis report to the customer within 48 hours, and implement relevant improvement measures. The case must be closed within 7 days for automotive products and within 10 days for non-automotive products by reaching a consensus with the customer. We received 1 customer complaint in 2023. (Not releated to substantiated complaints concerning breaches of customer privacy and losses of customer data). Cust. complained VisEra optical thin film product suffered delamination at back-end process from this CCN case. After root cause verification, this issue was caused by a level three earthquake in 2022. At that time, VisEra followed OCAP (Out of Control Action Plan) to handle the wafer, passed reliability tests to ensure quality standards and got cust. approval to release for shipment. Due to cust. complained in 2023, we detailed analysis the root cause to proposed improvements in OCAP process to reduce future quality risks. We successfully close the case through keep communicating with cust.

Customer Complain (Phone, E-mail or through other channel) → **Clarify if VisEra related issue?** — YES → **CE log in [Customer Complain Handling]**

NO → **Reject to customer**

in **24** hrs Containment action | in **48** hrs 4D report to customer

Automotive Device **7** calendar days
Non-Automotive Device **10** calendar days

Case Handling
❶ RMA/FA/Rework
❷ Discount
❸ Call back to scrap
❹ Release
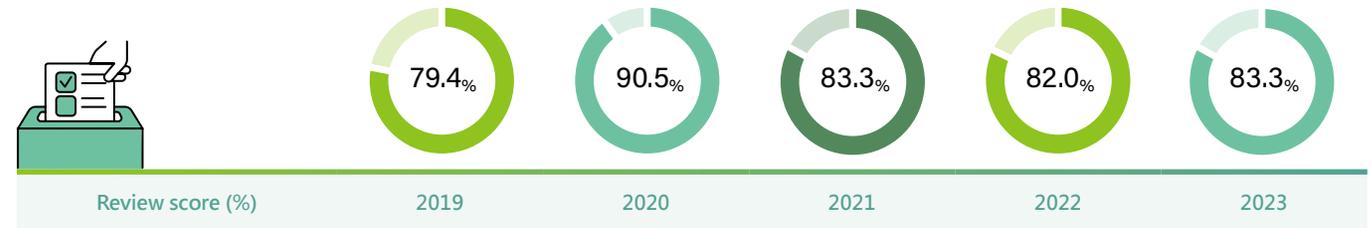
Provide 8D report to customer

VisEra conducts quarterly business technology review meetings with customers to provide products and services of the highest quality and to ensure that customers' needs are fully understood and provided with support. We also conduct annual customer satisfaction surveys of the top ten customers. As of 2023, the top ten customers account for more than 95% of the Company's revenue. We conduct the survey by email or telephone and the survey covers items such as the price/performance ratio, service, delivery, technical service, and future development. The specific implementation method is defined in the Company's customer satisfaction evaluation procedures. We use the VOC (Voice of Customer) system and the NRTO (New/Re Tape out) system to effectively learn about customer requirements and provide rapid response to customers to increase customer satisfaction. We revise the method for calculating customer satisfaction rate, adopting a weighted average to more accurately reflect the true assessment of our services by customers from 2023. Based on this new method, we also modified the customer satisfaction rate from 2019 to 2022. Customer satisfaction rate reached 84.4% in 2023, which exceeded the target for the year and showing an upward trend year over year. In terms of business technology review, Customer Program Management Department schedules quarterly meetings based on the varying needs of customers. These meetings focus on reviewing quality, technical service, delivery, price/performance ratio, service and get customer feedback. Customers are invited to participate in the assessment process. In 2023, the average business technology review score was 83.3.

Customer satisfaction survey results in the last 5 years

	2019	2020	2021	2022	2023
Number of survey questionnaires	10	10	10	10	10
Number of questionnaires recovered	10	10	10	10	10
● Satisfaction rate (%)	72.4	74.4	78.9	80.6	84.4
● Target satisfaction rate (%)	70	70	70	80	80

Customer quarterly business review scores in the last 5 years

Review score (%)	2019	2020	2021	2022	2023
	79.4%	90.5%	83.3%	82.0%	83.3%

Role in Sustainability

Responsible Procurement

- 4.1 Sustainable Supply Chain

4 Role in Sustainability — Responsible Procurement

4.1 Sustainable Supply Chain
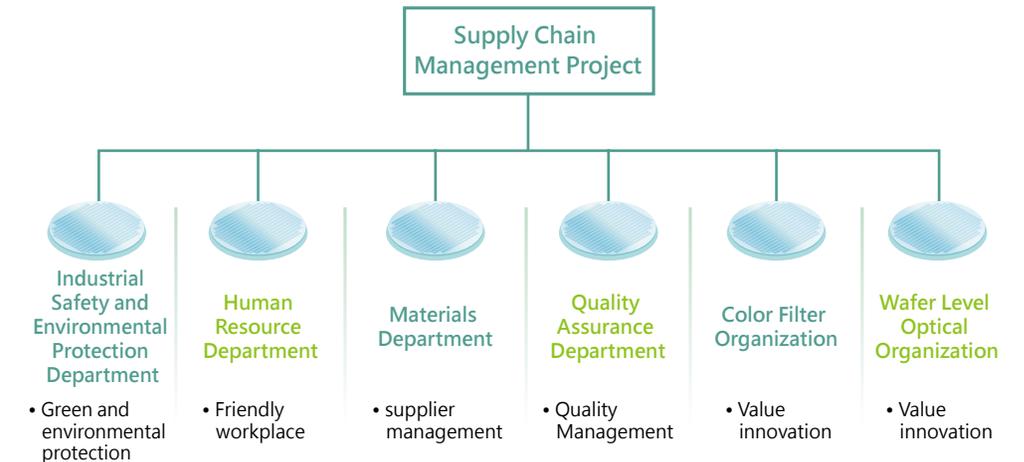
4.1.1 Supply Chain Management

VisEra regards suppliers as the most important strategic partners. In addition to providing products that meet customer expectations, we invite suppliers to jointly fulfill corporate social responsibility while supporting environmental protection and social values. VisEra's suppliers for seven major procurement categories include raw materials, equipment and components, plant operation and engineering, outsourced service providers, waste disposal, service providers, and products. There were 527 suppliers in transactions in 2023. We identify tier 1 suppliers and key suppliers based on the procurement amount and the importance of the products and implement corresponding management measures to reduce supplier risks

Supplier rating	Definitions	Number of Companies	Management Measures
Tier 1 suppliers	Those with direct transactions that exceed NT$1 million.	168	• Signature of the VisEra Supplier Code of Conduct. • Encourage tier 1 suppliers to request their upstream suppliers, contractors, and service providers to implement management in accordance with these standards.
Critical suppliers	Those suppliers that meet criteria for the top 80% of annual procurement expenditures or irreplaceable products or services, and being labor-intensive contracting firms that the RBA focuses on.	68	• Signature of the VisEra Supplier Code of Conduct. • Encourage critical suppliers to request their upstream suppliers, contractors, and service providers to implement management in accordance with these standard. • Signature of the CSR Letter (suppliers of direct materials and contractors) • Regular evaluations and audits (suppliers of direct materials and contractors) • Implementation of the sustainability self-assessment questionnaire, and based on the questionnaire results and discussions with relevant units, formulate the audit list of suppliers for the current year • For suppliers identified as key or highly concerning based on sustainability risk assessments, audits and guidance implementation must be decided upon by the Supplier Review Meeting.

Convene two material preparation meetings each week for key materials such as photoresists and target materials, and implement continuous review of the quantity of raw material inventory with related personnel based on the customer demand volume. Photoresist materials generally involved joint development and there is only one supplier. To mitigate the material supply interruption risks, we ensure that the suppliers have backup plants. We maintain at least two main suppliers with backup plants for each target material. There has not been any shortage in supplies or interruptions that impacted production at the Company in the last three years or in the most recent period. Direct materials of VisEra are coated on products and do not need to be recycled. Therefore, there are no investments or plans for technologies for recycling materials. Other raw materials such as tetramethylammonium hydroxide (TMAH), isopropyl alcohol (IPA), and solvents are disposed as waste or recycled according to waste management practices after use.

In terms of the management structure, the Materials and Resources Department is the unit responsible for managing the supply chain. It convenes regular communication meetings every year to coordinate with all units on the implementation of strategies and targets involving suppliers' environmental protection, friendly workplace, supplier management, quality management and value innovation. To enhance improvements and achieve sustainable management in environmental, social and economic aspects, VisEra established the Supplier Review Board (SRB) in the second quarter of 2022. As a principle, it holds supplier review meetings every two weeks to rule on the invalidation of new suppliers or existing suppliers for the purpose of improving supplier management.

Inable supply chain that supports environmental protection, labor human rights, safety, and social responsibility through the four major strategies including new supplier assessment, supplier evaluation, continuous improvement management, and supplier communication platform.

Supply Chain Management Project

Industrial Safety and Environmental Protection Department	Human Resource Department	Materials Department	Quality Assurance Department	Color Filter Organization	Wafer Level Optical Organization
• Green and environmental protection	• Friendly workplace	• supplier management	• Quality Management	• Value innovation	• Value innovation

Supplier Management Item

New supplier assessment

Implementation Methods

- All new suppliers are required to sign the "Compliance Statement for the Code of Professional Ethics and Supplier Code of Conduct" and we survey the labor, health and safety, environmental protection, ethics and management systems of the suppliers to ensure suppliers fulfill their social responsibility commitments.
- We conduct investigations on new suppliers of direct materials and production machines. The scope of investigation includes company operations, financial status, factory operations, and related certifications obtainment. Suppliers can only be registered in the Company's system and become part of VisEra's supply chain after the written review and approval from the procurement, quality assurance, engineering, and EHS units.

Achievements

- In 2023, we acquired 70 new suppliers and 100% of them signed the "Compliance Statement for the Code of Professional Ethics and Supplier Code of Conduct".
- In 2023, we completed the review and approval from the procurement, quality assurance, engineering, and EHS units for 2 new suppliers of production machinery and 3 new suppliers of direct raw material they joined VisEra's supply chain. The completion rate was 100%.

Supplier evaluation

Implementation Methods

- We require suppliers of direct materials and contractors to sign VisEra's CSR Letter to ensure that the metals such as gold, tantalum, tungsten, tin, cobalt and mica they supply are not conflict minerals and that they follow the guidelines of the Organization for Economic Co-operation and Development (OECD) for responsible supply chains.
- ISO 9001 certification is necessary for the suppliers of direct materials and contractors and also encourage them to obtain ISO 14001 and IATF 16949 certification.
- Suppliers of key direct materials (including contractors) are regularly evaluated by the quality assurance, engineering, procurement and material management, and R&D units through the QCDST (quality, cost, delivery, service, and technology) supplier rating mechanisms. And also communicate with suppliers regarding the evaluation results.
- In 2023, we issued sustainability self-evaluation questionnaires to 100% of the key suppliers and suppliers of specific products or services. The questionnaire incorporates the five sections of the RBA Code of Conduct including Labor, Health and Safety, Environment, Business Ethics, and Management System and can be used to examine the suppliers' level of participation and achievements in social responsibility. We conducted risk identification based on the results of the questionnaire, and identified suppliers of high concern for the annual supplier audit list. We aim to reduce risk levels through audits, assistance, and improvement programs.

Achievements

- In 2023, we reviewed 15 suppliers of key direct materials and contractors and they all signed VisEra's CSR Letter. The completion rate was 100%.
- 100% of the suppliers of direct materials and contractors attained ISO 9001 certification; 20% obtained IATF 16949 certification; 87% obtained ISO 14001 certification.
- We completed the QCDST evaluation for suppliers of key direct material (including contractors) in 2023 and distributed the evaluation results to suppliers on the Supply Online Supplier Platform. For positive feedback (e.g., support for delivery ahead of schedule, new technology development, and supply of new products), we expressed our gratitude. For negative feedback (e.g., quality anomaly events or error in shipping information or quantity), supplier had achieved our expectations via the discussion in regular meeting with unit personnel.
- In the second quarter of 2023, a total of 76 sustainability self-evaluation questionnaires were distributed to suppliers of raw materials, contractors, suppliers of machinery and parts, and plant operation and service providers. The response rate was 100%. We identified 1 supplier of middle concern and included it in the 2023 supplier audit program.

Continuous improvement management

Implementation Methods

- We perform audits of suppliers of direct materials each year. Onsite audits of suppliers are conducted by the quality assurance, procurement, and EHS units. We provide assistance to suppliers to improve the audit results and weaknesses, and continue to follow up.
- For suppliers that cannot attain targets, consider the impact on operations and bearable risks and continue to implement improvements, reduce the transaction volume, or terminate transactions.

Achievements

- In 2023, we conducted onsite or online audits of 12 suppliers of direct/indirect raw materials, outsourced services, plant engineering, and services. We used the opportunity to communicate the Supplier Code of Conduct to suppliers. We used the Supplier Quality System Questionnaire, Supplier Contractor ESH Assessment Table, and Supplier Sustainability Self-Evaluation Questionnaire to conduct audits based on the supplier's category and attributes.
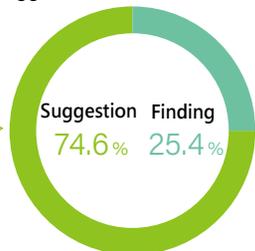- In the audit process, we classified violations of procedures and regulations as finding. Other items were listed as suggestion. Finding accounted for 25.4% of the results and the reasons for the top 3 finding included:
  ❶ **Safety and health**:The checking mechanisms for facility, equipment and first aid kits are inadequate spot.
  ❷ **Ethic**:Company ethical policy related and appeal channel didn't announce to employee well.
  ❸ **Labor**:Failure to convene labor-management meetings regularly and update the list of labor-management meeting representatives in a timely manner.

  Regarding to finding and suggestion, we continue to request suppliers to submit the evidence of improvement before the stipulated deadline and also confirmed the improvement results with relevant personnel. The completed rate had 94% till Dec 29th, 2023 and will continue tracking and observation.
- 2023 Supplier Audit Finding/Suggestion distribution ratio

Suggestion		Finding	
32.5%	Safety and health	7.0%	Safety and health
13.2%	Labor	5.3%	Ethic
10.5%	Quality control	3.5%	Labor
7.9%	Supply chain risk	2.6%	Supply chain risk
5.3%	Fire safety	1.8%	Fire safety
3.5%	Ethic	1.8%	Quality control
1.8%	RBA management system	1.8%	RBA management system
0.0%	Environmental protection	1.8%	Environmental protection

Suggestion **74.6**% 　 Finding **25.4**%

Supplier communication platform

Implementation Methods

- Hold regular supplier meetings to facilitate more harmonious and smooth cooperation between VisEra and suppliers.
- Contractor agreement organization meetings
- Quality management meetings.
- Supply chain management and communication.
- Excellent supplier award

Achievements

- Completed 586 contractor agreement organization pre-construction meetings in 2023.
- Completed QBR meetings (regular) with 4 suppliers of direct raw materials in 2023. In addition to quality performance and key project reviews, we also focused on ESG issues and RBA audits and shared information between the companies.
- Completed 2 raw material supplier and 1 outsourcing supplier quality meetings (irregular) in 2023.
- Award to 3 suppliers of raw material the Excellent Supplier Award base on selection criteria for best support/co-work with VisEra for long term period, and stable mass production capacity performance/ stable supplier rating.

4.1.2　Supply Chain Sustainability Management

To ensure safety in the work environment of the supply chain, ensure that employees and their dignity are respected, and ensure that business operations support environmental protection and ethical practices, VisEra has established the "Compliance Statement for the Code of Professional Ethics and Supplier Code of Conduct" based on the Responsible Business Alliance (RBA) (formerly EICC) Code of Conduct and reference guidelines in the UN Guiding Principles on Business and Human Rights (the UN Guiding Principles) and other internationally recognized human rights regulations including the ILO Declaration on Fundamental Principles and Rights at Work and the UN Universal Declaration of Human Rights. It requires suppliers to meet the stated sustainability standards for labor, health and safety, environmental protection, and integrity. We required the 70 suppliers added in 2023 to sign the Supplier Code of Conduct. The signature rate was 100%.

VisEra Supplier Code of Conduct 🔗

Spotlight

VisEra issued sustainability self-evaluation questionnaires to key suppliers in 2023 to create a responsible supply chain and maximize our sustainability influence. The questionnaire incorporates the five sections of the RBA Code of Conduct including Labor, Health and Safety, Environment, Business Ethics, and Management System. It is used to measure the suppliers' level of participation and implementation of corporate social responsibility. We distributed 76 questionnaires and the response rate was 100%.
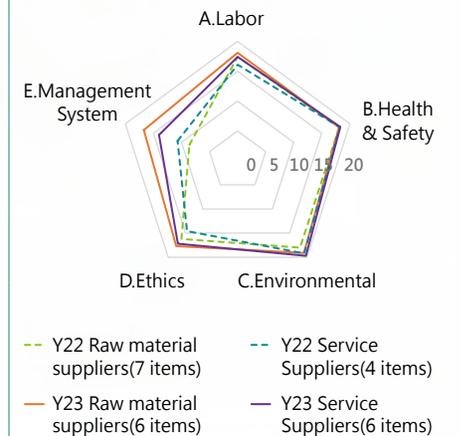
Based on the purchase order value, importance of products supplied, and results of the sustainability selfevaluation questionnaire, we identified five suppliers of high concern and included them in the domestic onsite audit and foreign online audit program. The audit team consists of the procurement, occupational safety, quality assurance, and RBA management units. They used the Supplier Quality System Questionnaire, Supplier Contractor ESH Assessment Table, and Supplier Sustainability Self-Evaluation Questionnaire to conduct audits and provide assistance.

In 2023, the supplier audit team consisted of members from procurement, occupational health and safety, environmental protection, quality assurance, and RBA management units. Considering the requirements of quality management systems, environmental health and safety/RBA requirements, as well as the identified moderate and high-risk suppliers from 2023 and the re-evaluation plan for highly concerned suppliers from 2022, a total of 12 suppliers were selected for audit. These suppliers include those involved in raw materials, plant engineering, and service categories. Audits were conducted through both on-site audits domestically and online audits internationally.

In 2023, the RBA supplier audit resulted in the identification of 88 deficiencies and recommendations. Through improvement tracking and effectiveness confirmation, the completion rate of supplier audit items reached 93% by the end of 2023. Additionally, suppliers were categorized into two main types: "Raw Materials" and "Service Providers." An analysis and discussion of the RBA's five aspects were conducted, along with a comparison to the 2022 audit results. In 2022, many suppliers lacked planning in ethical and management system aspects. However, through audit guidance, suppliers significantly improved their operational procedures and management system construction in 2023. Moving forward, VisEra will continue to strengthen RBA guideline advocacy among suppliers. This includes developing relevant operational procedures and complying with RBA guideline requirements to mitigate supply chain risks.

Supplier Type	2022	2023	Key Supplier RBA Continuous Management Action Plan for 2023
Raw Materials	• Improvement needed in procedures and operations related to business ethics. • Absence of planning for RBA-related management systems. • Identification of a highly risky supplier requiring continuous monitoring.	• Enhancement of procedures and operations related to business ethics has been completed. • Improvement in the completeness of RBA-related management systems has been achieved. • Completion of tracking for highly risky suppliers, with acceptable outcomes.	**Ethical Aspect** • Complaints must be defined according to RBA guidelines, allowing for named or anonymous submissions. • Planning or reinforcing channels for reporting should be implemented, with records kept. **Management System Aspect** • Strengthening of the RBA management system is necessary. • Comprehensive RBA education and training programs should be established, with records maintained.
Service Providers	• Lack of establishment of procedures and operations related to business ethics. • Absence of planning for RBA-related management systems.	• Business ethics-related procedures and operations have been established. • There is still room for improvement in RBA policies and related management systems. • Strengthening RBA advocacy for newly added service-type suppliers.	

Key Suppliers RBA Audit Result Analysis

A.Labor
B.Health & Safety
C.Environmental
D.Ethics
E.Management System

0　5　10　15　20

- - Y22 Raw material suppliers(7 items)
- - Y22 Service Suppliers(4 items)
— Y23 Raw material suppliers(6 items)
— Y23 Service Suppliers(6 items)

4.1.3 Local Procurement and Green Procurement

To enhance production efficiency, reduce carbon emissions from transportation, and contribute to the sustainable development of local industries, our company continues to promote local procurement. VisEra's main operational production site is located in Taiwan. The local procurement ratios for raw materials and components over the past five years are as follows.

Raw materials	55%	60%	70%	67%	69%
Parts and components	86%	74%(註)	69%(註)	72%(註)	64%(註)
	2019	2020	2021	2022	2023

Note: Introduction and monitoring of new processes (sputtering physical vapor deposition in the multi-film process)
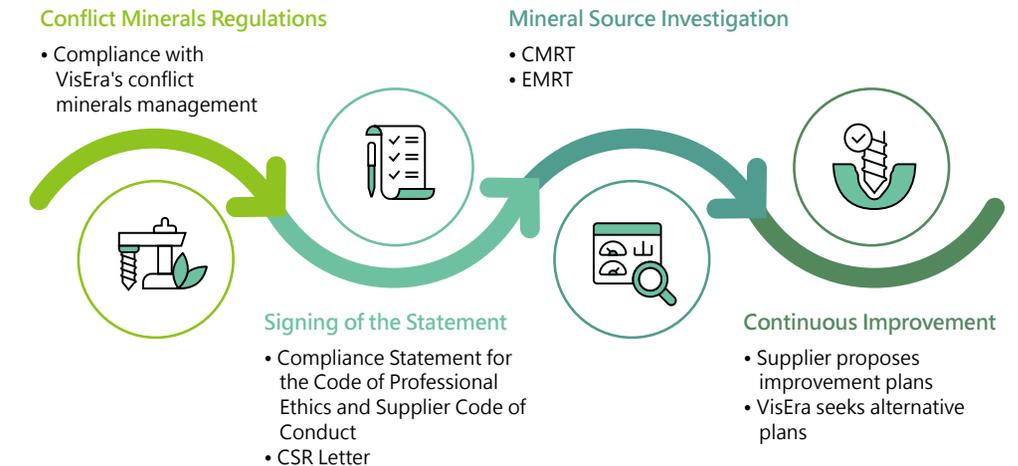
In addition, VisEra actively promotes a green procurement policy, encouraging procurement of products that meet various domestic environmental and green certifications, as well as products with internationally recognized environmental certifications or those covered by mutual recognition agreements with Taiwan. These certifications include Energy Star, FSC, and PEFC for sustainable forestry. Since 2019, the company has been recognized annually by the Hsinchu City Government for outstanding performance in green procurement evaluations. Furthermore, in 2023, VisEra received the Environmental Protection Administration's award for excellence in the evaluation of green procurement for private enterprises and organizations.

4.1.4 Management of Conflict Minerals

VisEra is committed to being a responsible link in the supply chain, ensuring social and environmental responsibility, and pledges not to use minerals extracted from areas of armed conflict, forced labor, or abusive working conditions. We require all relevant suppliers to comply with the prohibition of "conflict minerals" and disclose information about their smelters to pass new material certification and engage in transactions. In cases where information disclosure is incomplete or materials originate from non-compliant smelters, VisEra continuously urges suppliers to improve and explores alternative solutions.

VisEra mandates suppliers to sign a "Compliance Statement for the Code of Professional Ethics and Supplier Code of Conduct" and conducts an annual Conflict Minerals Questionnaire survey of direct material suppliers and subcontractors. We demand that materials provided by direct material suppliers and subcontractors meet corporate social responsibility standards, including current legal requirements for gold (Au), tantalum (Ta), tungsten (W), tin (Sn), cobalt (Co), and mica, or any metals in the future considered "conflict minerals" under the law. Suppliers must investigate the sources and disclose them to avoid materials from conflict areas or confirm that they originate from smelters certified through the Responsible Minerals Assurance Process (RMAP) provided by the Responsible Minerals Initiative (RMI). If incomplete disclosure or materials from non-compliant smelters are discovered, VisEra will continue to request improvements from suppliers.

VisEra updates the "RMI Conflict Minerals Reporting Template" at least once a year to avoid the risks of overlooking new minerals and new regulatory requirements, using the latest version of the questionnaire in 2023. We conduct audits of procurement targets or smelters as needed to ensure that the supplied raw materials meet social responsibility standards. In 2023, we used the Conflict Minerals Reporting Template (CMRT) and Extended Minerals Reporting Template (EMRT) questionnaires to survey 15 direct material suppliers and subcontractors, achieving a questionnaire response rate of 100%. Among them, 8 smelters identified were all certified under the Responsible Minerals Assurance Process (RMAP), with a non-compliance rate of 0%. As none of the direct material suppliers or subcontractors used conflict minerals, there were no restrictions or difficulties encountered, and no subsequent improvement measures were required. Currently, there have been no significant changes or upward trends in raw material supplier prices due to conflict minerals management.

Conflict Minerals Regulations
- Compliance with VisEra's conflict minerals management

Mineral Source Investigation
- CMRT
- EMRT

Signing of the Statement
- Compliance Statement for the Code of Professional Ethics and Supplier Code of Conduct
- CSR Letter

Continuous Improvement
- Supplier proposes improvement plans
- VisEra seeks alternative plans

5

Role in Sustainability

Green Production

- 5.1 Environmental Protection Policies and Commitments

- 5.2 Climate Strategy

- 5.3 Energy Management

- 5.4 Water Resource Management

- 5.5 Waste Management

- 5.6 Air Pollution Prevention

- 5.7 Environmental Protection Expenditures and Investments

5 Role in Sustainability — Green Production

VisEra regards pollution prevention as one of the primary responsibilities of its operations, and in order to promote environmental sustainability and green production, its vision is to become a benchmark enterprise in environmental protection.

5.1 Environmental Protection Policies and Commitments

5.1.1 Environmental Management Mechanisms

4 major management categories

Environmental Management Mechanisms

22 performance indicators

Note: For VisEra's environmental policies and commitments, please refer to VisEra's official website/Environmental Policies and Commitments.

To formulate specific response measures for environmental management and sustainability-related issues, VisEra established an interdepartmental organization called the "Green Team" for the management of environmental (E) issues in ESG for the management, implementation, target setting, and future prospects. We implement climate change and energy management, water management, waste management and air pollution prevention. We strive to reduce the environmental impact of operations and continue to improve environmental sustainability for Company's development and environmental protection to coexist and prosper together.

VisEra established an inter-departmental task force called the "Green Team" with the "ESG Sustainable Development Promotion Committee" as the chief convener. The Resource Planning Organization and its the ESG Unit oversee the environmental protection tasks, and each unit appoints a team member to implement environmental sustainability tasks and expand implementation. To implement effective supervision and management of environmental management, we planned and identified the four major strategies of environmental sustainability management in 2022. They include "Green Value and Marketing", "Environmental Pollution Control", "Communication of Sustainability Ideals" and "Green Production". We then used the four major areas to develop work indicators (the Company's performance for each indicator is specified in the chapters of the report). The Green Team of each unit provides statistics and information on the attainment of the targets. The attainment rate and effectiveness are confirmed in monthly meetings of the Green Team. They determine environmental related issues to continuously improve and enhance the effectiveness of environmental management.

Category	Item	Detailed items	Unit	2023 performance	2024 targets
Communicating sustainability ideals	Environmental education	Number of annual environmental education programs	Times	6	5
Environmental pollution control	Environmental protection expenditures	Total annual environmental protection expenditures	NT$ thousands	97,075	≧ 90,000
	Legal compliance	Major penalties for environmental pollution this year	Cases	0	0
	Air pollution	Hsinchu plant - VOC removal rate meets requirements for operations	%	98.99	>96
	Wastewater	Hsinchu plant - Volume of recycled process wastewater	%	91	>89.5
	Waste	Resource recycling rate	%	93	90
		Waste used as auxiliary fuel	%	28.77	>30
		Landfill rate	%	0.25	<1
		Total waste quantity	Tons	1,995	<2,039
		Waste volume (outsourced general)	Tons	741	<779
		Waste volume (outsourced) hazardous)	Tons	1,254	<1,259
Green production	Use of renewable energy	Hsinchu plant & Longtan plant -percentage of renewable electricity (green electricity)	%	15.6	24
	Green procurement	Green procurement amount	NT$ million	60.46	>100
	Water conservation	Hsinchu plant & Longtan plant - Annual water consumption	Million tons	0.30	<0.23
		Hsinchu plant & Longtan plant - Unit product water consumption	Liters/8" equivalent wafer mask layer	24.10	<16.98
		Hsinchu plant & Longtan plant - Number of plant-wide water conservation programs	Cases	2	≧ 3
		Hsinchu plant & Longtan plant - Plant-wide water conservation volume (excluding rainwater recovery)	Million tons	0.000468	>0.18
	Energy conservation	Hsinchu plant & Longtan plant - Number of plant-wide energy conservation programs	Cases	8	≧ 5
		Hsinchu plant & Longtan plant - Total electricity consumption (includes renewable energy & non-renewable energy)	Million kWh	88.9	<88.9
		Hsinchu plant & Longtan plant - Unit product electricity consumption	Liters/8" equivalent wafer mask layer	11.39	<9.89
		Hsinchu plant & Longtan plant - Cumulative electricity savings	Million kWh	1.2%	>1.2%
	Greenhouse gas	Hsinchu plant & Longtan plant - Greenhouse gas emissions (includes scope 1 & scope 2)	Metric ton of CO_2 equivalent	42,045.24	<50,000

5.1.2 Environmental Management History

VisEra adopted the ISO 14001 environmental management system when the plant was built and adopted the ISO 50001 energy management system in 2014. We continue to identify, verify, comply, and continuously improve the implementation of the system each year based on environmental factors, energy management, and regulatory requirements. The Company implements and manages the management tasks in accordance with the provisions and spirit of the management system, and regularly appoints a third-party verification institution to conduct verification and maintain the effectiveness of the management system.

Environmental Management Actions or Milestone

2007
• ISO 14001 Environmental Management System
• ISO 9001 Quality Management System
• OHSAS 18001 Occupational Safety and Health Management System

2011
• ISO 14001 Environmental Management System
• ISO 9001 Quality Management System
• OHSAS 18001 Occupational Safety and Health Management System

2012
• Authorized Economic Operator (AEO) certification

2014
• QC 080000 Hazardous Substance Management System

• ISO 50001 Energy Management System
• Electronic Industry Code of Conduct (EICC)

2017
• ISO 14064 Greenhouse Gas Emission Verification Certificate

2018
• ISO 14040 Life Cycle Assessment
• ISO 14067 Product Carbon Footprint
• ISO 14046 Product Water Footprin

2019
• ISO 14040 Life Cycle Assessment
• ISO 14067 Product Carbon Footprint
• ISO 14046 Product Water Footprin

2020
• BS 8001 Circular Economy
• ISO 14064: 2018 Greenhouse Gas Emission Verification Certificate

• ISO 45001 Safety and Health Management System
• Taiwan Occupational Safety and Health Management System (TOSHMS)

2021
• Silver certification in the Validated Assessment Program (VAP) of Responsible Business Alliance (RBA)

2022 Hsinchu Plant
• Passed clean production certification
• office net zero emissions
• use of renewable energy for 36.6% of electricity consumption

2030 Target
• Increase Hsinchu Plant & Longtan Plants' use of renewable energy to 40%

2050 Target
• Increase the Company's use of renewable energy to 100%

Environmental management certifications

ISO 50001 — Management System Certification

ISO 14001 — Management System Certification

Certificate — Clean production Certification
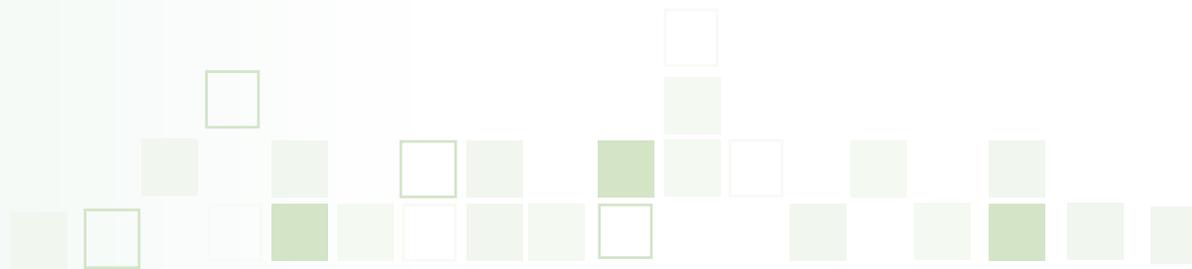
5.2 Climate Strategy

5.2.1   Climate Risk Management

In response to increasingly severe cases of extreme weather, it is crucial for companies to build up the resilience to respond to climate disasters in their business operations. VisEra established an Enterprise Risk Management (ERM) system with reference to the ISO 22301 Business Continuity Management standards. We evaluated the frequency of risk events and the severity of their impact on the Company's operations with a Risk Map, defined the priority and risk level for risk management, and adopted corresponding risk management strategies based on the risk rating. The assessment results showed that the risks associated with climate change include drought, strong typhoons, heavy rainfall, earthquakes, power and water shortages, and increasingly stringent regulatory requirements. VisEra conducts training and exercises on mitigation measures through scenario simulation, and regularly reviews risk changes and responses every quarter.

Note: Details for Climate-related information implementation, please refer to VisEra 2023 Annual Report, Climate-related information implementation, page 45-50.
Note: Details for Task Force on Climate-related Financial Disclosures, please refer to VisEra's official website/ ESG Section / Role / Green Production / Climate strategy

Since 2022, VisEra has adopted the framework of the Task Force on Climate-related Financial Disclosures (TCFD) every 2 years to identify climate risks and opportunities and referenced research reports of international institutions to evaluate climate change risks and response measures and identify potential risks and opportunities. We also established inter-departmental units to rank the risks and opportunities identified in the "Climate Change Risk and Opportunity Workshop" with respect to policies, regulations, markets, technologies, business reputation, and physical risks. We established metrics based on the identification results for target management to effectively monitor the progress and results of the actions taken in response to climate change, and thereby reduce the financial impact of climate risk on operations. To address the top three risks of net zero carbon emissions, regulations - carbon tax, and rapid climate change - drought, we considered internal and external environmental changes and conducted a quantitative impact financial assessment with reference to the methodologies disclosed by domestic and foreign companies. We developed strategies and actions for climate change with a focus on the four aspects including "governance", "strategy", "risk management", and "metrics and targets" to reduce the impact of climate risks and increase the climate resilience of the organization.

Aspect	Management strategy	VisEra's results in 2023
Governance	❶ The Board of Directors regularly reviews the risks and opportunities associated with climate change and the role of the management in the assessment and management of climate-related risks and opportunities. • ESG Sustainable Development Promotion Committee: The President serves as the chair and the Committee appoints a management representative to review the climate change strategies and objectives of VisEra on a regular basis and report to the Board of Directors. • Risk Management Steering Committee: The President serves as the chair and the Company appointed a management representative. It focuses on enterprise risk management as well as risk assessment and mitigation. Climate change is one of risks faced by VisEra. The management representative reports the results of the annual corporate risk management, including climate change risk response, to the meetings of the Board of Directors each year.	✅ The Company holds quarterly meetings of the ESG Sustainable Development Promotion Committee to discuss corporate sustainability issues such as corporate governance, social and environmental conservation. It also discusses climate change response and the issues discussed are included in the resolution or to-do list for follow-up and improvement. ✅ The Risk Management Steering Committee held four meetings to review the Company's operational risks, including emerging risks such as carbon fees and renewable energy use. It prepares quarterly energy conservation management plans and reviews their implementation status.
Strategy	❶ Regularly identify short, medium, and long-term climate related risks and opportunities with the TCFD framework. ❷ Consider the impact of climate-related risks and opportunities on the organization's operational, strategic, and financial plans. ❸ Evaluate the resilience of the organization strategies under different climate scenarios (including 2°C or more severe scenarios).	✅ Use the TCFD approach and inter-departmental discussions to identify short, medium, and long-term climate-related risks and opportunities. 12 risks and 9 opportunities were identified. ✅ Three different scenarios were used to estimate the transition costs required to implement carbon reduction strategies in the future (the government's net-zero pathway, the SSP1-1.9 pathway in the IPCC's sixth assessment report (AR6), and the net-zero carbon reduction pathway by 2050 called for in the Science Based Targets (SBT)) to understand the possible financial impacts of different strategies in different scenarios. ✅ Develop low-carbon products to meet customer needs, improve technologies, and provide information on the carbon footprint of products. 　1. Request suppliers to use low-carbon products or equipment and establish partnerships with these suppliers to develop eco-friendly low-carbon materials and production equipment. 　2. Implement green procurement. 　3. Use low-carbon transportation vehicles to transport products and materials. 　4. The electric vehicle is currently considered as an eco-friendly product that supports environmental sustainability. We will continue to strengthen innovation and management and gradually align the development of market economy with the environmental causes.
Risk Management	❶ Evaluate the significance of risks and opportunities associated with climate change in terms of their impact and frequency of occurrence, and set relevant response plans ❷ Incorporate the climate risk identification and assessment results into the Enterprise Risk Management (ERM) program, which must be confirmed by the top executives on a regular basis	✅ Assess the financial qualitative and quantitative impacts of the significant climate-related risks/opportunities discussed by the relevant units in the Climate Change Risk and Opportunity Workshop. ✅ The significant risks that are identified, including carbon tax, regulatory and customer demand for renewable energy, and changes in national energy policies, are assessed for their financial impact and reported to the top executives for review at the annual meeting of the Risk Management Committee. ✅ We identified three significant risks, included droughts, total greenhouse gas emissions management and carbon taxes & fees, and net zero emissions, and two significant opportunities, such as improving energy efficiency of plants, increasing water resource efficiency and diversifying water resources.
Metrics and targets	❶ Set management metrics and targets for measuring climate risks and opportunities. • Set targets for greenhouse gas management and energy and resource recycling and reuse. • Conduct a 100% product environmental footprint inventory and implemented analysis and improvements for areas with high carbon footprint. • Complete compliance with renewable energy regulations for major energy users and set medium and long-term targets for renewable energy. • Launch supply chain improvement projects ❷ Conduct annual inventory and verification of Scope 1/2/3 greenhouse gas emissions, identify sources of greenhouse gases, and implement targeted management.	✅ We have completed 100% of the product environmental footprint inventory, and will improve the management plans for the three areas with high carbon footprint based on the GHG inventory results in 2023. ✅ According to the Company's plan for purchasing renewable energy, we used 13,903,000 kWh of land-based wind power in 2023. We also set a target for increasing the use of renewable energy to 40% of the Company's electricity supply by 2030. ✅ Conducted an inventory in accordance with the Greenhouse Gas Protocol and passed the ISO 14064-1: 2018 third-party verification. The results show that the most significant emissions were in Scope 2 due the indirect use of electricity in the production process, and Scope 3 derived from the supply chain. We will continue to implement relevant management measures. Please refer to "5.2.2 Greenhouse Gas Inventory" for more information.

Identification of climate change risks and opportunities

Note: Risks and opportunities, please refer detailed information as VisEra official website/ ESG / Role / Green production/ Climate strategy.

Financial Impact Analysis for Transition Scenarios

As the transition risks of climate change such as changes in regulations and market demand may have a long-term and significant impact on the Company's operations, VisEra has estimated the cost of transition required for the carbon reduction strategy under three different scenarios, including the government's Pathway to Net Zero Emissions, the SSP1-1.9 pathway in the IPCC's Sixth Assessment Report (AR6), and the net-zero carbon reduction pathway by 2050 advocated by the Science-Based Targets (SBT) initiative. We ultimately compared the risks to the BAU strategy (risks due to any inaction by VisEra) to measure the potential financial impacts of different strategies under different scenarios.

Climate scenario	Financial impact of the BAU strategy	Cost of transition required for the carbon reduction strategy
Government's Pathway to Net Zero Emissions	A greater gap between carbon emissions and the government's net-zero target incurs a higher regulatory risk of carbon penalties. However, as the proportion of renewable energy use increases after 2035, the carbon emission coefficient from purchased electricity will decrease each year. Therefore, the regulatory risk will be gradually reduced.	In order to meet the government's requirements for obtaining carbon credits under the net-zero target, we will mainly use renewable energy to attain the target. Assume that the renewable energy cost is NT$4.58/kWh, the cost before 2025 will be approximately 0.1% of revenue and total expenditures will eventually reach 0.3% of revenue by 2050.
SSP1-1.9 pathway in IPCC AR6	Due to a higher market demand for low-carbon products, failure to take action to reduce carbon emissions may result in a loss of 40% of the existing demand for low-carbon products. In addition, the carbon tax would increase to nearly 2.6% of revenue by 2050.	The expansion of the purchase of renewable energy in 2025 would result in a rapid reduction in carbon emissions, but the carbon tax would continue to rise each year and peak in around 2030 and then decreasing with the reduction of carbon emissions. Carbon removal technologies will be employed starting from 2040. The total cost will reach approximately 0.8%~0.9% of revenue.
SBT Pathway to Net Zero Emissions	The conditions are similar to that of SSP1-1.9, except for the time for attaining net zero emissions. Therefore, the transition risks for inaction are the same and the potential financial impact is the same.	By 2035, the total cost expenditures will exceed 0.1% of revenue. However, when the target of attaining net zero by 2045 is met, the risks of carbon taxes would drop to zero and the Company could avoid all market risks.

5.2.2 Greenhouse gas inventory

Scope 1 greenhouse gas emissions

4,910 metric ton-CO_2e

Scope 2 greenhouse gas emissions

37,135 metric ton-CO_2e

Scope 3 greenhouse gas emissions

23,411 metric ton-CO_2e

VisEra established a voluntary greenhouse gas inventory system in 2013. We referenced ISO 14064 standards and the WBCSD/WRI Greenhouse Gas Protocol, and regularly inventory greenhouse gas emissions every year to monitor greenhouse gas usage and emissions, verify the effectiveness of reduction actions, and obtain third-party verification.

VisEra regards renewable energy as an important strategy for attaining net zero emissions. In 2022, VisEra used 100% renewable energy. We continued to optimize process greenhouse gas usage and maximize exhaust gas reduction as our benchmark actions. 100% of new and existing plants are equipped with onsite high-performance pollution reduction equipment with local scrubbers (LSC) and existing plants continuously replace inefficient LCS. We have taken concrete actions to effectively reduce direct emissions of Scope 1 greenhouse gases by 12,598 metric ton-CO_2e.

Scope 1 & 2: Greenhouse gas emissions

		2019	2020	2021	2022	2023
Scope 1	● Greenhouse gas emissions (metric ton-CO2e)	12,904	8,167	7,725	5,728	4,910
	Emission intensity (metric tonCO2e / 8" equivalent wafer mask layer)	0.0021	0.0006	0.0005	0.0005	0.0005
Scope 2	● Greenhouse gas emissions (metric ton-CO2e)	24,881	30,148	36,291	23,263	37,135
	Emission intensity (metric tonCO2e / 8" equivalent wafer mask layer)	0.0039	0.0022	0.0024	0.0018	0.0041

Note 1: In terms of the organizational boundaries, we adopted the 100% operation control methodology, including Hsinchu plant and Longtan plant (joined from 2023), excluding Zhongli plant (emissions account for less than 5% of total emissions.)
Note 2: The GWP value will be based on the IPCC 4th Assessment Report before 2022, and the IPCC 5th Assessment Report onwards from 2023. Greenhouse gas emissions are based on the Greenhouse Gas Emission Factor Management Table Version 6.0.4 of the Environmental Protection Administration.
Note 3: Since 2020, the local scrubber (LSC) has been introduced to effectively reduce fluorine gas emissions in the process.

Note 4: Scope 2 greenhouse gas emissions were calculated based on the electricity carbon emission coefficient announced by the Bureau of Energy, Ministry of Economic Affairs.
Note 5: The intensity of Scope 2 emissions decreased in 2022 due to the implementation of several energy conservation measures in the plants and the increase in the use of renewable energy (detailed in the Energy Management chapter).

To strengthen the integrity of the GHG inventory in the value chain, VisEra has included the quantification of Scope 3 emissions and obtained external verification starting from 2020. VisEra referenced the 15 types of Scope 3 emissions defined in the WBCSD/WRI Greenhouse Gas Protocol Scope 3 Calculation Guidance and estimated the categories of significant indirect emissions, taking into account factors such as ease of obtaining activity data, accuracy of emission coefficients, time required for data collection, and compliance obligations. Emissions from employee commutes have been included in the inventory since 2022. The results show that the areas with significant Scope 3 greenhouse gas emissions were raw material production and energy-related activities. We will actively work with suppliers to implement effective action plans and create a sustainable supply chain.

Scope 3: Greenhouse gas emissions

		2020		2021		2022		2023	
	● Purchases of products and services	7,534	40%	11,014	50%	11,261	61%	11,656	50%
	● Disposal of waste from operations	302	1%	432	2%	432	2%	381	2%
	● Fuel and energy-related activities	6,404	34%	7,634	35%	3,991	22%	7,283	31%
Scope 3 / Greenhouse gas emissions (metric ton-CO2e)	● Employees commutes	–	–	–	–	502	3%	972	4%
	● Downstream leased assets	3,138	16%	1,439	6%	2,039	11%	2,928	13%
	● Upstream transportation and distribution	1,511	8%	1,279	6%	57	0%	50	0%
	● Downstream transportation and distribution	136	1%	170	1%	166	1%	140	1%

Note 1: Waste from operations include solid and liquid waste.
Note2: Scope 3 includes the Longtan plant from 2023.
Note 3: The GWP value of Scope 3 will adopt the IPCC 4th Assessment Report before 2022, and the IPCC 6th Assessment Report from 2023.
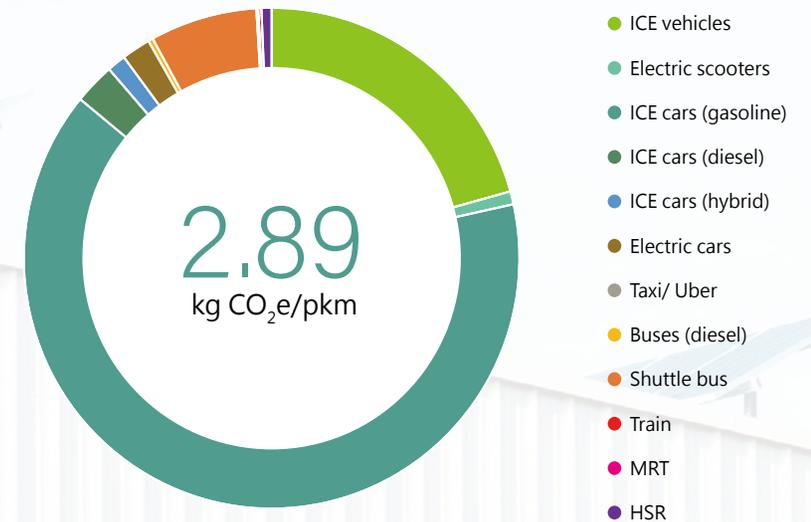
Spotlight

Analysis of carbon emissions from employees' commutes

As the impact of global warming on human life intensifies, the net-zero transformation becomes more than merely a matter of a company's competitiveness in the international market, and it comes a key element for the sustainable development of the company. VisEra has over 1,400 employees. To obtain information on the greenhouse gas emissions associated with employee commutes, we conducted a survey of employees' commute patterns in 2022 with methods provided in the "GHG Protocol Releases Scope 3 Calculation Guidance" created by the World Business Council for Sustainable Development (WBCSD). The results are used as references for the Company's subsequent efforts to promote low-carbon commutes. The results show that the greenhouse gas emissions from commutes of VisEra employees averaged 2.89 kg CO 2e/person-day and the main contribution was from cars and motorcycles powered by fossil fuels. According to Noussan et al. (2022), electric vehicles and mass transit vehicles generate only 15-59% of the greenhouse gas emissions of such vehicles and motorcycles powered by gasoline and diesel. VisEra will encourage employees to use low-carbon transportation, but also evaluate the increase of parking points and coverage of transportation vehicles to build a more complete low-carbon connection network and reduce the environmental impact of employees' commuting process.

Averaged kg CO_2e/person-day ● **Method of commute**

2.89
kg CO_2e/pkm

● ICE vehicles

● Electric scooters

● ICE cars (gasoline)

● ICE cars (diesel)

● ICE cars (hybrid)

● Electric cars

● Taxi/ Uber

● Buses (diesel)

● Shuttle bus

● Train

● MRT

● HSR

5.3 Energy Management

5.3.1 Energy Management Policy

To establish a sound energy management system, VisEra aims to improve energy efficiency and reduce greenhouse gas emissions to attain sustainable management and development. VisEra's main businesses include the manufacturing and process services for color filters for image sensor and tests of IC components. The use of energy in the manufacturing process under routine operation and management must meet the requirements in energy regulations and standards based on international norms. VisEra is committed to maintaining a high level of corporate social responsibility and fulfills its corporate citizenship obligations.

01 It is the responsibility of all employees to continuously improve energy efficiency and reduce energy costs.

02 We shall participate in external energy conservation organizations or activities to obtain new knowledge for improving management efficiency.

03 We shall comply with domestic energy laws and regulations and commit ourselves to meeting advanced international energy standards and regulations.

04 We shall support the use of energy-efficient products and services and the procurement of energy-efficient designs for energy services, products and equipment that may have a significant impact on VisEra's energy use.

05 We shall provide relevant training programs and resources to increase employees' awareness of energy conservation and carbon reduction. We will actively communicate with employees of all levels and seek out partners.

06 We shall engage and communicate with suppliers and contractors on energy issues to encourage them to improve energy efficiency.

07 The Energy Conservation Committee is held regularly to review the energy use of the Hsinchu Plant and Longtan Plant and track the implementation of energy conservation plans.

08 In addition to complying with ISO 50001 certification, we actively seek energy conservation performance improvement from our parent company and continuously improve our practices.

To achieve the above goals, we promise to continuously improve and achieve
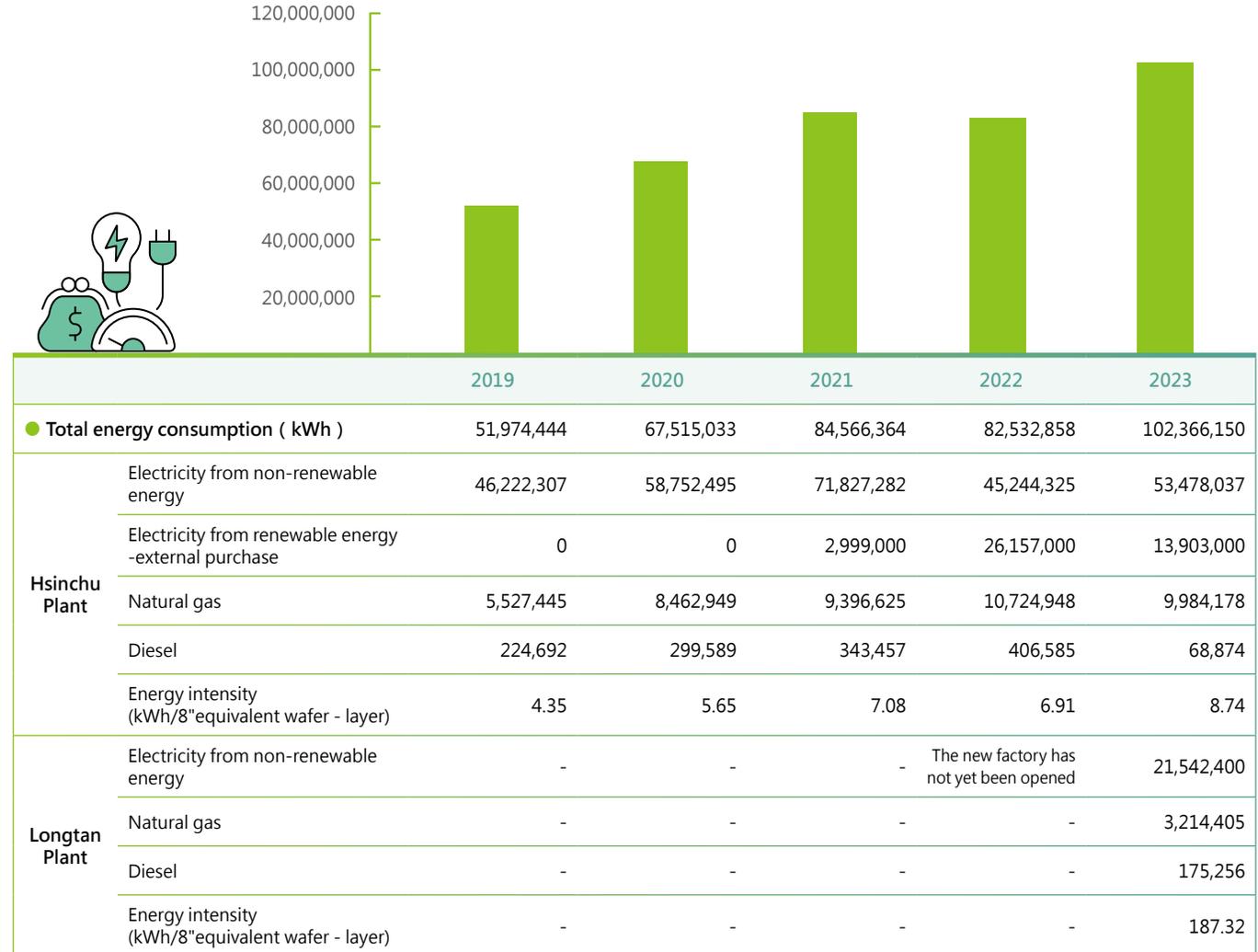
5.3.2 Energy Structure

Energy
Total consumption **102,366** MWh

Externally purchased
Electricity from
renewable energy **13,903** MWh

Renewable energy
Percentage in total
electricity consumption **15.6%**

VisEra's externally purchased electricity accounts for the largest share of energy use in the production process with 86.9% while natural gas accounts for 12.9% and diesel accounts for 0.2%. Therefore, the main target for energy conservation is to reduce the use of electricity and natural gas.Energy consumption in 2023 reached 102,366 MWh, an increase of approximately 24.0% compared to 2022, which is calculated after the completion and operation of Longtan plant. VisEra has spared no effort to purchase renewable energy in order to ensure that the company's renewable energy percentage will account for 100% in 2050. However, due to the inclusion of the Longtan plant in the calculation in 2023, the renewable energy percentage dropped to 15.6%.

Total energy consumption

		2019	2020	2021	2022	2023
● Total energy consumption（kWh）		51,974,444	67,515,033	84,566,364	82,532,858	102,366,150
Hsinchu Plant	Electricity from non-renewable energy	46,222,307	58,752,495	71,827,282	45,244,325	53,478,037
	Electricity from renewable energy -external purchase	0	0	2,999,000	26,157,000	13,903,000
	Natural gas	5,527,445	8,462,949	9,396,625	10,724,948	9,984,178
	Diesel	224,692	299,589	343,457	406,585	68,874
	Energy intensity (kWh/8"equivalent wafer - layer)	4.35	5.65	7.08	6.91	8.74
Longtan Plant	Electricity from non-renewable energy	-	-	-	The new factory has not yet been opened	21,542,400
	Natural gas	-	-	-	-	3,214,405
	Diesel	-	-	-	-	175,256
	Energy intensity (kWh/8"equivalent wafer - layer)	-	-	-	-	187.32

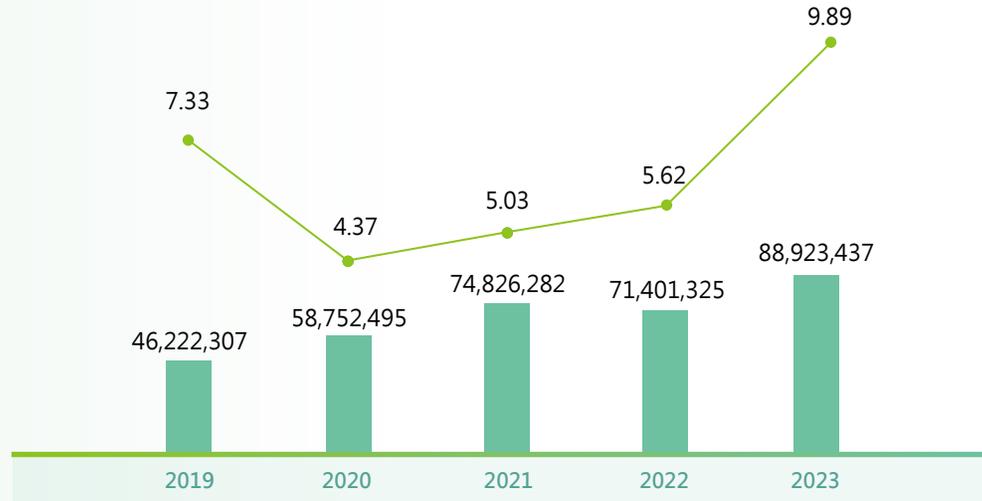Note 1：Externally purchased electricity is sourced from wind power and small water power.
Note 2：1 m³ natural gas = 10.467 kWh. Unit conversion coefficient provided for reference only: Bureau of Energy's Energy Statistics Handbook (2022)
Note 3：1 L diesel = 11.1628 kWh. Unit conversion coefficient provided for reference only: Bureau of Energy's Energy Statistics Handbook (2022)
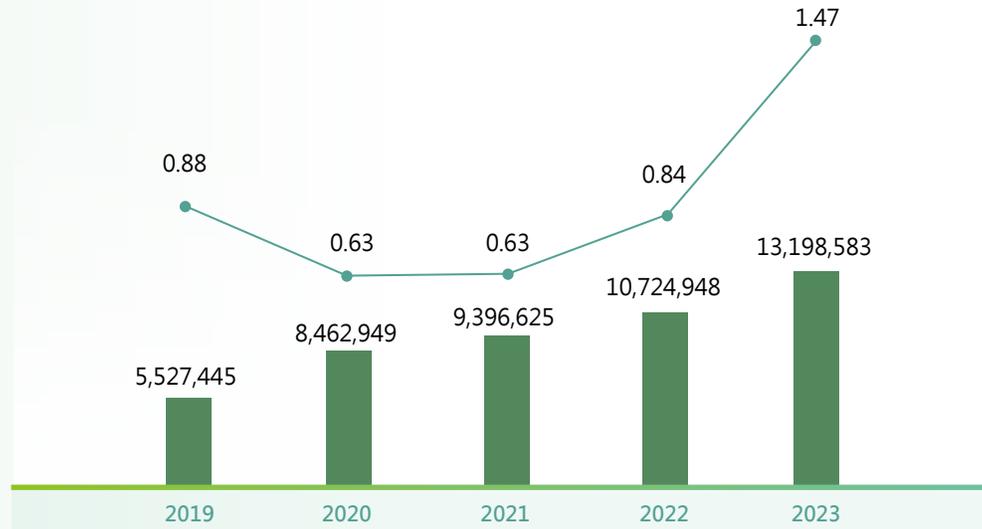Note 4：1 kWh= 0.00357 GJ. 2023 total energy consumption was approximately 365,593.4 GJ. (Non-Renewable Energy =315,542.6 GJ. Renewable Energy = 50,050.8GJ).
Note 5：Zhongli Plant is a leased plant of Xintec Inc., which has been merged and disclosed in the ESG sustainability report of Xintec Inc.. The indirect energy usage is 505,584 kWh.

Electricity usage statistics over the years   ● Electricity usage, kWh   ● kWh / number of masks

Natural gas usage statistics over the years   ● Natural gas usage, kWh   ● kWh / number of masks

5.3.3 Improve Energy Efficiency

To effectively reduce the environmental impact of the greenhouse effect and reduce energy consumption, VisEra established an energy management organization to set energy conservation and carbon emissions reduction targets and plans. We coordinated and integrated departments to promote energy conservation and carbon reduction strategies and programs, and continuously launch and evaluate energy conservation technologies and implement energy improvement plans for related equipment. Considering the impact of the boom in 2023, the 2023 energy conservation target is divided into two aspects: shutdown energy conservation and efficiency improvement. The total annual electricity conservation target is 1.5%. Adhering to the spirit of continuous improvement, it is better than the annual electricity conservation rate of energy regulations. The shutdown plan will be evaluated and implemented in early 2023, and the shutdown will save 2,350 MWh of electricity throughout the year. In terms of efficiency improvement, we replaced the high-efficiency clean room fan filter unit FFU (Fan Filter Unit) in 2022 and replaced the traditional AC motor FFU in FAB 3F/5F Phase 1 clean room with DC brushless motor FFU,saving a total of 1,528,620 kWh,which can reduce 757 metric tons of CO_2 emissions based on the latest 2022 electricity carbon emission coefficient (0.495 kg-CO2e/kWh) announced by the Energy Bureau; In 2022, we replaced the old chiller with the high-efficiency chiller CH-101, which saved 577,072 kWh and reduced CO_2 emissions by 266 metric tons. In addition to implementing electricity conservation measures, improving energy efficiency, and installing renewable energy facilities, we also purchased renewable energy and obtained 13,903 renewable energy certificates in 2023, which was equivalent to a reduction of 6,882 metric tons of CO_2 emissions. We also encourage employees to turn off appliances that are not used in offices and public areas to reduce energy consumption. These measures are supported by related awareness campaigns and training programs to enhance employees' awareness and habit of energy conservation and carbon reduction.

Electricity conservation results in past years

Year	Annual electricity consumption (kWh)	Annual electricity conservation（kWh）	Average electricity conservation rate (%)
2019	46,222,307	390,889	0.8
2020	58,752,495	647,591	1.1
2021	74,826,282	1,939,714	2.6
2022	71,401,325	1,674,306	2.3
2023	88,923,437	1,111,338	1.2

Note: Only Hsinchu Plant and Longtan Plant data were included. As Zhongli Plant is leased, data from public facilities are not included in energy conservation calculations

Energy conservation projects and results

Project type/name	Starting year	2023 electricity conservation (kWh)	2023 carbon emissions reduction (metric ton-CO2e)	Cumulative to 2023 electricity conservation (kWh)	Cumulative to 2023 carbon emissions reduction (metricton-CO2e)
Air conditioning					
Hsinchu Plant –Replace a total of 1745 FFU on FAB 3F & 5F phase 1.	2022	764,310	378.33	1,528,620	756.67
Hsinchu Plant- Replace of highefficiency chillers (No. CH-101) to increase capacity and efficiency	2022	134,268	66.46	537,072	265.85
Longtan Plant - Adjust the temperature of the electrical room from 20 degrees to 26 degrees	2023	29,460	14.58	29,460	14.58
Longtan Plant –Chiller outlet water temperature rise from 6.0 → 7.3 C	2023	40,483	20.04	40,483	20.04
Longtan Plant - Adjust the office air conditioner and raise the temperature from 25 degrees to 26 degrees	2023	5,796	2.87	5,796	2.87
Longtan Plant -Sub-main bypass valve close(3F: 42->37 Hz)	2023	4,297	2.13	4,297	2.13
Longtan Plant -CHP 510CMH flow rate adjusted to 500CMH	2023	81,444	40.31	81,444	40.31
Illumination					
Longtan Plant -Light off for FAC machine room 730 lights	2023	18,345	9.08	18,345	9.08
Process emissions					
Longtan Plant -SEX loading down based on tool off to 35 Hz	2023	6,051	3.00	6,051	3.00
Process power					
Longtan Plant-UPS On-line mode change ECO mode	2023	26,884	13.31	26,884	13.31

Note: The carbon emission coefficient refers to the 2022 electricity emission factor announced by the Bureau of Energy in January 2024: Every kWh of electricity emits 0.495 kg-CO2e/kWh

Process power

2021 **Hsinchu Plant**-Central UPS Eco Mode: Turned off the inverter of Central UPS and switched to direct power supply with static bypass — Energy saving by **438,000** kWh/year

2023 **Longtan Plant**-UPS On-line mode change ECO mode — Energy saving by **26,884** kWh/year

Process exhaust

2021 **Hsinchu Plant**-AAS Systm: Replaced Sex-03 impeller with wing section type — Energy saving by **13,800** kWh/year

2023 **Longtan Plant**-SEX loading down based on tool off to 35 Hz — Energy saving by **6,051** kWh/year

Illumination

2023 **Longtan Plant**-Light off for FAC machine room 730 lights — Energy saving by **18,345** kWh/year

Gas

2021 Expanded two 315kW inverter type air compressors with 95.3% motor effciency, improving efficiency and capacity. — Energy saving by **1,065,636** kWh/year

Energy efficiency performance 2020~2023

Energy saving efficiency performance

66.35%
9.97%
22.86%

Air conditioner

2021 **Hsinchu Plant**-Newly purchased high-efficiency ice water main engine (No. CH-104) to improve capacity and efficiency — Energy saving by **865,458** kWh/year

2022 **Hsinchu Plant**-Replaced CH-101 ice water main engine with high efficiency ice water main engine to improve efficiency — Energy saving by **402,804** kWh/year

Hsinchu Plant-Replacement of 1st phase FFUs on FAB 3F &5F totaling 1,745 units — Energy saving by **1,528,620** kWh/year

2023 **Longtan Plant**-CHP 510CMH flow rate adjusted to 500CMH — Energy saving by **81,444** kWh/year

Longtan Plant-Adjust the temperature of the electrical room from 20 degrees to 26 degrees — Energy saving by **29,460** kWh/year

Longtan Plant-Chiller outlet water temperature rise from 6.0 →7.3℃ — Energy saving by **40,483** kWh/year

Longtan Plant-Adjust the office air conditioner and raise the temperature from 25 degrees to 26 degrees — Energy saving by **5,796** kWh/year

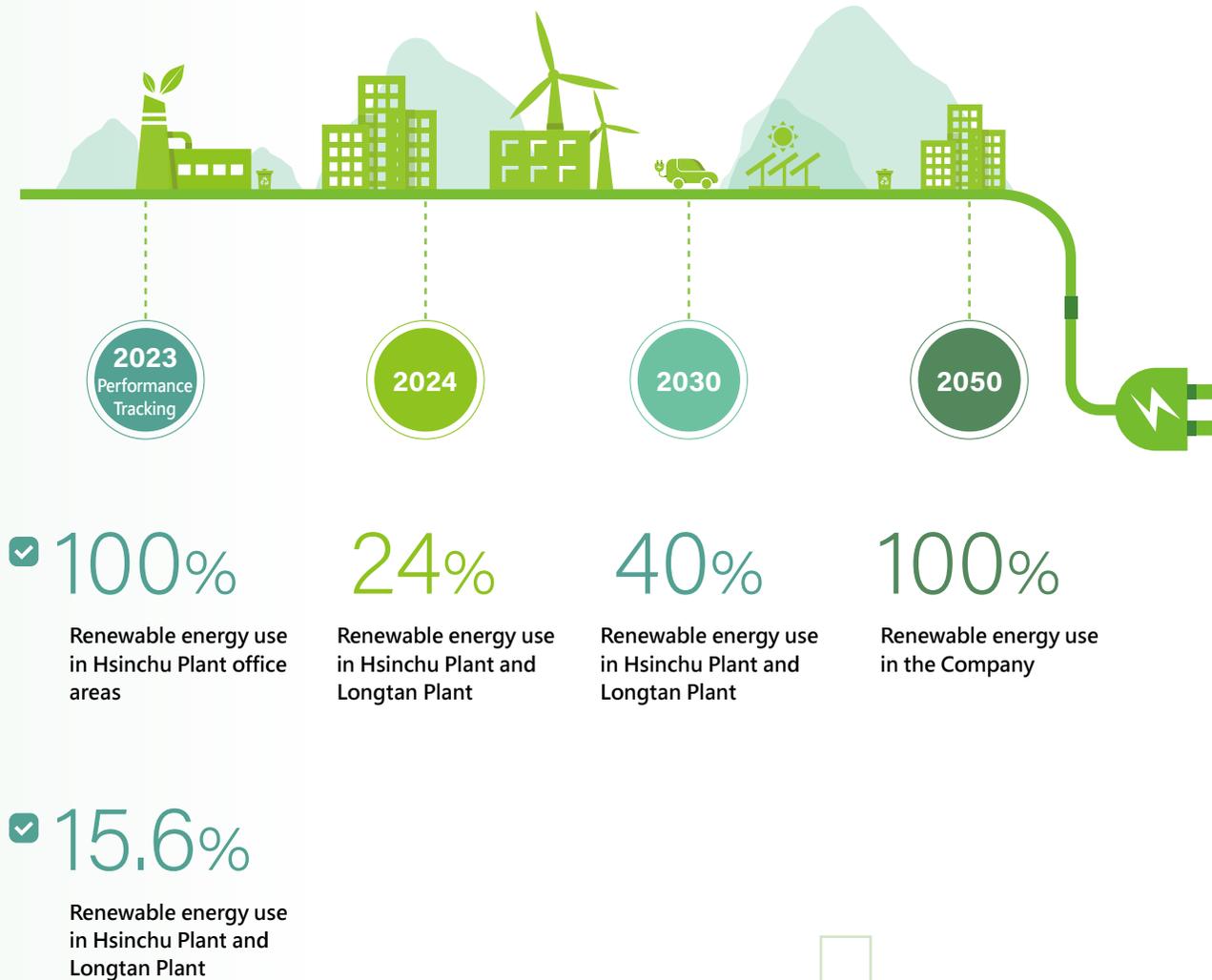**Longtan Plant**-Sub-main bypass valve close(3F: 42->37 Hz) — Energy saving by **4,297** kWh/year

Spotlight

Intelligent Control of Chiller

In response to the global trend of machine intelligence implementation, the highest energy-consuming equipment in the factory is chiller and chilled water system. Therefore, we hope to establish a model using a big data database from 2023 to 2024 to learn past operating techniques and parameter adjustments to improve efficiency. Intelligent control of chilled water system parameters to maximize electricity saving performance.In order to pursue energy saving efficiency and smooth control of chiller, a database of hundreds of parameters and tens of thousands of entries in total in the past two years has been established, multiple noises were eliminated and the influence of parameters was classified, and a model that was consistent with the current situation was established for operation.In 2023, the summer model was successfully established and put into trial operation to verify that it successfully saved at least 4% of electricity. Currently, we continue to revise the model and establish remote communication for chillers, moving towards the vision of automated intelligent control of chillers, combining the latest artificial intelligence development and the constant trend of energy conservation and carbon reduction.
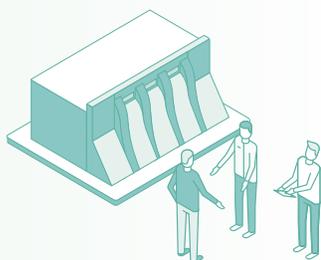
5.3.4 Renewable Energy

☑ **100%**
Renewable energy use
in Hsinchu Plant office
areas

24%
Renewable energy use
in Hsinchu Plant and
Longtan Plant

40%
Renewable energy use
in Hsinchu Plant and
Longtan Plant

100%
Renewable energy use
in the Company

☑ **15.6%**
Renewable energy use
in Hsinchu Plant and
Longtan Plant

VisEra understands our corporate responsibility to the environment. In addition to continuing to improve energy efficiency, we are actively involved in the use and purchase of renewable energy by paying close attention to the Science Based Targets (SBT) initiative and the RE100 Global Renewable Energy Initiative to limit global warming to 2° C. We also actively participate in the use and purchase of renewable energy. Consolidated calculation of electricity consumption for the newly added Longtan Plant in 2024, We set the target for attaining 24% renewable energy use in Hsinchu Plant and Longtan Plant, and we used carbon credits to offset the greenhouse gas emissions of the natural gas used in the kitchen to attain the short-term goal of net zero emissions in the office. Our mid-term goal is to expand the stable supply of renewable energy and attain 40% renewable energy use in Hsinchu Plant and Longtan Plant by 2030, and our long-term goal is to attain 100% renewable energy use in the Company by 2050.The Company will purchase land-based wind power and small hydropower in 2021, and will introduce land-based wind power in November 2021, and will start to transfer small hydropower in June 2022, with a total of 43,059,000 units of electricity to be transferred by 2023, and will obtain 43,059 renewable energy certificates. By 2023, VisEra has signed contracts for the purchase of renewable energy including 3,600KW of wind power systems with an estimated annual generation capacity of 9,000 MWh, and a 6,250KW hydroelectric system with an estimated annual generation capacity of 24,375 MWh. We estimate that we can obtain approximately 33,375 renewable energy certificates each year, which is equivalent to a reduction of 16,520 metric tons of carbon emissions. VisEra also set up solar energy systems totaling 29.8KW in 2014, which fully demonstrated our commitment to green energy and our steadfast support for clean energy.

5.4 Water Resource Management

5.4.1 Energy Management Policy

Water resources are critical for the semiconductor production process. VisEra has adopted water risk assessment tools of the World Resources Institute (WRI) to identify the water risks in the area where the plant is located, using water availability, environmental discharge quality, and regulatory and reputational risk as key indicators. The results of the assessment for the Company's Hsinchu Plant, and new Longtan Plant sites are all medium to low risk. We enforced the three strategies of "implement water use plans, seek opportunities to conserve water, and control pollution channels" and we set up have mechanical or electronic flow meters on all water inlets and key water pipelines. We assign on-duty personnel to record meter readings every day. The engineer in charge of the water system compiles statistics and sets water use plans based on the meter reading records. After evaluating the capacity of the system in 2023, we changed the source of water for the plant-side waste gas scrubber from tap water to reclaimed water to demonstrate our commitment to water conservation. We set up a Water Supply Emergency Response Team with representatives from relevant departments to discuss future water shortages, sources for purchasing water, and ways to replenish sources of purchased water. They divided the work based on the resolution to arrange the water purchase and replenishment schedule and implement water resource risk management.

Relationship between water consumption balance and upstream and downstream environment

Hsinchu Plant		Quantitative data of water resources in 2023 (unit: megaliters)	Percentage (%)
Upstream water supply source -total withdrawal		212.678	100%
	Tap water plant withdrawal	209.458	98.5%
	Rainwater collection volume	3.22	1.5%
Plant regional balance - total water consumption		403.610	100%
	Domestic water consumption	25.738	6.4%
	Pure water system - process water consumption	175.112	43.4%
	Reclaimed water recycling volume	26.112	6.5%
	Cooling tower water consumption	126.109	31.2%
	Waste gas scrubbing water consumption	49.384	12.2%
	Watering system water consumption	1.155	0.3%
Downstream effluent - total water discharge		132.321	100%
	Plant wastewater treatment volume	110.233	83.3%
	Domestic sewage discharge	22.088	16.7%
Total water consumption		80.357	-

Longtan Plant		Quantitative data of water resources in 2023 (unit: megaliters)	Percentage (%)
Upstream water supply source -total withdrawal		88.702	100%
	Tap water plant withdrawal	88.414	99.7%
	Rainwater collection volume	0.288	0.3%
Plant regional balance - total water consumption		158.823	100%
	Domestic water consumption	5.023	3.2%
	Pure water system - process water consumption	41.609	26.2%
	Reclaimed water recycling volume	52.283	32.9%
	Cooling tower water consumption	52.080	32.8%
	Waste gas scrubbing water consumption	7.575	4.8%
	Watering system water consumption	0.253	0.2%
Downstream effluent - total water discharge		53.257	100%
	Plant wastewater treatment volume	49.216	92.4%
	Domestic sewage discharge	4.041	7.6%
Total water consumption		35.445	-

Note 1：The water resource statistics included Hsinchu Plant and Longtan Plant. Zhongli Plant is leased and the tap water withdrawal and wastewater effluent are included in the lessor's water treatment system and cannot be calculated separately.
Note 2：Rainwater collection involves the use of the plant's rooftop rainwater recovery and reuse system that collects rainwater for the rainwater recovery tank. It is filtered and used as a source of water in the reclaimed water system.
Note 3：Reclaimed water recycling refers to treatment of wastewater in the plant with advanced organic reclaim (AOR) recycling systems. They treat wastewater that can be reused in the process by filtration, adsorption, and neutralization, and redirect the treated wastewater to other systems.
Note 4：The pure water system directs tap water through adsorption, dosing, filtration, UV sterilization, and filtering processes for use on the production line and produces wastewater in the process.
Note 5：The cooling towers of the air-conditioning system uses the contact of water with air for cooling. Some of the water mist escapes from the cooling tower when the system operates and it causes water consumption.
Note 6：The waste gas scrubbing system mainly uses recycled reclaimed water. If the reclaimed water cannot replenish the water necessary for the scrubbing tower due to its supply of water to the cooling tower, tap water is used to replenish the supply.
Note 7：The wastewater is collected in the pipeline system and discharged into the sewer system of the Science Park after the pH is adjusted by dosing to meet the discharge standards.
Note 8：The Company's wastewater is discharged in accordance with the water quality standards specified for the sewer system of Hsinchu Science Park by Hsinchu Science Park Bureau, Ministry of Science and Technology.
Note 9：Total water consumption = total water withdrawal - total water discharge

Upstream water source	Plant area zoning balance	Downstream wastewater discharge

Water treatment plant

Domestic water supply

Pure water system

Process manufacturing

Process water recycling and reuse system

Cooling tower

Waste washing

Irrigation system

Reclaimed water

Wastewater treatment system

Wastewater treatment plant

Rainwater

Rainwater harvesting

5.4.2 Water Resource Withdrawal

In 2023, VisEra's Hsinchu Plant and Longtan Plant total water withdrawal totaled 301.38 megaliters. Tap water was the main source accounted for about 98.8% and rainwater recycling accounted for 1.2%.

Total water withdrawal

Hsinchu Plant	2019	2020	2021	2022	2023
Total water withdrawal (megaliters)	128.470	190.490	226.840	277.221	212.678
● Tap Water	126.550	189.881	224.696	270.583	209.458
● Rainwater	1.920	0.609	2.144	6.638	3.22
● Water intensity (liter/8"equivalent wafer - layer)	20.59	14.47	15.77	22.66	24.01

Longtan Plant	2023
Total water withdrawal (megaliters)	88.702
Tap Water	88.414
Rainwater	0.288
Water intensity (liter/8"equivalent wafer - layer)	664.26

Note 1 : The statistics only included Hsinchu Plant and Longtan Plant. Zhongli Plant is leased and the water withdrawal cannot be calculated separately.
Note 2 : Due to the water shortage in 2021, the rainwater collection valves were opened around the clock and water is immediately directed into the recycling tank after it reaches a certain level. In addition, the inauguration of the Phase 2 plant increased the density of the rainwater collection pipelines and increased the volume of recycled rainwater.

5.4.3 Water Conservation Measures and Recycled Water

01 Reduce domestic water consumption
Ⓐ Enhance internal training and communication
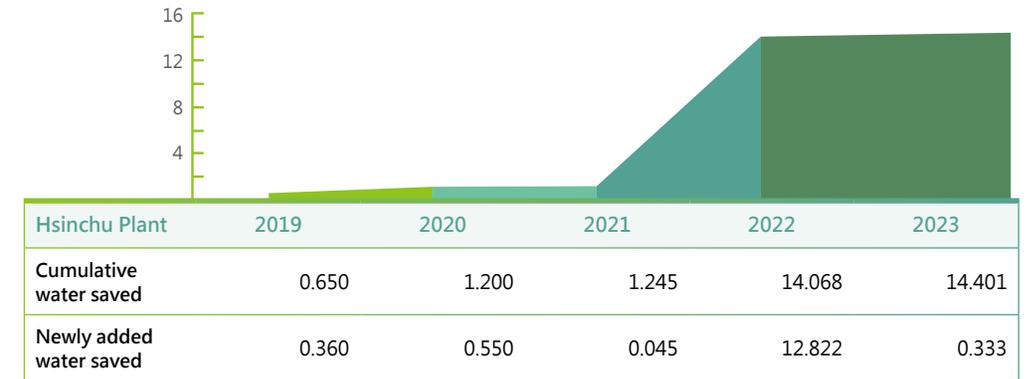Ⓑ Participate in advocacy campaigns
Ⓒ Use water-saving equipment and products

02 Increase industrial water usage efficiency
Ⓐ Participate in plant water conservation assistance programs
Ⓑ Review the possibility of setting up different process wastewater recycling systems and convert the wastewater into water that can be reused
Ⓒ Review unnecessary loss of water resources with measures such as seeking assistance from production units (process/equipment) to jointly review opportunities to reduce water consumption in the production process (e.g.,reduce water consumption time)

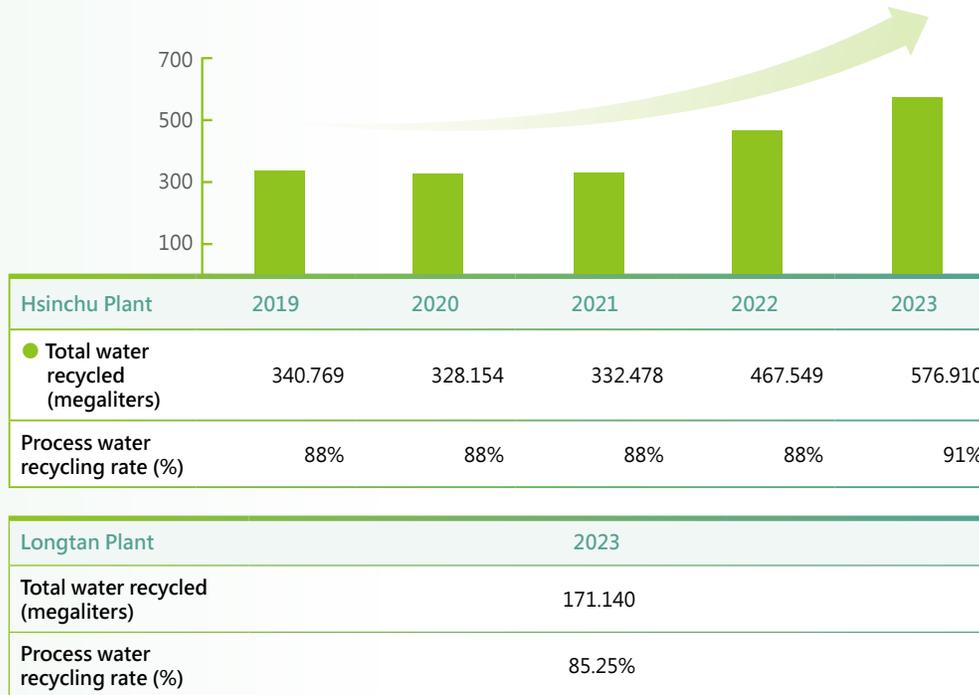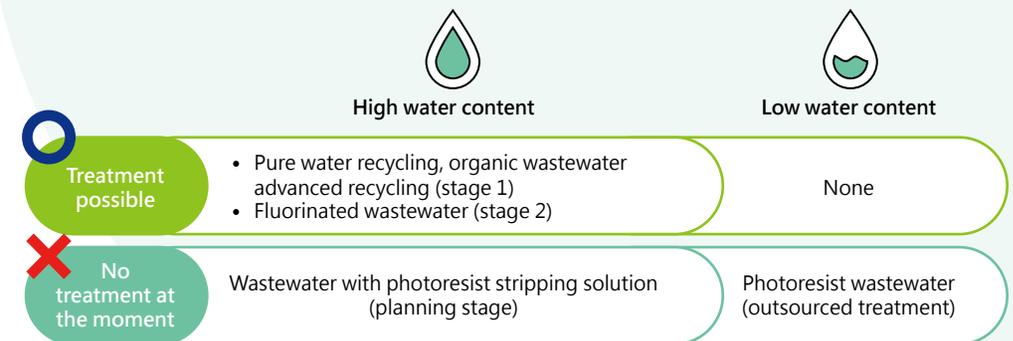### Water conservation results in past years
Unit: megaliters

Hsinchu Plant	2019	2020	2021	2022	2023
Cumulative water saved	0.650	1.200	1.245	14.068	14.401
Newly added water saved	0.360	0.550	0.045	12.822	0.333

Longtan Plant	2023
Cumulative water saved	0.135
Newly added water saved	0.135

Note : The statistics only included Hsinchu Plant and Longtan Plant. Zhongli Plant is leased and the water withdrawal resources cannot be calculated separately.

Water conservation measures	Water saved
Case ❶ — The regeneration cycle of the 2B3T unit of the Hsinchu plant's pure water system has been extended, saving 0.333 megaliters of tap water throughout the year.	0.333 （megaliters）
Case ❷ — Longtan plant pure water system 2B3T/MB Rinse time adjustment, saving 0.135 megaliters of tap water throughout the year.	0.135 （megaliters）

Water resource recycling volume and recycling rate

Hsinchu Plant	2019	2020	2021	2022	2023
● Total water recycled (megaliters)	340.769	328.154	332.478	467.549	576.910
Process water recycling rate (%)	88%	88%	88%	88%	91%

Longtan Plant	2023
Total water recycled (megaliters)	171.140
Process water recycling rate (%)	85.25%

Note: Review the possibility of setting up different process wastewater recycling systems and convert the wastewater into water that can be reused so that water can be used approximately 3.52 times.
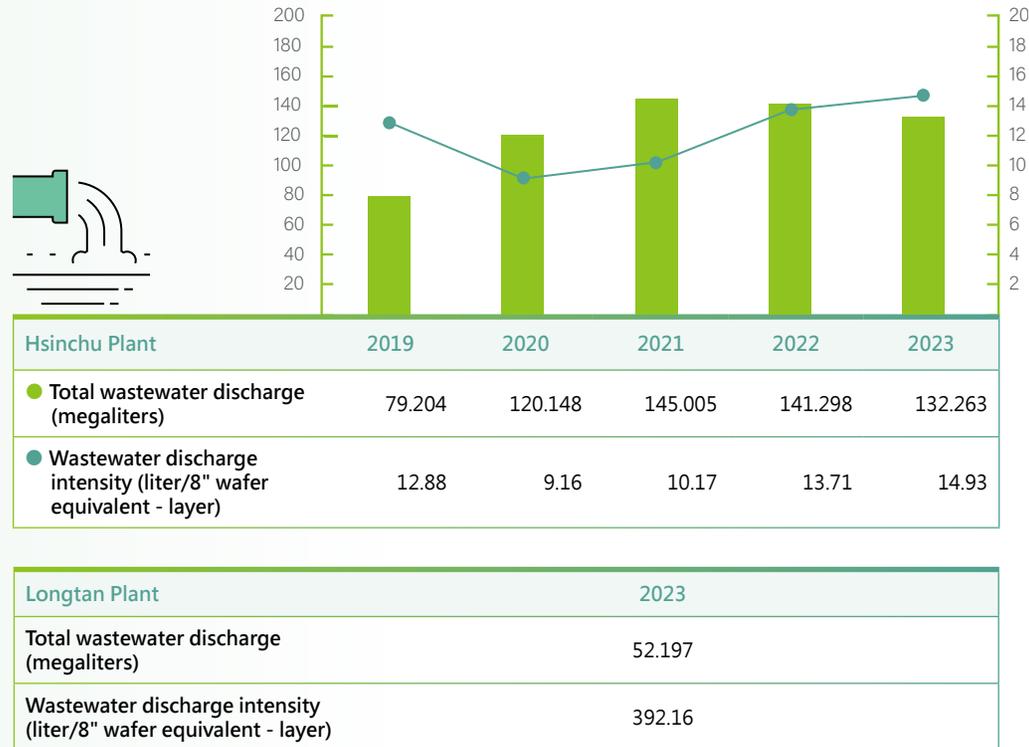
Spotlight

To attain the goal of recycling process wastewater, the wastewater produced during the production process is first collected through separate pipelines based on the level of water content and whether it can/cannot be treated to avoid cross-contamination that could result in the inability to recycle any wastewater. In the first stage, the wastewater that can be recycled by preliminary filtration is directed into the reclaimed water collection system. In the second stage, the reclaimed water is produced after a special treatment system is installed. At present, due to cost and site restrictions, the wastewater with high water content and photoresist stripping solution is still disposed by contractors of outsourced services. If there is a breakthrough in treatment technology in the future, we will prioritize the recycling of this water source. After the concentrated efforts in the two stages, the water resource usage rate can be calculated as "(tap water consumption + reclaimed water) /tap water consumption = number of times a drop of water is used". It means that the water can be used approximately 3.52 times.

	High water content	Low water content
○ Treatment possible	• Pure water recycling, organic wastewater advanced recycling (stage 1) • Fluorinated wastewater (stage 2)	None
✕ No treatment at the moment	Wastewater with photoresist stripping solution (planning stage)	Photoresist wastewater (outsourced treatment)

5.4.4　Effluent Management

VisEra actively develops water pollution prevention measures to reduce the potential impact in operations. We implement pollution prevention and treatment of wastewater quality indicators including biological oxygen demand (BOD), chemical oxygen demand (COD), fluoride ion concentration (F-) and suspended solids (SS) discharge concentration. The indicators were in compliance with the discharge water standards of the Science Park.

Total wastewater discharge

Hsinchu Plant	2019	2020	2021	2022	2023
● Total wastewater discharge (megaliters)	79.204	120.148	145.005	141.298	132.263
● Wastewater discharge intensity (liter/8" wafer equivalent - layer)	12.88	9.16	10.17	13.71	14.93

Longtan Plant	2023
Total wastewater discharge (megaliters)	52.197
Wastewater discharge intensity (liter/8" wafer equivalent - layer)	392.16

Note : Only Hsinchu Plant data are included, and add Longtan Plant in 2023. The process wastewater in Zhongli Plant is collected in the wastewater system of the lessor for treatment and recycling and cannot be verified.

Wastewater classification and recycling process

	Machine separation	Recycling system	Wastewater treatment	Recycling and reuse
Fluorinated wastewater	• Fluorinated wastewater	• Reclaimed exhaust gas scrubbing wastewater	• Fluoride acidification and mixing treatment	• Calcium fluoride
Acid-alkaline balance and organic wastewater	• Acidic wastewater • Alkaline wastewater • Organic wastewater	• Organic wastewater recycling	• Acid-alkaline wastewater treatment	• Sulfuric acid
Highconcentration waste solution	• Photoresist waste • Photoresist stripping solution recycling		• Photoresist solution recycling	• Photoresist

5.5 Waste Management

5.5.1 Waste Production and Recycling

waste
Total waste quantity
1,995 tons

Resource recycling and waste
including alternative energy
1,859 tons

Waste recycling rate
including alternative energy
93%

VisEra implements green manufacturing and upholds the waste management principle of "minimizing waste generation and maximizing resource circulation". We prioritize "material recovery" and "energy recovery" over incineration and landfill to ensure maximum resource utilization. Since 2020, VisEra has experienced rapid growth in sales, production capacity, and process innovation. As a result, the consumption of various chemical raw materials, consumables, and machine line cleaning and maintenance has significantly increased. With the introduction of new materials and widespread adoption of innovative processes, VisEra has not only witnessed a substantial increase in the production of both conventional and hazardous waste but also faced constraints in waste management due to limitations in disposal technologies and environmental regulations. Consequently, the annual material recovery rate dropped from 74% to 55%.In 2021, VisEra began actively seeking alternative waste treatment facilities to replace incineration. Collaborating with the Foundation of Taiwan Industry Service, in December of the same year, VisEra partnered with a recycling company to divert and purify a portion of previously non-recyclable waste, turning it into auxiliary fuel to replace conventional high-polluting fuels such as coal and natural gas. This initiative led to a material recovery rate (including alternative energy sources) of over 90% in 2022.By 2023, the recycling and reuse rate (including alternative energy sources) had reached 1,859 tons per year, with a landfill rate of only 0.25%. Furthermore, since the establishment, VisEra has maintained a landfill rate of less than 1% for 18 consecutive years.

Full-process smart waste management procedures

		Waste generated(tons)	Ratio(%)
Resource output after use by VisEra	Raw materials → in-plant process → waste resources after manufacturing process	1,995	100%
Recycling/reuse/disposal by outsourced service provider (waste resources after manufacturing process)	Incineration	131	6.57%
	Landfill	5	0.25%
	Alternative energy	574	28.77%
	Recycled and reproduced products	1,285	64.41%
Reuse by other industries	Products produced from recycled resources for reuse in other industries	Industries: Materials for the optoelectronics, semiconductors, and chemical industries	

Note: Statistics include Hsinchu Plant, Longtan Plant and Zhongli Plant.

Collaborative Supply Chain Efforts Towards Reduction

Upstream and downstream companies work together to recycle wafer shipment packaging materials for reuse in product shipments. The percentage of recycled packaging materials used in product shipments is over 80%.

Waste resource recycling and reuse/disposal

- Recycling and Reuse: 64.41%
- Alternative energy: 28.77%
- Incineration: 6.57%
- Landfill Disposal: 0.25%

Waste production

- Sorting at the source and collection with separate pipelines.
- Output tracking and in-plant reduction projects.
- In-plant pre-processing, recycling, and reuse of waste resources.

Process improvement for waste reduction

From 2015 to 2018, all employees continuously applied the CIT approach for waste reduction and reuse initiatives. We strive for optimal process parameters with the goal of reducing the usage of hazardous substances and chemicals, ultimately achieving a 33% reduction in waste generation.

Waste production volume and processing method

Item	Unit	2019	2020	2021	2022	2023
Total outsourced industrial waste quantity	Tons	611	1,463	2,054	2,348	1,995
Outsourced disposal of general industrial waste	Tons	136	370	781	930	741
Hsinchu Plant	Tons	135	369	780	929	689
Zhongli Plant	Tons	1.2	1	0.9	0.2	1
Longtan Plant	Tons	n/a	n/a	n/a	n/a	51
Outsourced disposal of hazardous industrial waste	Tons	475	1,093	1,273	1,418	1,254
Hsinchu Plant	Tons	462	1,079	1,260	1,405	1,174
Zhongli Plant	Tons	13	14	13	13	13
Longtan Plant	Tons	n/a	n/a	n/a	n/a	67
Waste recycling volume	Tons	455	806	1,087	1,491	1,285
Material recycling - general industrial waste	Tons	6	18	8	100	62
Hsinchu Plant	Tons	6	18	8	100	59
Zhongli Plant	Tons	0	0	0	0	0
Longtan Plant	Tons	n/a	n/a	n/a	n/a	3
Material recycling - hazardous industrial waste	Tons	449	788	1,079	1,392	1,223
Hsinchu Plant	Tons	436	774	1,066	1,379	1,152
Zhongli Plant	Tons	13	14	13	13	13
Longtan Plant	Tons	n/a	n/a	n/a	n/a	58
Waste recycling rate	%	74.45%	55.10%	52.93%	63.50%	64.41%

Item			Unit	2019	2020	2021	2022	2023
Waste used for Alternative energy			Tons	0	0	54	691	574
	Alternative energy - general industrial waste		Tons	0	0	54	691	574
		Hsinchu Plant	Tons	0	0	54	691	541
		Zhongli Plant	Tons	0	0	0	0	0
		Longtan Plant	Tons	n/a	n/a	n/a	n/a	33
	Alternative energy - hazardous industrial waste		Tons	0	0	0	0	0
		Hsinchu Plant	Tons	0	0	0	0	0
		Zhongli Plant	Tons	0	0	0	0	0
		Longtan Plant	Tons	n/a	n/a	n/a	n/a	0
	Alternative energy rate		%	0%	0%	2.64%	29.43%	28.77%
Waste incineration disposal volume			Tons	155	654	911	161	131
	Incineration - general industrial waste		Tons	129	349	717	134	100
		Hsinchu Plant	Tons	128	348	716	133	84
		Zhongli Plant	Tons	1.0	1.0	1.0	0.2	1.0
		Longtan Plant	Tons	n/a	n/a	n/a	n/a	15
	Incineration - hazardous industrial waste		Tons	26	305	194	26	31
		Hsinchu Plant	Tons	26	305	194	26	22
		Zhongli Plant	Tons	0.00	0.03	0.00	0.00	0.00
		Longtan Plant	Tons	n/a	n/a	n/a	n/a	9
	Waste incineration rate		%	25.39%	44.69%	44.34%	6.86%	6.57%

Item			Unit	2019	2020	2021	2022	2023
Waste landfill disposal volume			Tons	1	3	2	5	5
	Landfill - general industrial waste		Tons	1	3	2	5	5
		Hsinchu Plant	Tons	1	3	2	5	5
		Zhongli Plant	Tons	0	0	0	0	0
		Longtan Plant	Tons	n/a	n/a	n/a	n/a	0
	Landfill - hazardous industrial waste		Tons	0	0	0	0	0
		Hsinchu Plant	Tons	0	0	0	0	0
		Zhongli Plant	Tons	0	0	0	0	0
		Longtan Plant	Tons	n/a	n/a	n/a	n/a	0
	Waste landfill rate		%	0.16%	0.20%	0.10%	0.21%	0.25%
Waste disposal volume per unit of product- Hsinchu Plant + Zhongli Plant + Longtan Plant			kg/8" equivalent wafer - layer	0.0969	0.1089	0.1381	0.1847	0.2091
Waste disposal volume per unit of product – Hsinchu Plant			kg/8" equivalent wafer - layer	0.0971	0.1103	0.1431	0.1954	0.2103
Waste disposal volume per unit of product – Zhongli Plant			kg/8" equivalent wafer - layer	0.0917	0.0485	0.0227	0.0171	0.0254
Waste disposal volume per unit of product – Longtan Plant			kg/8" equivalent wafer - layer	n/a	n/a	n/a	n/a	0.8865
Waste disposal volume of general industrial waste per unit of product- Hsinchu Plant + Zhongli Plant + Longtan Plant			kg/8" equivalent wafer - layer	0.0216	0.0275	0.0525	0.0731	0.0777
Waste disposal volume of general industrial waste per unit of product- Hsinchu Plant			kg/8" equivalent wafer - layer	0.022	0.0281	0.0547	0.0778	0.0778
Waste disposal l volume of general industrial waste per unit of product- Zhongli Plant			kg/8" equivalent wafer - layer	0.000008	0.000003	0.000001	0.000259	0.001817
Waste disposal volume of general industrial waste per unit of product- Longtan Plant			kg/8" equivalent wafer - layer	n/a	n/a	n/a	n/a	0.3832
Waste disposal volume of hazardous industrial waste per unit of product- Hsinchu Plant + Zhongli Plant + Longtan Plant			kg/8" equivalent wafer - layer	0.0754	0.0814	0.0856	0.1187	0.1314
Waste disposal volume of hazardous industrial waste per unit of product- Hsinchu Plant			kg/8" equivalent wafer - layer	0.0752	0.0822	0.0884	0.1176	0.1325
Waste disposal volume of hazardous industrial waste per unit of product- Zhongli Plant			kg/8" equivalent wafer - layer	0.0841	0.0453	0.0213	0.0168	0.0236
Waste disposal volume of hazardous industrial waste per unit of product- Longtan Plant			kg/8" equivalent wafer - layer	n/a	n/a	n/a	n/a	0.5034

Note 1: Material recovery processing refers to any waste treatment that does not involve incineration or landfill. Waste treatment by physical, heat treatment, reuse, etc. to produce reusable materials or products are considered material recovery.
Note 2: Alternative energy refers to the use of waste materials as fuel to produce heat (generally in the form of steam), which is then used to produce electricity with a steam turbine generator. Alternative energy generates both heat and electricity. The heat in the form of steam and electricity can be supplied to companies in the industrial zone.

Total waste quantity (unit: tons)

Waste type		2019	2020	2021	2022	2023
General		136	370	781	930	741
	Waste solvent	108	317	727	755	620
	Sludge	2	3	3	4	5
	Waste fabrics	3	6	7	9	8
	Waste paper	4	6	7	9	8
	Waste electronic parts, scraps	1	2	1	2	4
	Mixed waste metal	3	5	4	29	6
	Others	15	31	31	122	90
Hazardous		475	1,093	1,273	1,418	1,254
	Others	1	1	1	21	16
	Containers	11	13	21	36	27
	Corrosive solids	1	3	5	6	7
	Waste solvent	413	918	1,095	1,199	1,061
	Waste acid	49	158	150	156	141

5.5.2 Circular Economy

Case ❶

Project Name	Waste solvent reuse
Project Targets	Waste photoresist solution, acetone
Improvement Method	The waste photoresist and waste acetone solvent, originally mixed together, are now segregated and collected separately. After segregation, the waste liquid is sent to the disposal company Shun Tsang Co., Ltd. for distillation treatment, producing PGME (Propylene Glycol Monomethyl Ether) and PGMEA (Propylene Glycol Monomethyl Ether Acetate), which are then utilized by other industries as coating materials. The acetone is supplied to other industries for use.
Project Objectives	Waste photoresist PGME+PGMEA >85% Wastewater acetone concentration >80%
Investment Cost	NT$1.6 million

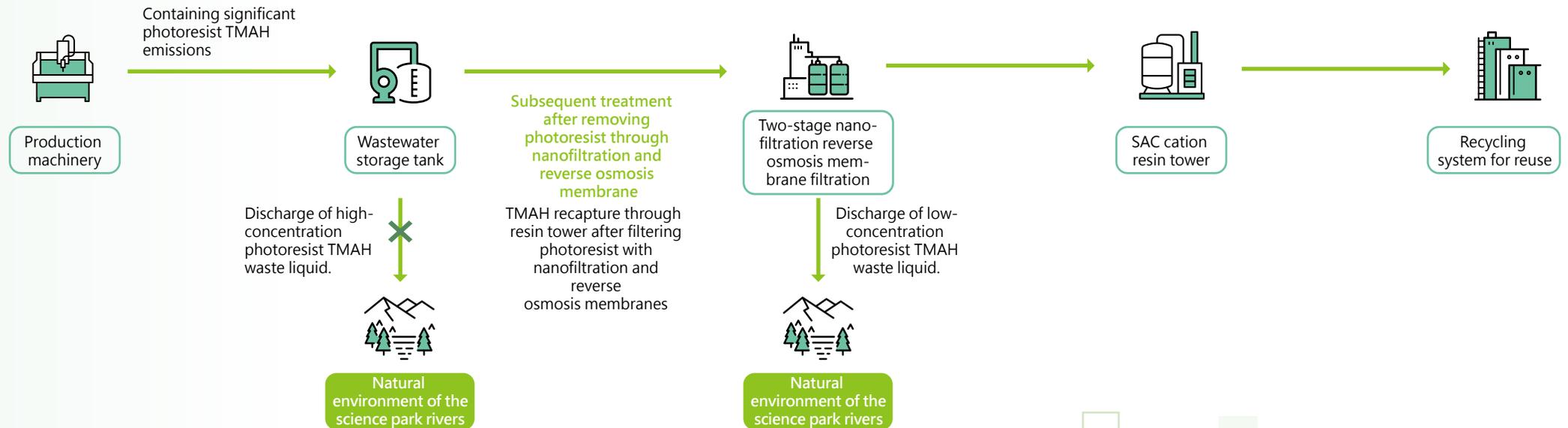| Item	Photoresist	Acetone
In-Plant Treatment Method	Separation (46% -90%)	Separation (52 %-80%)
Disposal Company Treatment Method	Distillation (90% -98%)	Distillation (80% -95%)
Reuse Purpose	Industrial materials (coatings, ink solvents, detergents)	Industrial materials (acetone)
2023 Treatment Volume (tons/year)	656	120
2023 Economic benefits (NT$10,000/year)	1,575	288

Project Benefits

As Is

Local Drain
LD-1
LD-2
LD-3
LD-4
LD-5
PR1-N
PR1-S
FCOAT08

PR2-N
PR2-S
PR2-1 LD
FCOAT01
FCOAT02
FCOAT03

PR1 PR2

Mix WCCS

LD-1~5/PR-1/N & S: PR-2 S CF8 coat tool
PR2-1 LD : FCNDT01
PR2-N : CF12 Tool (CO4,5,6)

To Be

LD-1
LD-2
LD-3
LD-4
LD-5
PR1-N
PR1-S
FCOAT08
FCOAT09

PR2-N
PR2-S
PR2-1 LD
FCOAT01
FCOAT02
FCOAT03

VMB Box PR1   PR2 VMB Box

Acetone WCCS   EBC-100 WCCS

(Waste Chemical Collection System)

Case ②

Project Name	Waste solvent reuse
Project Targets	Waste Tetramethylammonium sulfate (TMAX) solvent
Improvement Method	The TMAH recycling system of the Plant uses resin absorption to remove the TMAH. After running for a certain period of time, it requires the use of sulfuric acid (H2SO4) for desorption and restoration of the absorption capacity of the resin. After the treatment, the waste solvent that contains sulfuric acid is separated by a contractor to produce TMAH and sulfuric acid. It is used to produce industrial-grade materials for use in other industries to reuse resources and reduce the impact on the environment.
Project Objectives	TMAX concentration >10%
Investment Cost	NT$19.78 million

Project Benefits

Item	TMAX
In-Plant Treatment Method	Increase concentration (1% → 10%)
Disposal Company Treatment Method	Electrolysis (10% → 25%)
Reuse Purpose	Industrial materials
2023 Treatment Volume (tons/year)	134
2023 Economic benefits (NT$10,000/year)	144

Production machinery

Containing significant photoresist TMAH emissions

Wastewater storage tank

Discharge of high-concentration photoresist TMAH waste liquid.

Natural environment of the science park rivers

Subsequent treatment after removing photoresist through nanofiltration and reverse osmosis membrane

TMAH recapture through resin tower after filtering photoresist with nanofiltration and reverse osmosis membranes

Two-stage nano-filtration reverse osmosis membrane filtration

Discharge of low-concentration photoresist TMAH waste liquid.

Natural environment of the science park rivers

SAC cation resin tower

Recycling system for reuse

Case ③

Project Name	Material conservation design –reduce waste packaging materials
Project Targets	Product packaging materials
Improvement Method	Recycling and reuse of packaging materials domestic shipment
Project Objectives	Annual use rate of recycled packaging materials for domestic shipment > 80%
Investment Cost	NT$0
Project Benefits	• Cost benefits (2023 as example): NT$2,400,000/year • Calculation method: Annual Purchasing Price of Packaging Materials for Each Size * Annual Recycling Usage of Packaging Materials for Each Size • Waste reduction benefits (2023 as example): 13,000 cardboard boxes/year

Domestic shipments will use
recycled cartons by 2023

87%

Case ④

Project Name	Material Conservation Design - Recycling and Reuse of Packaging Bags
Project Targets	Material Packaging Bags
Improvement Method	Recycling and Reuse of Packaging Bags
Project Objectives	Reducing the purchase and usage of garbage bags by 5,000 annually.
Investment Cost	NT$0
Project Benefits	Recycled polystyrene packaging bags are used for outgoing shipments from the warehouse, repurposed as packaging bags for general business waste. This initiative reduces the quantity of purchased garbage bags, resulting in an estimated reduction of approximately 7,300 disposed garbage bags per year (1 large bag equals 5 small garbage bags), amounting to a waste reduction of approximately 900 kg/year.

5.5.3　Waste Disposal Contractor Management

VisEra outsources all business waste through environmental agencies, with selection conducted jointly by the company's internal environmental, procurement, and waste management units based on six criteria (including scale/reputation, permit documents, violation records, on-site facilities, waste control, and safety and health).

The selection process involves screening for high-quality vendors based on these criteria. Environmental unit personnel and waste management unit personnel conduct on-site visits and evaluations (utilizing eight aspects covering 166 audit items for on-site audits), with vendors needing to score over 60 points, as set by the parent company (TSMC), and gaining unanimous approval from the visiting unit personnel. Following this, vendors must undergo legal contract review, approval, and procurement procedures before being approved as waste disposal vendors for the company. Finally, the "Annual Evaluation of Waste Disposal Vendors" serves as the basis for vendor replacement assessments. Since 2018, VisEra has collaborated with TSMC to conduct visits and guidance for outsourced waste disposal vendors, addressing common regulatory audit deficiencies and penalty items, sharing internal management methods and experiences, and strengthening management processes through face-to-face communication with vendors. Additionally, we encourage vendors to disseminate this process to other clients, collectively striving for environmental sustainability.

Manage & Control the Operational Processes of Waste Treatment Vendors through the Waste Treatment Vendor Sustainability Enhancement Project

Results of audits and inspections of waste disposal service providers in 2023

Deficiency category	Number of deficiencies		Regulatory compliance correction	Onsite environment/ implementation improvement	Establishment of regulations and procedures
Waste Management	Deficiencies	1	Audit and visitation records were not submitted to the designated business personnel or their authorized representatives as required by regulations, nor were they signed or electronically signed.	NA	NA
	Recommendations	1	NA	• Adjust the temporary storage locations for general waste and hazardous waste to create clearer segregation.	NA
Safety and Health Management	Deficiencies	0	NA	NA	NA
	Recommendations	2	NA	• Relocate the construction material storage area to ensure traffic safety. • Post reminder stickers for wearing seat belts on forklifts.	NA
Air pollution	Deficiencies	0	NA	NA	NA
	Recommendations	0	NA	NA	NA
Wastewater	Deficiencies	0	NA	NA	NA
	Recommendations	0	NA	NA	NA

Vendor Selection — 6 Main Aspects: Corporate Scale and Reputation, License, Violation Assessments, On-site Facilities, Waste Control, Safety / Health Management

• Environmental Safety & Health Department
• Purchasing Department　• Waste Management Section

Vendor Inspection — 8 Main Aspects: Operating Management, Waste Management, Wastewater Management, Air Pollution Prevention, Fire Safety Management, Safety / Health Management, Maintenance Records, Emergency Response

• Industrial Safety and Environmental Protection
• Waste Management Section

Annual Evaluation — 3 Main Aspects: Waste Flow Control and Compliance with Management Requirements, Corporate Scale and Reputation, Operation Record

• Environmental Safety & Health Department　• Purchasing Department
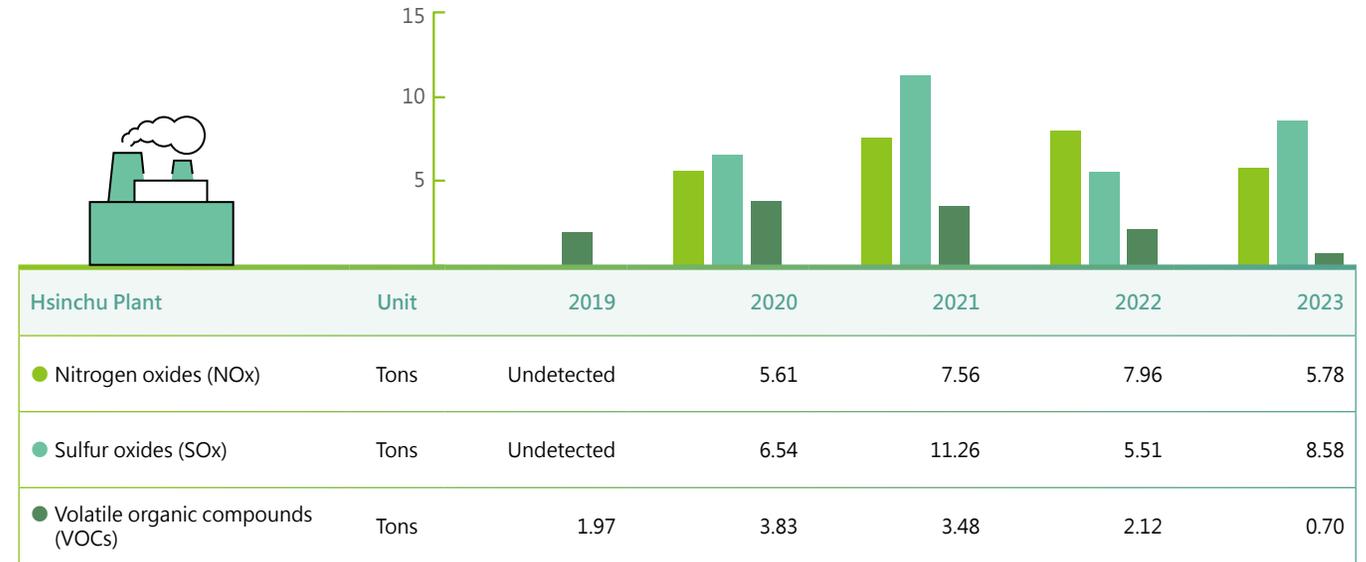• Waste Management Section　• Legal Department

5.6 Air Pollution Prevention

The air pollution prevention capabilities of VisEra meets the regulations in the "Air Pollution Control and Emissions Standards for the Semiconductor Industry" and "Standards for Air Pollutant Emission from Stationary Pollution Sources".To ensure stable 24-hour year-round operations pollution prevention equipment, all air pollution prevention equipment must be equipped with at least one backup system (N+1 design) and a DC backup system to prevent power interruption.The design is implemented to ensure zero failure of the prevention equipment and ensure stable and continuous pollution monitoring. In addition, VisEra also set up automatic monitoring facilities to monitor the effectiveness of waste gas treatment in all systems. Related information is reported to the on-duty office of plant operations and the Occupational Safety and Environmental Protection Emergency Response Center to operate the independent dual-track monitoring system and ensure that the stack emissions meet regulatory requirements.

VisEra's air pollutants can be divided into acidic and alkaline gases and volatile organic gases. We adopted "separation of emissions at the source" and "best available technology for multi-section processing system" as our strategy for air pollution prevention so that the pollutant levels meet (or are superior to) government environmental protection regulations. The first stage for separation of emissions at the source is implemented for acid and alkaline process waste gas that are corrosive, flammable, greenhouse gas, or perfluorinated compounds as determined based on process characteristics. We added high-performance air treatment local scrubbers to effectively treat process emissions. Finally, the inorganic acid and alkaline gases are directed to the central scrubber for the second-stage of water neutralization process in the terminal pollution prevention equipment. For volatile organic gases, we determine whether to install treatment equipment such as local condensers based on their boiling points. We then direct the process emissions to the zeolite rotor concentrator system for treatment. With separation at the source and two-stage treatment, we enhance the efficiency of air emission treatment across the board.

To improve the reduction rate of organic exhaust central treatment waste gas system, a budget will be allocated year by year starting from the end of 2021 to replace zeolite rotors, and two sets of old equipment will be replaced with high-efficiency zeolite rotors by 2023.As a result, VisEra's air emissions have consistently met (exceeded) the standards for emissions set by the EPA. With our early warning mechanisms and immediate response to issues, there were no anomalies involving pollutant emissions that were reported to the competent authority in 2023.

Total air pollutant emissions

Hsinchu Plant	Unit	2019	2020	2021	2022	2023
● Nitrogen oxides (NOx)	Tons	Undetected	5.61	7.56	7.96	5.78
● Sulfur oxides (SOx)	Tons	Undetected	6.54	11.26	5.51	8.58
● Volatile organic compounds (VOCs)	Tons	1.97	3.83	3.48	2.12	0.70

Longtan Plant	Unit	2022	2023
Nitrogen oxides (NOx)	Tons	0.18	Undetected
Sulfur oxides (SOx)	Tons	0.02	Undetected
Volatile organic compounds (VOCs)	Tons	0.83	0.73

Note 1 : Longtan Plant be added in 2023, Zhongli Plant does not have processes with air pollutant emissions and thus does not emit air pollutants
Note 2 : Measurements were not conducted in 2019 of Hsinchu Plant because they were merged with the test run measurements in 2020. The SOx and NOx are tested once every five years in accordance with regulatory requirements, so measurements were not conducted in 2023 of Longtan Plant.
Note 3 : Due to the needs of the processes, we used photoresist stripping solutions that contain DMSO and it was the main reason for the increase in Nox and SOx emissions in recent years.
Note 4 : The three types of air pollutant emissions included nitrogen oxides (NOx), sulfur oxides (SOx) and volatile organic compounds (VOCs).
Note 5 : Volatile organic compounds (VOCs) are continuously monitored by the FAC Dept.

5.7 Environmental Protection Expenditures and Investments

By upholding the philosophy of attaining coexistence and common prosperity in business growth and the ecological environment, VisEra is committed to the full implementation of environmental pollution prevention actions to protect the local environment and increase the value of the Company. The environmental protection (Note 1) investments in 2023 total NT$27,308 thousnad, which were mostly invested in wastewater and waste gas treatment facilities. The total fees (Note 2) are shown in the figure below:

Expenditures for social activities for reducing the burden of the environment (cost of social activities for environmental protection)

$13 NT thousand

Other costs related to environmental protection

$1,198 NT thousand

Indirect cost for reducing the burden of the environment (environmental protection management expenses)

$28,854 NT thousand

Environmental protection cost category

Direct cost for reducing the burden of the environment

$39,702 NT thousand

Note 1: The total investment refers to the actual investments on hardware facilities in the current year.
Note 2: The total expenses refer to the expenses for equipment depreciation, research and development, personnel, power, maintenance, monitoring, consumables, contracting, education, donations, and other expenses in the current year.

Role in Sustainability

Employee Relations

- 6.1 Talent Recruitment and Retention

- 6.2 Talent Development

- 6.3 Human Rights

- 6.4 Occupational Safety and Health

6　Role in Sustainability — Employee Relations

6.1　Talent Recruitment and Retention

6.1.1　Employee Distribution

As of the end of the year 2023, VisEra has a total employee of 1387 people, 855 of them are managers and professionals, and 532 of them are factory workers.

Optical components companies in the semiconductor industry are knowledge and technology-intensive. Of all the managers and professionals over 70% of them hold a bachelor's degree and above. In addition, VisEra continuously strives to provide a friendly and fair workplace, out of the total number of employees in 2023, 44% of them are female, and 24.6% of them are below the age of 30. VisEra's employees' average age is 36.6 years old.

Note 1: The total number of employees is based on the number of active employees after the end of the year without including interns.
Note2: The manager consists of deputy managers or higher. The technical personnel consist of direct labor.
Note 3: Relative Percentage to Total Employee = number of people within each classification/total number of employee.
Note 4: VisEra's operating bases are all located in Taiwan and there are no employees assigned overseas. All the nationality of high-level managers is Taiwan.

Employee Distribution

2023 Human Resources Distribution							
Item	Group	Male		Female		Relative Percentage to Total Employee	
		Number of People	Ratio of the Group (%)	Number of People	Ratio of the Group (%)	Number of People	Ratio of the Group (%)
Job Function	Manager	130	79.8%	33	20.2%	163	11.7%
	Professional personnel	536	77.5%	156	22.5%	692	49.9%
	Technical personnel	109	20.5%	423	79.5%	532	38.4%
Employment Agreement	Indefinite term	775	56.0%	609	44.0%	1384	99.8%
	Fixed term	0	0.0%	3	100.0%	3	0.2%
Nationality	Taiwanese	736	61.7%	456	38.3%	1192	85.9%
	Foreigner	39	20.0%	156	80.0%	195	14.1%
Type of Employment	Full-time	775	55.9%	612	44.1%	1387	100.0%
	Part-time	0	0.0%	0	0.0%	0	0.0%
Age	≦ 30	195	57.2%	146	42.8%	341	24.6%
	31~50	543	55.3%	439	44.7%	982	70.8%
	≧ 51	37	57.8%	27	42.2%	64	4.6%
Education	Ph.D	24	82.8%	5	17.2%	29	2.1%
	Master	468	77.9%	133	22.1%	601	43.3%
	Bachelor	215	59.1%	149	40.9%	364	26.3%
	Junior college	36	16.8%	178	83.2%	214	15.4%
	Senior high school	32	17.9%	147	82.1%	179	12.9%

6.1.2 Talent Recruitment

Employees are valuable partners to VisEra and also a steadfast cornerstone in the Company's journey to a sustainable future. To realize VisEra's vision of becoming "one of the world's leading companies in providing best optical components for the semiconductor industry," exceptional talents are the key. To this end, VisEra is constantly looking out for talents who meet our vision: "VISERA" They are: Visionary, Innovation, Sagacity, Excellence, Reliability, and Accountability to grow together with us.

VisEra makes its annual human resources plan based on the company's annual operational strategy and recruits the necessary talents via diverse recruitment channels, including but not limited to, the recruitment system on the company's official website, taking part in major recruitment events, engaging in social media, host company visits and campus speech events, in addition of providing employee referral program to increase recruitment efficiency and continue to build VisEra's creativity and energy.

Recruitment Channels

01 Industry cooperation with schools

Recruitment seminars   4 Sessions

02 Employee Referral

Referral from existing employees*

Report-for-work rate 100% Professional personnel `100% Technical personnel

Retention Rate 100%

03 Recruitment Website

Human resources websites 178,421 views

Facebook Website 14,254 views

Recruitment seminars

In 2023, VisEra hired 47 new employees. Number of people by age and gender are distributed as below:

2023 Total new employees and percentage							
		Male		Female		Number of People	Percentage of all employees (%)
	Group	Number of People	Percentage of the population in this age group(%)	Number of People	Percentage of the population in this age group(%)		
Age	≦ 30	18	5.3%	11	3.2%	29	2.1%
	31~50	11	1.1%	6	0.6%	17	1.2%
	≧ 51	0	0.0%	1	1.6%	1	0.1%
Total new employees		29	2.1%	18	1.3%	47	3.4%

Note 1: Does not include interns.
Note 2: Percentage of all employees = number of people within each group/total number of employee

In 2023, 82 people resigned, the annual turnover rate was 5.8% and the turnover rate within 1 year was 1.8%. Number of people by age and gender are distributed as below:

2023 Total turnover and percentage							
		Male		Female		Number of People	Percentage of all employees (%)
	Group	Number of People	Percentage of the population in this age group(%)	Number of People	Percentage of the population in this age group(%)		
Age	≦ 30	19	5.6%	9	2.6%	28	2.0%
	31~50	32	3.3%	19	1.9%	51	3.7%
	≧ 51	2	3.1%	1	1.6%	3	0.2%
Total turnover		53	3.8%	29	2.1%	82	5.9%
Annual turnover rate		5.8%					
New employee turnover rate		1.8%					

Note 1: The turnover rate is calculated based on formal employee, and does not includes employee on leave without pay, intern, fixed term employee, and forgien direct labor.
Note 2: Percentage of all employees = number of people within each group/total number of employee.
Note 3: Annual turnover rate = Annual turnover number/ {（number of employee at the beginning of the year）+（number of employee at the end of the year）/2 } .The turnover number is calculated based on formal employee, and does not includes employee on leave without pay, intern, fixed term employee, and forgien direct labor.
Note 4: New employee turnover rate = Annual turnover number/ {（number of employee at the beginning of the year）+（number of employee at the end of the year）/2 } . The turnover number is calculated based on formal employee within one year, and does not includes employee on leave without pay, intern, fixed term employee, and forgien direct labor.

Employees are VisEra's valuable partners. VisEra implements 5 outstanding benefits measures, 6 training programs, and 3 workplace-friendly initiatives to help attract and retent talents, to help VisEra secure the momentum of continuous growth.

Talent Retention Measures

Three workplace friendliness plans

- **Gender ratio near 1: 0.8**
- **Buddy system**
  - Help newcomers familiarize themselves with work contents and the environment to shorten the time required to adapt
- **Employee assistance programs**
  - Maternity health protection, onsite physician health consultation, psychological consultation

Five high-quality benefits

- **Abundant rewards and bonuses**
- **Employee referral bonuses**
- **More days of leave than statutory requirements**
- **Employee health care**
  - gym/employee health examinations / insurance
- **Abundant and diverse activities**
  - employee vacation / family day events / clubs

Six major training programs

- **On-the-job training**
  - Professional courses
- **Personal development programs**
  - Plan professional courses based on the employee's role and duties
- **Digital learning**
  - V+ Talent online courses without time and spatial constraints
- **Team building**
  - Consolidate internal cohesion and build foundations for teamwork to increase efficiency
- **Orientation training camp**
  - Help new employees quickly learn about the workplace
- **Professional licenses**
  - Help employees obtain job-related licenses

VisEra endeavors to build a multi-faceted and inclusive workplace by employing people from different sexes, religious backgrounds, ethnicities, nationalities, and ages, in addition to providing work opportunities for the physically challenged. However, due to the nature of the work, the number of physically challenged candidates is lacking and doesn't meet the legally required 1% of weighed total number of employees and the company has paid the contribution fee as required.

Diverse Employment		2019	2020	2021	2022	2023
Disabled Employment	Number of employee required	9	12	13	14	13
	Number of employee	3	5	5	5	7
	Number of Vacancies	6	7	8	9	6
	Employment	0.3	0.4	0.4	0.3	0.5

Note : The Number of employee required is based on the number of employee specified on the official letter form Hsinchu City government in December each year.

As for employees' career development and promotion channels, 100% of VisEra's employees go under regular performance reviews, and potential talents are given sample opportunities to explore and grow their potential. Promotion decision is made based on the consideration of work experience, professional ability, job performance, and personality traits by the management with the aim of putting the right person in the right position and fostering an inclusive workplace and diversified atmosphere wage.

Promotion Rate	2019	2020	2021	2022	2023
Number of Female	18	20	31	23	22
Percentage of Female（%）	24.3%	29.0%	27.7%	15.9%	10.6%
Number of Male	50	57	72	94	79
Percentage of Male（%）	21.5%	22.4%	23.5%	20.8%	11.5%
Female / male Ratio（%）	1.13	1.29	1.18	0.76	0.92

Rate of Promotion to Management role	2019	2020	2021	2022	2023
Number of Female	3	3	3	4	5
Percentage of Female（%）	9.7%	12.0%	18.8%	8.2%	16.1%
Number of Male	10	14	13	25	18
Percentage of Male（%）	9.2%	11.9%	19.4%	14.6%	14.6%
Female / male Ratio（%）	1.05	1.01	0.97	0.56	1.09

Ratio of Female employee & manager（%）					
	2019	2020	2021	2022	2023
Ratio of Female(%)	49%	47%	44%	44%	44%
Ratio of Female entry-level manager(%)	18%	18%	20%	20%	20%
Ratio of Female senior excutive(%)	0%	0%	0%	0%	0%
Ratio of Female employee in management role(%)	18%	18%	20%	20%	20%

Note: Entry-level manager include fisrt-line manager. Senior excutive consists of Vice President and above.

The employee's salary will be reviewed based on job function, individual performance, and benchmarking with the industrial standard on an annual basis when making the salary adjustment proposal. Salary is structured in two parts: fixed compensation and variable compensation. Fixed compensation is benchmarked with overall market standards, while variable compensation will be linked with the employee's department, team, and personal performance. The overall compensation structure for the year 2023 is 12 months of basic salary and 2 months of year-end bonus. The average salary is more than 1.27 million NTD while the average salary for direct labor is higher than 0.7 million NTD. The average monthly income is 2.2 times higher than Taiwan's minimum wage. In 2023, VisEra's highest personal salary is 14.36 times higher than the median salary. The change between annual total compensation and median compensation is 2.2 times.

Ratio of Female /Male Salary										
	2019		2020		2021		2022		2023	
	Basic compensation	Remuneration	Basic compensation	Remuneration	Basic compensation	Remuneration	Basic compensation	Remuneration	Basic compensation	Remuneration
Manager personnel	0.77	0.71	0.75	0.70	0.81	0.69	0.81	0.72	0.82	0.71
Professional personnel	0.88	0.88	0.88	0.89	0.92	0.87	0.94	0.92	0.93	0.88
Technical personnel	1.14	1.18	1.03	1.05	1.06	1.07	1.06	1.03	1.00	0.97

Note 1: Basic compensation includes monthly salary, commute reimbursement, DL reimbursement, and year-end bonus.
Note 2: Remuneration includes monthly salary, commute reimbursement, DL reimbursement, overtime paid, year-end bonus, bonus, shift bonus for direct labor, and job-specific reimbursement.
Note 3: Female/Male Compensation Ratio= Female compensation/male compensation.

Average salary & Mdian salary			
Item	2022	2023	Difference between 2 years
Number of full-time non-management employee	1,356	1,382	26
Average salary of full-time non-management employee （NT$ Thousand）	1,334	1,230	-104
Mdian salary of full-time non-management employee （NT$ Thousand）	1,069	1,019	-50

VisEra highly respects the career path each employee is willing to take. By providing a transparent internal job vacancy platform, the employee is encouraged to diversify their job function to enhance the width and depth of their career in order to optimize the flow of talents realize the goal of putting the right people on the right job, and foster a friendly workplace. In the year 2023, there are 43 internal vacancies, and 67.4% of them were filled by the existing employees, and successfully met the targeted goal of 65%.

Internal employee substitution rate	2019	2020	2021	2022	2023
Number of job opening	26	50	94	81	43
Number of employee transfer	19	43	58	54	29
Internal employee substitution rate （%）	73.1%	86.0%	61.7%	66.7%	67.4%

VisEra understands talent development is the key to sustainability development, in order to meet the constant challenge faced by the company, VisEra aims to let high-potential talent into the management role via an internal promotion system and also help with key talent retention. In the year 2023, 82.1% of management roles were promoted from existing employees which exceeded the targeted goal of 70%.

Manager replacemet rate	2019	2020	2021	2022	2023
Number of New Manager	6	15	14	8	5
New Manager Ratio (%)	24.0%	31.9%	32.6%	21.6%	17.9%
Number of internal promotion to Manager	19	32	29	29	23
Manager internal promotion rate(%)	76.0%	68.1%	67.4%	78.4%	82.1%

Note: New Manager Ratio = New Manager in the current year / total number of manager opening in the current year. Manager internal promotion rate = number of employee promotion in the current year / total number of manager opening in the current year.

To better attract and retain talents, VisEra offers leaves and benefits systems that are superior to what is legally required, including but not limited to, paid leaves, flexible leaves, sick leaves, group insurance, health care services, and other benefits and reimbursements. About the leaves system, all the newly hired are given advanced leaves before the one-year service period. One day of paid leave is available for every two months of work. Moreover, while the 7 days of memorial leaves were no longer available due to the new regulation, VisEra still offers these leaves as flexible leaves. As the sick leaves, VisEra offers half a day of sick leave for every 30 days of service and 120 hours of paid sick leaves, in addition to 120 hours of half-paid sick leaves which are superior to what is legally required.

For the sake of work-life balance, VisEra has implemented a flexible work schedule since September 2022, the employees may adjust their work schedule based on their personal needs. In 2023, a total of 70 people applied for a flexible work schedule which constitutes about 8.5% of employees who work on a regular schedule.

In addition, other than legally required occupational and health insurance, VisEra offers additional group insurance packages to the employees and their immediate families i.e. spouses, children, and parents. The employee will enjoy coverage on life insurance, casualty insurance, and medical insurance (including against cancer); moreover, the employee who is under parental leave (within 6 months) will still covered by the group insurance.

VisEra assembles the "Supervisory Committee of Business Entities' Labor Retirement Reserve" as required by the law. For the employee who falls under the old labor retirement plan, the company will disburse their retirement reserve into the designated account. For the employee who falls under the new labor retirement plan, 6% of their monthly salary will be disbursed to their designated retirement account as required by the law.

Item	Legal requirements	Practices superior to legal requirements
Annual leave	Those who have served for six months or more but less than one year shall be given three days of annual leave	New employees who have not yet served for one year shall be provided one day of annual leave for every two months of service.
Flexible leave	12 days of national holidays in each year	In addition to the 12 days of national holidays, the Company also provides flexible leave for the seven days of memorial days that are not statutory holidays
Sick leave	30 days of regular sick leave with half pay	120 hours of paid regular sick leave and 120 hours of half-paid sick leave each year
Group insurance	Employees are enrolled under labor insurance and national health insurance starting from the day they report for duty	• VisEra provides employees and their family members with group insurance including life insurance, accident insurance, medical insurance, and cancer insurance. • Employees are eligible for the Company's group insurance during the period of statutory unpaid parental leave (6 months).
Health services	• According to the The Labor Health Protection Regulations: Supplementary 9: General Physical Examination, Supplementary 10: Special Physical Examination and Supplementary 12: Specifications for Diseases Unsuitable for Employment Consideration • Provide free onsite services by physicians	Annual health examination services, health seminars, and aerobic courses.
Employee benefits	None	Family day events, employee vacation, movie screenings and other events, birthday gift certificates, wedding and funeral gift money, emergency relief support, childbirth benefits, and other benefits available for application

Compensation and benefits

Ten thousand	2019	2020	2021	2022	2023
	106,404	183,224	204,641	213,438	178,311

Other than parental leave, should an employee face family difficulties, extraordinary circumstances, or military conscription, such an employee may apply for leave without pay to better achieve work-life balance and may apply for reinstatement at a later date.

On leave without pay	2019	2020	2021	2022	2023
On leave without pay (one month to two years)	2	2	6	5	7
On leave without pay for illness (one years)	1	-	-	2	2
On leave without pay for military service (military service period)	-	-	1	-	1

In 2023, there are 120 people eligible to apply for parental leave, and 10 of them applied for parental leave. The application rate is 8.3%. 14 people are expected to come back to work, and 11 of them did come back, the reinstatement rate is 78.6%. A total of 3 people resigned, two of them resigned due to career choice, and one of them was to focus on child-rearing. The reinstatement rate exceeds the targeted goal of 50%. In 2023, 14 people applied for maternity leaves, and 31 applied for accompanying spouse maternal leaves. A total of 45 newborns contribute to Taiwan's overall birth rate.

2023 Parental leave without pay	Total	Male	Female
Application rate (B / A)	8.3%	2.4%	11.5%
Number of employee eligible for Parental leave without pay in 2023 (A)	120	42	78
Number of employee who applied for Parental leave without pay in 2023 (B)	10	1	9
Reinstatement rate (D / C)	78.6%	0.0%	84.6%
Number of employee scheduled reinstatement form Parental leave without pay in 2023 (C)	14	1	13
Number of employee scheduled reinstatement form Parental leave without pay in 2023 and reinstated in 2023(or earlier) (D)	11	0	11
Retetion Rate (F / E)	66.7%	0.0%	100%
Number of employee reinstated form Parental leave without pay in 2022 (E)	3	1	2
Number of employee reinstated form Parental leave without pay in 2022 and remained at the company as of the end of 2023(F).	2	0	2

Spotlight

Talent Retention Measure

Employee Stock Ownership Trust

Talent is what fuels the company's moves forward, VisEra's talent retention roadmap and strategy to keep the momentum going.

In 2023, VisEra implemented the "Employee Stock Ownership Trust" program to encourage its employees to dream big and make retirement plans with peace of mind, encouraging them to take part in the fruit of the company's success.

Joint rate approached nearly 60% within 1st month after its implementation and acquired positive feedback and interaction by employees. This program continues to be among one of the most welcome incentive programs launched by the company.

6.1.3　Labor-management communication

VisEra Corporation has established internal and external complaint channels to enhance communication between the company and its employees. These channels are managed by dedicated supervisors, allowing employees to freely submit constructive proposals to the company at any time. Additionally, they provide a platform for employees to express personal suggestions and complaints, ensuring timely and effective communication.In addition, face-to-face communication is also facilitated through various meeting formats such as supervisor communication meetings and IDL communication meetings. Furthermore, labor-management meetings are held quarterly to report operational updates, annual activities, and welfare measures planning to labor representatives. We respect the rights of all employees to organize and participate in unions, collective bargaining, and peaceful assemblies, while also respecting the rights of employees to abstain from such activities. As of 2023, there have been no instances of employees organizing unions.In the event that it becomes necessary to terminate employment relationships with certain employees due to unforeseen circumstances or to implement significant operational changes that may substantially affect employee rights (such as plant closures, relocation, changes in workplace, or job duties), we adhere to legal requirements by providing advance notice to employees and ensuring effective communication, thus ensuring a dispute-free process between labor and management. There were no significant labor-management disputes in 2023.

Labor-management communication channels are as follows:

Type	Scope	The person who responsible for internal/external whistleblower/complainant/ inquiry.(classify cases)	Reference Documents
Anti corruption	Breach of work ethic: Finance (accounting, audit) Other suspected unlawful matters within the company.	Chairman & CEO The top manager of HR Div The top manager of Legal	Code of Ethics (A-HRS-0018)
PIP Violation	Any improper disclosure of confidential information or unauthorized disclosure of information (including personal data).	Acceptance:PIP manager Supervision:The manager of Audit/The manager of Legal	VisEra PIP policy (A-PIP-0003)
Complaint	Worker's benefit, Personal right, Administrative oversight, Labor dispute.	The top manager of HR Div	Employee's Awards, Disciplinary and Complaints Rules (A-HRR-0102)
General Inquiry	Employee's concern or question about amenities provided by VisEra or any general inquiry or suggestion about working environment in general	The top manager of HR Div	Internal Communication Management Procedures (A-HRR-0100)

6.2 Talent Development

VisEra is committed to enhancing employees' self-learning awareness and providing diverse learning resources and tools. We encourage employees to engage in learning activities without restrictions on time, location, or format, in alignment with the company's growth direction, organizational needs, and individual performance requirements. This continuous improvement of work efficiency aims to gather more energy for company growth and societal advancement. In addition, VisEra actively implements On-the-Job Training (OJT) and Individual Development Programs (IDP) to allow employees to learn and enhance their work efficiency in practical work environments. Apart from systematically planning job rotations to cultivate future talent, VisEra also encourages employees to align with organizational development and arrange their personal career paths, enabling them to leverage their strengths and continue growing.

In the fiscal year 2023, we focused on talent retention strategies and assisted supervisors in enhancing their management skills. We specially invited senior executives to conduct seminars on managerial philosophies, sharing their personal approaches to workplace management to bring positive energy to frontline supervisors. The program covered six major themes: subordinate development, team leadership, note-taking skills, customer communication, time management, and cross-departmental collaboration, with a total of twelve sessions held for each theme. The total number of supervisor participants was 539, with an attendance rate of 90%.

Furthermore, we planned training on communication and management skills for supervisors, inviting external speakers to conduct sessions on two topics: intergenerational communication and conflict management. Six sessions were conducted in total to provide communication and management training for supervisors. The total number of supervisor participants was 188, with an attendance rate of 91%.

Training paths for new hires and existing employees.

New comer

On Board

Arrive Dept.

Career Learning

A pro

Orientation 2 days

→ To know more about VisEra

1. HR/ER functions
2. IT resources
3. Environment safety & health
4. QMS & Quality Policy + DCC Functions

Buddy System 6 months

→ To accommodate VisEra

1. Buddy assigned by the manager
2. To take care of new comers

On the Job Training 3 months

→ To acquire related skills & knowledge

1. Each department has its own OJT roadmap
2. Each roadmap includes several items
3. Each item has a trainer assigned by the manager

Annual Training Plan

→ To enhance ability & competence

1. MGR、IDL、DL
2. Management、Professional
3. Core、Common

Individual Development Plan

1. Different dept. & JG, specific training roadmap established
2. Each training roadmap includes several courses
3. Each staff(JG2X~33) has his/her IDP edit by the manager

In 2023, VisEra organized training and learning development activities totaling 33,776.8 hours, with a total of over 40,750 participants completing the training. On average, each employee received approximately 24.4 hours of training.

Project	2019			2020			2021			2022			2023		
Total number of employees	924			1,232			1,380			1,445			1,384		
Employee categories	MGR	DL	IDL	MGR	DL	IDL	MGR	DL	IDL	MGR	DL	IDL	MGR	DL	IDL
	106	407	411	132	515	585	148	556	676	154	572	719	163	532	689
Average hours	20.4	4.0	44.4	20.6	11.4	37.1	16.1	10.4	30.9	20.1	12.1	28.3	33	20.9	25
Total training hours	2,166	1,641	18,247	2,714	5,865	21,729	2,382.7	5,784.6	20,878.2	3,100.6	6,929.8	20,358.6	5,384	11,126.4	17,266.4
Gender	Male		Female	Male		Female	Male		Female	Male		Female	Male		Female
	467		457	656		576	766		614	810		635	775		609
Total training hours (by gender)	11,146.3		10,907.7	16,138.1		14,170	16,122.4		12,923.1	17,032.1		13,356.9	18,914.0		14,862.8
Average hours (by gender)	23.9		23.9	24.6		24.6	21		21	21		21	24.4		24.5
Total training hours	22,054			30,308			29,045.5			30,389			33,776.8		
Average training hours per employee	23.9			24.6			21			21			24.4		
Total training cost (NTD)	1,489,436			1,233,921			973,438			1,599,449			1,135,212		
Average training cost per person (NTD)	1,612			1,002			705			1,107			820		

Note 1: The total number of employees for the fiscal year is based on the total number of employees as of the end of the year without including contractors and interns. Average training hours per employee: Total training hours for all employees in the fiscal year divided by the total number of employees for the fiscal year.

Note 2: Total training hours for male and female employees are calculated based on the gender ratio.

Note 3: Employees are classified into supervisors, technical staff, and professional staff according to the internal personnel system of the company. Average training hours per employee in each category: Total training hours for employees in that category in the fiscal year divided by the total number of employees in that category for the fiscal year.

6.2.1 Competency Development

Although VisEra does not provide transition assistance programs specifically for employees whose careers end due to retirement or termination of employment, the establishment of our "Talent Development" goals has always focused on ensuring that employees' competencies remain up-to-date to support the company's sustainable operation and meet employees' lifelong learning needs. In other words, as long as employees continue to learn systematically under the company's talent development system, we believe they will be well-prepared for their career development after leaving the company.

To continue focusing on talent development strategies and encouraging self-directed learning, VisEra assists employees in continuously improving their skills in their respective fields and expanding their learning horizons. To achieve this goal, VisEra provides self-directed learning resources to facilitate learning anytime, anywhere.

The key self-directed learning courses in 2023

Enhancing the professional capabilities of engineers and frontline supervisors.

By utilizing physical courses, peer learning, external training, and hands-on practical exercises, we aim to strengthen the professional knowledge and abilities of engineers and frontline supervisors.

In 2023, we introduced the following professional themed courses:
- Basic Principles and Applications of Optics
- CIS Sensing and Camera Optical Principles and Operations
- Advanced CF ML Process
- Basic IC Process
- Optical Design and Material Selection
- Principles and Applications of Optical Thin Films
- Market Outlook for VisEra
- Future Development of New Technologies at VisEra

Encouraging self-directed learning.

Providing an e-learning system allows colleagues to schedule learning activities at their convenience.

- In 2023, a total of 1,562 online learning courses were available on the platform
- They were completed by a total of 25,119 participants.

**Management-themed courses:
Communication Management
Supervisor Management
Philosophy Seminar**

- The "Inter-generational Communication Skills and Conflict Management" course focuses on learning communication techniques, practicing effective interactions, and mastering listening and response methods.
- Covers various types of conflict management situations and principles and techniques for handling them.
- The "Supervisor Management Philosophy Seminar" consists of six major topics, during which senior executives share their own managerial philosophies and approaches to work.

- The "Inter-generational Communication Skills and Conflict Management" course was attended by 188 supervisors.
- The "Supervisor Management Philosophy Seminar" was attended by 539 supervisors.

VisEra has an online learning system called V+ Talent. Currently, there are 1,562 courses available on the platform. These courses are categorized into four main types: basic, professional, general education, and management.Every year, during the fourth quarter, the company collects digital courses planned by various departments for the next year. Internal colleagues are appointed by supervisors to serve as course instructors. The Training and Development Unit assists these instructors in recording digital courses, which are then uploaded to the system for colleagues to access and learn.

In 2023, VisEra produced a total of 50 in-house digital courses, including basic, general education, and professional courses. The completion rate for recording these courses reached 100%.

VisEra continues to strengthen the professional development of its employees to achieve corporate goals. In addition to offering various in-house training courses, the company also sends representatives to participate in external training programs. Upon completion of these courses, the company fully subsidizes the expenses. In 2023, there were 315 external training applications, with a total completion time of 4,467 hours. Among these, 185 safety-related certifications were obtained, and 130 employees received completion certificates for various professional courses. These professional courses covered topics such as quality management, research and development technology, and product and market trends. Through external training programs, the company aims to comply with regulatory requirements and enhance the professional skills of its employees.

Internal and external training in 2023

Item	Classroom Training	e-Learning	On-the-Job Training(e-Learning)	External Training	Total
Number of classes/ courses	113	691	871	315	1,990
Number of training participants	15,316	24,944	175	315	40,750
Training hours	15,802.4	11,841.7	1,663.0	4,469.7	33,776.8
Training expenses (NT$)	445,981	0	0	689,231	1,135,212

6.3　Human Rights

VisEra follows to the principles of the Responsible Business Alliance (RBA) Code of Conduct, emphasizing the importance of employees and respecting human rights. We strive to create a good workplace environment for nun-discrimination of gender, but more open mind and equal. We comply with labor laws and international human rights conventions, committing to creating an excellent workplace where every employee can fully unleash their potential. VisEra has established policies and management practices such as the "Corporate Social Responsibility Policy" and the "Code of Conduct for Employment Ethics and Supplier Behavior Compliance Statement." These documents encompass commitments to non-discrimination, prohibition of child labor, and prevention of forced labor. Regular human rights training sessions are conducted for all employees, and the RBA standards are communicated to suppliers and contractors to encourage collaborative efforts in creating harmonious labor-management relations.

VisEra places great importance on employee opinions and rights, establishing various channels for employees to provide feedback. Many of these channels are overseen by senior executives of relevant departments to ensure swift and confidential handling. The company is committed to providing an open and transparent communication environment between supervisors, colleagues, and peers.

Type	Workplace Abuse	Sexual Harassment
Scope	Abusing or causing harm to other people's bodily/ psychological well-being when exercising one's corporate power, such as: • Bodily violence/abuse • Psychology violence/ abuse • Verbal violence/abuse • Stalking and harassment	• Verbal abuse : telling dirty jokes, make inappropriate comments about people's physical appearance • Visual abuse : display pornographic pictures, staring at people's chest or other inappropriate places, or showing off inappropriate body parts. • Physical harassment : using hands to touch other's body, or forcefully touch people's breast or other body parts. • Using unbalance power relationship to make the weaker party uncomfortable, anxious, pressured or hurtful which can constitute as sexual harassment.
The person who responsible for internal/ external whistleblower/ complainant/inquiry. (classify cases)	• Acceptance : The top manager of HR Department • Supervision : The manager of Audit / The manager of Legal	• Acceptance : The top manager of HR Department • Supervision : The manager of Audit / The manager of Legal
Reference Documents	Workplace violence prevention policy (A-HRR-0105)	Sexual Harassment Prevention Policy (A-HRR-0104)

VisEra Corporation has established a Sexual Harassment Complaint Handling Committee, comprising five members appointed by the CEO, including executives responsible for employee relations, legal affairs, human resources, auditing, and other relevant departments (with three female members). The committee is chaired by a representative from the legal department and is responsible for handling complaints involving employees below the managerial level. If the accused individual holds a high-ranking position (director level or above), the CEO or a senior executive appointed by the CEO will serve as the convener. The convener will assemble a Sexual Harassment Highest Appeal Committee, consisting of the highest-ranking legal affairs executive, the highest-ranking human resources executive, human resources representatives, auditing representatives, or other executives at the level of vice president or above, totaling five members (including three female members). This committee will conduct investigations and handle complaints. If the accused individual is a manager at the level of general manager or above, the complaint will be handled by the Audit Committee. The Sexual Harassment Complaint Handling Committee and the Sexual Harassment Highest Appeal Committee, while reviewing cases, should exercise their authority independently and be free from interference by the company's internal administrative system. In 2023, two cases of sexual harassment complaints and three cases of workplace misconduct were received and processed. All cases have been thoroughly investigated and closed.

Sexual Harassment Complaint Channels

Contact the Supervisor of Employee Relations Department by phone.	Fill a sexual harassment complaint, employees can fill out a Sexual Harassment Complaint Form.	Reporting through the company's internal website.

Type	Accepted	Under Investigation	Closed
Sexual Harassment Cases	2	2	2
Workplace Misconduct Cases	3	2	2

To ensure that security personnel understand workplace misconduct and know how to respond appropriately, training sessions are conducted semi-annually. During these sessions, all security personnel are educated on relevant topics, including recognizing workplace misconduct, the complaint process for workplace violence at VisEra Corporation, and how to handle incidents of workplace violence. In the first half of 2023, there were 15 security personnel trained in Hsinchu and 11 in Longtan. In the second half, there were 15 security personnel trained in Hsinchu and 12 in Longtan. The training completion rate for security personnel on duty was 100%.

6.3.1 Human Rights Risk Assessment

In 2023, a human rights protection training for all employees was implemented. The Responsible Business Alliance (RBA) Code of Conduct education and online training for 1 hour. A total of 1,397 employees completed the training, achieving a coverage rate and a passing rate of 100% in both the assessment and the test. We will continue to pay attention to human rights protection issues and promote relevant education and training to enhance awareness of human rights and reduce the likelihood of related risks. Through online courses involving all staff, we aim to strengthen colleagues' understanding of the "VisEra Company Corporate Social Responsibility Policy" and implement it in their work. We utilize the standardized risk assessment template provided by the Responsible Business Alliance, known as the Self-Assessment Questionnaire (SAQ), to self-identify social, environmental, and ethical risks in our operations. As an example, in 2022, our self-assessment score was 93.6, with low risk in the human rights section. In recent years, VisEra has not encountered incidents of discrimination or violations of indigenous rights.

RBA training statistics

Employee item	Number of trainees expected		Number of trainees completed	
	Male	Female	Male	Female
Manager	132	34	132	34
Professional staff	543	151	543	151
Technical staff	111	426	111	426
Sub-total	786	611	786	611
Total	1,397		1,397	

Note: The training period is from July 19 to August 22, 2023. Personnel data is accurate as of August 22, 2023, with a coverage rate of 100%. The passing rate for the test also reached 100%.

6.4 Occupational Safety and Health

VisEra is committed to achieving zero safety accidents, building the best healthy workplace, and becoming a worldclass company for ensuring safety and health. We also cultivate a safety culture based on humanistic values and build an intrinsically safe work environment. To ensure safety and security, we support the physical and mental health of employees to achieve work-life balance and we work together with stakeholders to reduce workplace safety and health risks. There were no litigation involving violations of employee health and safety in 2023.

6.4.1   Build a Human-Centric Safe Workplace

Operations of the occupational safety and health organization and system

VisEra has established the Occupational Safety and Health Committee with 56 members (including department heads, engineers and technical staff involved in occupational safety and health, laborers, and managers of occupational safety and health) jointly review occupational safety and health issues to transform the Company into a benchmark for occupational safety and health. Non-management personnel account for 57% of the members. The Committee also convenes meetings regularly each month, which exceeds regulatory requirements and facilitates full consultation and communication for all employees.

We established the employee proposal system to strengthen employee consultation, participation, and communication. Employees can file proposal forms or provide feedback to the Occupational Safety and Health Committee. The Company according to the Occupational Safety and Health Management Regulations continues to obtain certification by independent third-party certification institutions for the ISO 45001/TOSHMS Occupational Health and Safety Management System to continue to improve safety and health in the work environment (Just the Hsinchu and Longtan factories need to apply for TOSHMS, as the Zhongli factory's workforce does not match the necessary conditions). The certification covers 100% of all workers and related routine and non-routine activities in the locations of operations. VisEra has appointed occupational safety and health management personnel (9 in Hsinchu Plant, 1 in Zhongli Plant and 2 in Lonatan as required by law) in accordance with regulations. We also set up dedicated units to help all plants implement regular annual assessments, internal audits, management review, and other matters required by the system. The results pass external certification to ensure their effectiveness and implementation. We also set a target for filing 10 occupational safety management proposals each quarter and 47 proposals were filed in 2023 (the resources invested totaled NT$3.19 million). included automated measuring of photoresist thickness lowers ergonomic risks and prevent musculoskeletal injuries when employees work. The Company received recognition for the performance of the safety and health management system and was shortlisted by the Hsinchu Science Park Bureau, National Science and Technology Council (hereinafter referred to as Hsinchu Science Park Bureau) as a company with outstanding performance in promoting occupational safety and health in 2023. VisEra employees have won the Occupational Safety and Health Excellent Employee Award presented by Hsinchu Science Park Bureau each year from 2019 to 2023. In 2023, We are humbled to have received National Occupational Safety and Health Awards and OSHA's outstanding performance awards.

To enhance safety management, we use the audit system to progressively and continuously improve safety management. We conduct regular and ad hoc audits, including daily construction inspections by safety and environmental protection units, weekly routine and project inspections by the safety and environmental department to review the implementation of occupational safety and health management in each plant. We require the responsible unit to propose corrective measures for any failure to meet expectations or violations of regulations. We also set up safety performance indicators (including active and passive indicators) and regularly track the effectiveness of the implementation in each plant every month. The parent company (TSMC) conducts at least 3 audits each year. We use the system to track all non-compliances or violations found in audits and regularly submit results for review to continuously improve and manage the system operations. Non-compliances are also reported to the Occupational Safety and Health Committee to review the effectiveness of improvements.

Safety Performance Indicators

VisEra has established procedures based on the Occupational Safety and Health Act, domestic and overseas safety and health standards, and ISO 45001 requirements. To implement the safety and health related procedures, VisEra has established the Safety Performance Index (SPI) system based on the management model of the parent company TSMC to implement quantitative management and supervision of the daily safety and health implementation results in the plants. The SPI includes active and passive indicators and management mechanisms with four color-coded indicators including blue, green, yellow, and red. The indicators have been maintained at blue or green (indicating excellent or good performance).

Description: ● Blue (excellent)-SPI ≧ 95 ● green (good)-85 ≦ SPI<95 ● yellow (warning)-70 ≦ SPI<85 ● red (warning)SPI<70

Active indicators
- → Completion rate of regulatory and parentcompany-required occupational health and safety implementation tasks
- → Number of Safety Management of Change (SMOC) and occupational health and safety management plan proposals
- → Completion rate of emergency response education and training
- → Contractor's self-management

Passive indicators
- → Number of incidents
- → Number of abnormalies
- → Number of incidents and abnormalies involving contractors
- → Audit of the parent company
- → External validation deficiencie

Risk control and opportunities for improvement

VisEra focuses on global safety and health issues, assesses risks and opportunities, and invites employees or representatives in the Company to participate and provide opinions for building a good workplace environment. We set environmental safety and health factors for consideration and hazard identification management procedures, and implement regular evaluations of internal and external issues and issues of concern to stakeholders every year. We determine risk assessments and response to opportunities by considering regulatory compliance, level of concern, technical, financial (including annual operating costs), operational (including operational and business impact on quality, cost, and delivery), and business factors to continuously reduce potential risks. In 2023, we performed 2,681 environmental consideration/risk assessments and evaluations, and assessed 15 internal and external issues and 16 stakeholder requirements and expectations. We also strengthened the safety awareness of all employees by incorporating the "right to active avoidance of danger" in the Occupational Safety and Health Act so that the concept of safety first can be implemented in the workplace.

Medium to long-term objectives for occupational safety and health management	
Medium-term objectives	• Incident rate per thousand persons < 0.20 • Disabling injury frequency rate <0.4 • Disabling severity rate < 4
Long-term objectives	• Number of occupational diseases caused by exposure to chemicals remain 0 • Disabling injury frequency rate <0.4 • Disabling severity rate < 4

Hazard identification and risk assessment results

Risk-related threats and opportunities   Annual hazard identification results

Proportion of hazard factor categories

- Biological **2**%
- Ergonomical **14**%
- Chemical **20**%
- Others **5**%
- Physical **59**%

Proportion of Risk Level

- First level **17**%
- Third level **30**%
- Second level **53**%

EHS risk identification results

This year, the risk assessment scores were redefined according to the risk assessment technical guidelines, and the risk assessment level 5 and level 4 are occupational safety and health risks.

There were no level 5 and level 4 risk in 2023.

Considering that there are still risks worthy of attention in the operation characteristics of the plant, the "occupational safety and health risks" operation items are defined as "occupational safety and health risks" for this year with reference to the identification results of last year.

Table: Risk Level and Control Plan

Risk level	Risk control plan	Note
❺ - Major risks	Risk reduction measures must be taken immediately, and operations shall not be started or continued until the risk is reduced.	Unacceptable risk, for major and high risk, risk mitigation control measures should be taken to reduce the risk to below moderate level.
❹ - High risks	Risk control measures must be adopted within a certain period of time, operations shall not be started before risk reduction, and considerable resources may be required to reduce the risk. If current operations are highly risky, risk mitigation measures shall be implemented as soon as possible.	
❸ - Medium risks	Need to work on risk mitigation, such as • Based on cost or financial considerations, it is appropriate to gradually adopt risk mitigation facilities to gradually reduce the proportion of moderate risk. • For severe to major or very major moderate risks, it is advisable to further evaluate the possibility of occurrence as a basis for improving control facilities.	
❷ - Low risks	There is no need to adopt risk mitigation measures for the time being, but the effectiveness of the existing protection facilities shall be ensured.	Acceptable risk, for which maintenance, supervision and inspection of existing protection facilities, as well as education and training mechanisms shall be implemented or reinforced.
❶ - Mild risks	There is no need to adopt risk mitigation measures, but the effectiveness of the existing protection facilities shall be ensured.	

Ergonomic

→ Continuous actions

- Appoint professional medical specialists to conduct onsite visits and provide recommendations.
- Continue to observe operations and identify potential ergonomic hazard factors in the workplace based on the risk identification methodology and ergonomic hazard assessment tools, and implement corresponding preventive actions.
- Use the Health Center's ergonomic factors questionnaires and records on the use of pain relief patches to monitor employees with musculoskeletal pain. Work with occupational medicine specialists for on-site services and interviews.

→ Results

- Ask experts in occupational medicine to evaluate the risks associated with the design and operation of mother protection zones in clean rooms and manufacturing facilities. Three recommendations for improving human factors engineering were offered in total; these included enhancing the way that wafer boxes are handled and the light sources used for mask inspection. Improvements have been made to height adjustment, cargo placement height constraints, etc., with a 100% completion rate.
- 1,407 employees completed the musculoskeletal symptom survey questionnaire, and the Company assisted 20 employees with suspected ergonomic risks to attend work interviews and assessments, and arranged onsite visits by occupational medicine specialists to provide recommendations.
- After interviewing employees affected by soreness and pain and identifying the ergonomic risks, we found that they did not work in areas with potential or existing ergonomic risks.
-

Chemical

→ Continuous actions

- In terms of the selection of chemicals, we referenced the green procurement questionnaire of VisEra to process chemicals restricted by the EU REACH regulation. The unit using the chemicals evaluate the feasibility of alternatives and prioritize the selection of chemicals withlow health hazards.
- If chemicals contain CMR substances, IARC substances or The Ministry of Labor's Occupational Cancer Prevention Blueprint has a list of chemicals that should be avoided, don't use it if we are unable to utilize it. Give the selection of compounds with low health hazards top priority. Before utilizing it, we must, if necessary, get the director of the appropriate unit organization's authorization.
- If chemicals contain CMR substances or IARC substances, employees in maternity health protection programs may not engage in related operations.
- Regarding the handling of particular chemical substances, these regulations will be integrated into the environmental, safety, and health procurement specifications to verify whether they comply with regulatory requirements throughout the procurement process. This is because of the new requirements for local exhaust devices in the "Hazard Prevention Standards for Specific Chemical Substances" regulations. criteria for supervision to stop illicit activity.

→ Results

- The European Chemicals Agency (ECHA) plans to restrict the use of PFHxA by 2035 and VisEra has established related chemical replacement programs for continuous verification and replacement.
- The number of occupational diseases caused by exposure to chemicals remained 0.
-

Biological

We readily monitor changes in the policies announced by the Centers for Disease Control for continuous adjustments of plant response measures and to provide timely health education information

→ Continuous actions

- We continue to pay close attention to the development of infectious diseases in Taiwan and overseas. We established preparation and response measures for notifiable diseases.
- We continue to implement reporting mechanisms for non-notifiable diseases and provide health education information for seasonal influenza and dengue fever.

→ Results

- Support COVID-19 control measures and implement individual epidemic prevention management for high-risk personnel. 0 cases of infections of employees due to business operations. (As announced by the CECC, COVID-19 will be downgraded to Category 4 communicable disease on May 1, 2023.)

Physical

→ Continuous actions

- Establish a radiation personnel exposure management system
  ❶ Supervision of employees donning heart rate monitors
  ❷ Personnel radiation armband wearing management
  ❸ Monitoring and management of monthly radiation exposure

- Establish non-ionizing radiation measurement results in each sites
  ❶ The process machines reviewing for Non-Ionizing Radiation Related machines
  ❷ Manufacturing engineering equipment with labeling management settings
  ❸ Semi-annual management of non-independent radiation monitoring

→ Results

- No instances either verified or suspected instances of radiation exposure.
- Personnel radiation education and training completion rate 100%.
- Results of Monthly Radiation Exposure Monitoring: Normal
- Non-ionizing radiation measurement results of power plants and magnetic fields are far below the ACGIH TLV standard.

Risk assessment and mitigation of hazards	Assessment methods used for such hazards	Mitigation measures for high-risk hazards identified in the assessment	Number of employees/non-employees covered in the hazard prevention program1
Physical hazards	Established with reference to the Technical Guidelines for Risk Assessment of the Occupational Safety and Health Administration, Ministry of Labor	No occupational safety and health risks were found in the plants and all operations must be processed in accordance with operating regulations of the plants	100%
Ergonomic hazards	Established with reference to the Key Indicator Methods (KIM table) for ergonomic risk assessment	No occupational safety and health risks were found in the plants and all operations must be processed in accordance with operating regulations of the plants and managed based on VisEra's ergonomic hazard internal control operating procedures	100%
Chemical hazards	Established with reference to the Technical Guidelines for Risk Assessment of the Occupational Safety and Health Administration, Ministry of Labor	No occupational safety and health risks were found in the plants and all operations must be processed in accordance with operating regulations of the plants	100%
Biological hazards	Established with reference to the Technical Guidelines for Risk Assessment of the Occupational Safety and Health Administration, Ministry of Labor	No occupational safety and health risks were found in the plants and all operations must be processed in accordance with operating regulations of the plants	100%
Specific sensitive groups (e.g., middle-aged, young workers, or those at risk of maternal health hazards)	Established with reference to related guidelines of the Occupational Safety and Health Administration, Ministry of Labor (Safety and Health Guidelines for Middle-Aged and Senior Workers and Technical Guidelines for Maternity Health Protection at the Workplace (Version 2))	Established related regulations with reference to related guidelines of the Occupational Safety and Health Administration, Ministry of Labor	100%

The Company also established accident investigation procedures. In the event of an accident involving an employee or contractor (including anomalies or incidents), investigation procedures are activated to identify the cause of the accident. We aim to clarify the reason to ensure that such accidents do not recur. There were no cases of material, severe, or recordable occupational injuries (including occupational diseases) in 2023. However, the Company analyzed and reviewed the 2 cases of incindent, 10cases of anomalies and 27 cases of near miss that occurred in 2023* but did not cause specific damages to review the appropriateness of operational risk assessments and ensure continuous and sustained improvements.

* Information Summit Center Taiwan Sites (includes the sites at Hsinchu, Zhongli, and Longtan)

Statistics of occupational safety and health accidents in past years

	2019		2020		2021		2022		2023[註]		2024 Goal	
	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors
Number of material occupational safety and health accidents	0	0	0	0	0	0	0	0	0	0	0	0
Number of severe occupational safety and health accidents	0	0	0	0	0	0	0	0	0	0	0	0
Number of recordable occupational safety and health accidents	0	0	2	0	0	0	0	0	0	0	0	0
Total work hours	1,520,312	506,718	2,355,038	233,192	2,795,757	232,982	2,938,372	430,296	2,960,986	319,360	NA	NA
Disabling frequency rate	0	0	0.85	0	0	0	0	0	0	0	<0.4	0
Number of accidents	0	0	2	0	0	0	0	0	2	0	1	0
Number of abnomalies	4	0	15	0	11	0	8	0	10	0	8	0
Number of near misses	0	0	64	0	24	0	5	0	27	0	12	0

Note :
1. Material occupational safety and health accidents: Occupational injuries or occupational diseases that cause death; severe occupational safety and health accidents: Occupational injuries or occupational diseases that necessitate more than 6 months of recovery time (excluding death); recordable occupational safety and health accidents: Occupational injuries or occupational diseases that cause the worker to be unable to perform original functions (including material and severe)
2. Disabling frequency rate = number of disabling cases / total work hours *1,000,000
3. The disabling injury frequency rate of peers is 0.85 (Information and application platform 113 of the Occupational Safety and Health Management System revealed the overall injury index for each industry throughout the first three years of operation.)
4. Accident: It refers to incidents in the workplace that harm equipment or personnel safety and cause injuries or property loss
5. Abnomal: It refers to incidents in the workplace that jeopardize the safety of equipment or personnel but have not caused specific injuries or losses
6. Near miss: It refers to incidents in the workplace that may jeopardize the safety of equipment or personnel and have not caused specific injuries or losses, but shocked the personnel
7. The data from 2019 to 2022 includes Hsinchu site and Zhongli site; the data in 2023 includes Hsinchu site, Zhongli site and Longtan site.

Anomaly analysis

	Chemical leakage	Water leakage	External air/gas	Fire alarm	Environmrntal	Others
● 2023	3	2	2	1	1	1
● 2022	1	3	-	3	-	3
● 2021	4	4	1	-	-	-

Number and types of anomalies in 2023

Key improvement measures for anomalies in 2023

The top three categories of anomalous events in 2023 are primarily chemical leaks, water leaks, and gas leaks. The majority of them are insufficient or improper operational methods. Additionally, we have developed pertinent leak prevention measures:
- Include extra objects for inspection: Self-inspection and PM form.
- Bolster hazard analysis for job. Before operation, a thorough evaluation of the construction risks and the appropriate safety precautions.

Expected improvements and preventive measures in 2024

- Examine risk variables (such as the lifespan of a part) and improve management procedures. Personnel inspection routes and check list inspections.
- Prior to operation, strengthen the work hazard analysis, thoroughly evaluate the construction hazards, and put the appropriate safety measures in place.

Near miss incident reports and investigation procedures

Incident occurs (Confirm definition)
- Execution method: Implement emergency response measures.
- Responsible department: ERC and responsible department.

On-site investigation
- Execution method: Basic information and description of the incident.
- Responsible department: Department commander and ERC.

Issue the investigation report
- Execution method: The Security Committee to report and close the case according to its resolution.
- Responsible department: Responsible department for false alarm.

Review the investigation report
- Execution method: Review the investigation report for completeness and reasonableness.
- Responsible department: Responsible department for false alarm & Security Committee members.

Track progress
- Execution method: Close the case and track the progress & Parallel expansion scheme
- Responsible department: Responsible department for false alarm

Archive closing report for future reference
- Execution method: Report exists.
- Responsible department: Responsible department for false alarm.

All personnel safety and disaster prevention preparation

VisEra has developed a safety and health training system to enhance the safety and health awareness, responsibility and commitment of all employees, ensure the safety of all employees, and increase the safety awareness of all workers. In addition to the statutory training for all types of operations or business personnel, those who perform ISO 45001 internal audits at the plants are required to receive training as ISO 45001 internal auditors. We also provide safety and health training for contractors. We exercise caution and preparedness to respond to possible accidents. The Company established an emergency response plan and conduct regular or unannounced drills to effectively control and minimize damage of accidents. In 2022, we conducted 38 drills for scenarios including fire, earthquake, gas leak, chemical leak, food poisoning, industrial machinery failure, damage from smoke outside the plant, environmental anomalies, and odor. All drills were conducted in accordance with the regulations and OI (F-RMS-2100 VisEra Emergency Response Plan). In addition, we organized 18 training sessions (basic, advanced, and commander) for the Emergency Response Team this year and personal protective equipment (PPE) usage tests twice a year. We also assign on-duty personnel on a rotating basis every day to respond to emergencies. If courses are held by means of online courses (V+talent), we conduct evaluations and satisfaction surveys after the courses. If courses are held in person, the instructor engages trainees during the course or the review of test papers to measure the effectiveness of the training. We also conduct a review at the end of the course to enhance the awareness of participants.

Occupational safety and health training and drills in 2023

	Number of activities	Total number of people	Coverage rate* (%)
General safety and health training (traffic safety, equipment operation safety training, protective equipment, etc.)	27	74	100
ISO 45001/ISO 14001 internal audit training	1	77	100
Environmental, safety and health procurement and change management education and training	2	70	100
Contractor safety and health training	63	533	100
Emergency response training or drills (earthquakes, typhoons, fires, etc.)	Training:10 Drills:38	Training:666 Drills:506	-
*Coverage rate = (actual number of trainees/number of eligible individuals) *100%			

Note: VisEra has not yet provided high-risk operation training (Little Red Card) courses for contractors. Contractors are only permitted to engage in high-risk operations after they obtain the training certificate from the parent company (TSMC).

6.4.2　Creating a Comfortable Workplace that Fosters Employees' Physical and Mental Well-being

VisEra adheres to the core value of "Putting People First" and is committed to ensuring the safety and health of its employees. We allocate resources and manpower to create a safe and hygienic work environment, implementing measures such as health risk assessments and environmental monitoring to prevent occupational hazards. We also conduct health check-ups and provide systematic health management information and health promotion activities to enhance the safety and well-being of our employees.

Occupational Health Management

Assessment, monitoring, and mitigation measures related to occupational health management and health hazards in the factory area.

Health hazard assessment items	Monitoring	Mitigation measures
Workplace Environmental Monitoring (including clean rooms)	Conduct every six months	• Announce monitoring results on the company's intranet homepage (My VisEra). • All monitoring results to date have met regulatory standards.
Hazard identification (including Ergonomic hazards)	• Conduct once a year • The subjects include employees, contractors, visitors, suppliers, catering staff, outsourced operations, security personnel, and laborers.	When necessary, relevant departments are requested to propose control measures.
Special operation personnel (nickel and indium operations)	• Utilize a license management system to document and track the number of workers involved in operations. • Control nickel and precision operations through system access permissions to prevent unauthorized personnel from engaging in related operations without permission.	Arrange colleagues to undergo special health examinations in accordance with the law.
Respirator Fit test	Conduct once a year	Mark colleagues who fail the test as ineligible to participate in the operation.

Provide health check-up benefits that are better than regulation.

On-site health consultation assistance is provided with one occupational physician and two general physicians scheduled to be present at the factory for consultations each month (3 hours per physician per month). The services provided include:

1. Conduct relevant hazard assessments and provide recommendations based on the requirements of the occupational safety unit.
2. Provide consultation, assessment, and recommendations for abnormal personnel conditions, such as special health examination grading management consultation assessment, Ergonomic hazards, abnormalities detected during physical and health examination, and abnormal physiological assessments for respiratory protection.
3. Suggestions proposed by on-site physicians will be evaluated and implemented by relevant units, with assistance provided by the Health Center and on-site physicians as needed.
4. Continuously monitor and track the health status of personnel with abnormalities, providing assistance in improving health conditions or recommending job suitability adjustments in collaboration with on-site physicians.

In addition, VisEra provides health examination benefits that are better than regulation and implements graded management based on the results of health examinations. For special operation graded management, it follows the Regulations of the Labor Health Protection. In 2023, a total of 423 individuals completed special health examinations, identifying 167 cases with a high potential risk of work-related diseases. General operation graded management is conducted based on the recommendations of on-site physicians, categorizing employees into four levels: normal, mild abnormality, moderate abnormality, and severe abnormality, following the rule of the Regulations of the Labor Health Protection. In 2023, 1,055 individuals participated in health examinations, with 53.45% of employees with moderate to severe abnormal health examination results being regularly monitored.

Item	Subjects	Legal timeframe	Cost burden	VisEra Benefits
General Physical Examination	New Employees	Before new employees report for duty	Labor-management negotiation	The company covers the costs.
Special Physical Examination	Employees engaged in tasks with special health hazards.	Before reporting for duty or any job changes.	Labor-management negotiation	The company covers the costs.
General Health Examination	1. Age < 40 years old. 2. Age 40 to 64. 3. Age 65 and above.	Every 5 years Every 3 years Every year	The employer bears the cost.	1. All employees are eligible for an annual general health check-up, and the cost is covered by the company. 2. Supervisors are eligible for an annual supervisor health check-up, and the cost is covered by the company
Special Health Examination	Workers exposed to special health hazards.	Every year	The employer bears the cost.	We provide initiatives that exceed regulatory requirements, such as laser operations (retinal examinations), and more.

Health Management Items	2019	2020	2021	2022	2023
Nickel – special operation	223 persons /100% completed	147 persons /100% completed	353 persons /100% completed	323 persons /100% completed	365 persons /100% completed
Ionizing radiation - special operation	1 person /100% completed	2 persons /100% completed	4 persons /100% completed	6 persons /100% completed	5 persons /100% completed
Indium - special operation	NA	23 persons /100% completed	45 persons /100% completed	48 persons /100% completed	53 persons /100% completed
Health service personnel	2 persons	2 persons	3 persons	3 persons	3 persons
On-site physician service hours	72 hours	96 hours	108 hours	108 hours	108 hours
Number of on-site physician service instances	-	248 cases	610 cases	411 cases	897 cases

Note: Among the special operation personnel, there are 19 colleagues simultaneously involved in nickel and indium operations, resulting in a total of 404 special operation personnel.

健康促進項目	2019	2020	2021	2022	2023
EAP/number of Participants	16 persons	21 persons	15 persons	21 persons	19 persons
Completion Rate of Overload Questionnaire	100%	100%	100%	100%	100%
Number of Attendees at Health Lectures	214 persons	487 persons	online*	online*	200 persons
Number of Participants in Health Promotion Activities	1,494 persons	2,824 persons	291 persons	1,346 persons	3,766 persons

Note 1: Due to the pandemic, health lectures in 2021 and 2022 were conducted online instead of in-person, so the attendance count is unavailable.
Note 2: Health promotion activities in 2022 included cancer screening, vaccination (participation rate: 72.7%), and bone density testing (participation rate: 23.8%).

6.4.3　Work with Contractor Partners to Create an Inclusive Workplace

VisEra actively communicates and cooperates with customers and suppliers to jointly improve the safety and health performance of the supply chain. We also share safety and health knowledge and experience with external parties and build partnerships with business partners, industries, governments, academia, and the entire society to build a safe and healthy workplace environment together.

The Blue Book for Contractors' Safety, Health and Environmental Protection was published in 2021 for contractors to enhance their environmental, safety, and health management awareness in all construction operations. Before contractors enter the plant, they must use the construction management system to organize pre-construction safety meetings, construction permit reviews, and completion of safety and health training for all contractor personnel before the access control system permits their entry and implements management and control.

Enhancement of assistance for contractors

We encourage high-risk contractors to obtain ISO 45001 occupational health and safety management system certification. In 2023, 13 contractors responsible for onsite high-risk operations obtained certification (approximately 87%), and we aim to attain 100% certification by 2030. Contractors are not permitted to perform high-risk operations in plant areas without obtaining comprehensive management system certification. We continue to verify the feasibility of JSA work safety analysis through pre-construction surveys and pre-construction meetings for remaining construction items. We ensure that the contractors have sufficient safety and health enforcement capabilities to complete the contracted work on time in accordance with quality and safety requirements.

We also continue to conduct onsite safety, health, and environmental protection audits for suppliers each year. We require a score of at least 70 and provide support. The contract value is used as the basis for screening and grading for onsite audits. We also require reports on improvements for deficiencies and include them as the criteria for the selection of suppliers and contractors. In 2023, we conducted a total of 12 supplier/contractor audits and identified a 55 deficiencies and recommendations during the audits. There were 45 items related to safety and health, 8 items related to fire safety, and 2 items related to environmental protection, and the completion rate of corrections for deficiencies was 96% (53/55), and continued monitoring will be carried out until the improvement reaches 100% completion.

Contractor training

VisEra organizes annual training for new contractors to inform them of the hazards in accordance with regulations. If a new contractor fails to obtain the certification for the hazard communication training course, the contractor will not be able to apply for the VisEra Qualified Vendor Work Permit and will not be able to apply for permission for related construction projects. If a contractor does not have a contractor's work permit, the Company will prohibit the entry of its personnel when reviewing the qualifications of the contractor personnel for entry into the plant.

Contractor environmental, safety, and health assessment procedures

The Company selects contractors with high risk ratings to conduct self-assessments on safety and health every year. We require all contractors to identify mechanical, material, compliance, and environmental risks for the work contents and propose countermeasures during the negotiation and organization meeting. We also require them to conduct environmental, safety, and health audits for the construction project every day. If there are any deficiencies, they must be immediately addressed to effectively reduce the environmental, safety, and health risks.

Annual environmental health, and safety assessment. → Risk identification → Environmental, health, and safety audit. → Review meeting

Resources invested/cost of helping contractors' environmental, safety, and health improvements

The Company invests significant amounts of manpower and financial resources each year to increase the safety and health performance of contractors. We reintroduced the contractor safety and health management system in 2023 to improve the efficiency of contractors' construction management procedures in the plants.

No.	Item name	Investment cost	Unit
❶	Safety and health instructor resources	118	Person hours
❷	Contractor safety and health access control management fees	147,764	NT$

Contractor management and immediate correction

We implement risk-based management for contractors and established the "High-Risk Operation Management Regulations", "High-Risk Area Management Regulations", and "Operation Permit Management Regulations" to require contractors and employees of the Company to work together and ensure safety in construction. In 2023, we improved the functions of contractor construction management system, and recorded high-risk construction audit results and deficiencies in the

electronic system to effectively monitor construction safety issues in the plants. We also implemented 100% high-risk audits so that the Company did not have any occupational accident in 440 high-risk operations and 323,288 hours of contractor operations in the plant in 2023.

These measures are implemented to prevent potential significant casualties of high-risk operations, electric shocks of personnel, fire, leaks of hazardous gases/chemicals, and operations that may cause system shutdown or interrupt production. Contractors are required to apply for work permits for high-risk operations in advance. We also implement restrictions on 14 types of hazardous operations (pipeline operations, roofing operations, installation of bus switches, operations in confined spaces, operations of hazardous machinery, construction scaffolding assembly/dismantling operations at a height of over five meters, LDS cylinder replacement operations for pyrophoric substances, ceiling (including mezzanine) operations, wall removal operations, fire operations, fire sensor isolation, fire safety interruptions, organic solvent operations, and activation of electricity supply panel rated 208V or higher). Supervisors and operators must obtain technical certification (obtain a legal license or the little red card) to be qualified for entering the construction site.

We require contractors to implement the following tasks to promote contractor self-management and implement occupational safety tasks:

- ✅ Explain the matters of note for the work of the day, including the operation method, division of labor, safety, and tools and materials used, in the daily toolbox meeting.
- ✅ Check the status of the equipment and safety and protection equipment before work.
- ✅ Conduct at least three onsite inspections every day. If unsafe conduct or environment is found, they must be addressed immediately and the contractor shall affix his/her signature on the inspection table.
- ✅ Supervise onsite operations and oversee personnel at all times.
- ✅ Verify the restoration of the environment after operations. If it cannot be immediately restored on the same day, verify whether protection measures are adequate.

The Company's personnel shall implement front-end management with pre-operation reviews such as work permits and independent onsite inspections with the contractor's supervisors. They shall also take measures such as recording violations, deductions, suspension of rights, termination of contract, and request for restoration of damages against the contractor, and impose penalties in accordance with the contract if necessary.

Future safety and health plans

VisEra understands the importance of occupational safety and health for all workers of the Company. We also value and continuously invest resources to create a safe and healthy workplace environment. We planned four major strategies for future improvement with the aim of working with employees and contractors to create a more sustainable work environment.

Strengthen the source management in the use of chemicals and implement replacement plans for hazardous substances

- In terms of the selection of chemicals, we referenced the green procurement questionnaire of VisEra to process chemicals restricted by the EU REACH regulation. The unit using the chemicals evaluate the feasibility of alternatives and prioritize the selection of chemicals with low health hazards.
- The European Chemicals Agency (ECHA) plans to restrict the use of PFHxA by 2035 and VisEra has established related chemical replacement programs for continuous verification and replacement.
- If chemicals contain CMR substances, IARC substances or The Ministry of Labor's Occupational Cancer Prevention Blueprint has a list of chemicals that should be avoided, don't use it if we are unable to utilize it. Give the selection of compounds with low health hazards top priority. Before utilizing it, we must, if necessary, get the director of the appropriate unit organization's authorization.

Periodically implement operation observation to identify the areas for improvements in environmental and operational safety

- Arrange operation observation for operations with higher hazard identification scores in each unit. Observe 1 case each month to confirm that employees meet regulatory requirements in operations and identify the areas for improvements in environmental and operational safety.
- Twelve operational observations were conducted in 2023, yielding a total of seven concealed risks (two chemical, four physical, and one human factor), all of which have been improved.

Use AI image recognition technology to strengthen operational safety risk identification

- With a 95% recognition success rate, fixed high-resolution cameras had been utilized in 2023 to provide AI identification of personal protective equipment for HPM acid exchange activities.

Continue to implement contractor construction inspections

- Implement construction inspections for 100% of the high-risk operations to verify that the contractor follows the requirements of VisEra and the operating procedures listed in the work analysis table for implementation and reduce the occupational safety accidents of contractors.

Strengthen emergency response team education and training

- In order to guarantee that all ERT members have finished their training and to improve member control, the ERT management system is scheduled to be implemented in 2023. Include ERT-related activities (training, drills, rotation) and use the system for total control, tracking, and record-keeping.

Spotlight

Contractor Management - Engineering vehicle for line-men regulations set up and audits

People are transported to high elevations using engineering vehicle for line-men. The operation process will be impacted if there is a lack of safety management system (safety management is not implemented), unsafe actions by workers during operations, or vehicle body failure, damage, or abnormalities. Accidents could possibly result from potential risks. Thus, the development of a high-altitude work vehicle safety management system will increase managers' managerial skills and assist users in putting safety management into practice to raise operational safety. Therefore, the Occupational Safety and Health Administration of the Ministry of Labor and the Institute of Labor and Occupational Safety and Health have formulated safety management guidelines for the use of high-altitude work vehicles, including guidelines for making work plans, automatic inspection technical guidelines and other information references, which can provide users with information to implement independent management and improve work safety.

VisEra has developed pertinent in-factory inspection specifications, including work plan formulation, automatic inspection, operator qualifications, vehicle inspection, and other information, with reference to the guidelines in order to improve the safety of aerial work vehicle operations. The inspection rate in 2023 will be 100%, and the registration will be completed and managed.

Pre-construction	Entry control
SH Coordination organization meeting mintues job safety analysis	On-site inspection of vehicles and licenses Self-inspection recordes
• Provide construction plan and SOP • Provide rental contract and customs declaration certificate • Provide factory inspection and maintenance related records	• Check the functions and markings of the test vehicle • Check the license information of on-site operators • Check the recordes

After the auditing has completed, the vehicle will be inspected and attached with information and signs posted.

7

Role in Sustainability

Corporate Citizenship

- 7.1 Corporate Citizenship

7　Role in Sustainability — Corporate Citizenship

7.1　Corporate Citizenship

VisEra's ESG (Environmental, Social, and Governance) Sustainable Development Implementation Committee has established the "Social Engagement and Friendly Workplace Task Force" with the goal of becoming a responsible corporate citizen. We are committed to social care with a focus on education, environmental conservation, and public welfare. We collaborate with local governments, schools, non-profit organizations, and engage in volunteer services to maximize our social impact and value over the long term.

Primary Focus on Social Care

- Education
- Environmental Conservation
- Public Welfare and Charity

Goals and Achievements of Social Engagement and Friendly Workplace Activities

Unit: Sessions

Item	2022		2023	
	Goals	Achievements	Goals	Achievements
Social Engagement	20	15	20	21
Friendly Workplace	76	76	110	145

VisEra , through its employee-led volunteer organization called the Volunteer Society, is led by senior executives serving as presidents, guiding colleagues in volunteer activities. We are committed to long-term engagement in community and school initiatives, such as adopting green spaces annually in the Hsinchu Science Park, leading volunteers every two months to participate in landscape conservation at Wenshan Elementary School in Xinpu Township, and providing community services around the Longtan factory area. Embodying the spirit of sustainable development, we actively demonstrate neighborly goodwill and community involvement.

Statistics on the Effectiveness of VisEra's's Philanthropic Activities Over the Past Five Years

Yearly (Years)	2019	2020	2021	2022	2023
Number of participants	115	106	173	190	288
Man-hours	185	176	243	260	270

Main Public Service Activities of the Volunteer Association

Wufeng	→	Volunteer Service
To Rural Primary Schools	→	Donation of Shoeboxes
For Rural Areas	→	Donation of Computers
Tayal Academy	→	Cultivating Support
Community volunteer	→	Veterans' home
For Taoshan Elementary School	→	Support and Development
Wenshan Elementary	→	School Landscape
Hsinchu Coast	→	Environmental Beach Cleaning
In Longtan Industrial Area	→	Promoting Harmony and Friendliness

Education

Taoshan Elementary School

→ Content

In response to Father Ding Songqing from Qingquan Church in Wufeng Township,assisting Taoshan Elementary School Choir to participate in the Brahms Music Competition in Germany.

↗ Total number of volunteer participants **10**

→ Benefits

Colleagues voluntarily fundraising for travel expenses; Father Ding Songqing'sbooks, stainedglass paintings sold for charity and fundraising events

Taeya School

→ Content

- The members of the Taeya School Chorus are mostly indigenous teachers from Hsinchu County, or elementary and middle school teachers who enjoy singing and are interested in indigenous culture. The chorus consists of approximately 25 teachers
- VisEra supports the beauty of indigenous culture and music by inviting the Taeya School Chorus to perform at the year-end banquet, demonstrating practical support through action.

↗ Total number of volunteer participants **5**

→ Benefits

Supporting the chorus to convey the beautiful indigenous cultural arts and music through their singing, as well as their philosophy of sharing and spreading positivity, to disseminate wonderful music across Taiwan and around the world.

Donating computers for rural areas

→ Content

Through Professor Hung Lan's understanding of rural needs, each computer is carefully organized, packaged, and boxed by colleagues in our company. Leveraging Professor Hung Lan's insights into rural demands, these computers are then sent to classrooms for the children in schools, even in the most remote corners. We aim to donate to these areas. By connecting computer knowledge, we aim to open up new opportunities for children to connect with the outside world. As of the end of 2023, VisEra Company has donated over 223 PCs/laptops.

↗ Total number of volunteer participants **5**

→ Benefits

Through organizing second-hand computers, we donate them to students in rural areas or those who cannot afford computer equipment. The recipients include eight schools and one foundation.

→ Donation recipients

- ✓ Xiang Le Elementary School in Pingtung
- ✓ Ailiao Elementary School in Pingtung
- ✓ Zhulin Elementary School in Pingtung
- ✓ Yongkang Elementary School in Pingtung
- ✓ Gouguo Junior High School in Pingtung
- ✓ Pearl S. Buck Foundation
- ✓ Tsinghua University
- ✓ Binmao Junior High School in Taitung
- ✓ Qimei Elementary School in Penghu

Public welfare charity

Landscape Service at Wenshan Elementary School

Content

Basic maintenance of the landscape at Wenshan Elementary School in Xinpu Town, including grass cutting, tree relocation, tree pruning, and tidying of activity areas

2019-2023 total number of volunteer participants 273

Benefits

Assisting in maintaining the landscape of rural elementary schools.

Promoting neighborly harmony in the Longtan industrial area

Content

Embracing sustainable practices and promoting community friendliness, since September 2020, a group of dedicated volunteers has been mobilized to provide community service in the surrounding areas of the Longtan industrial zone, focusing on grass cutting and sidewalk cleaning

2019-2023 total number of volunteer participants 133

Benefits

Beautifying the surroundings of the industrial area

Shoebox donation for rural primary schools

Content

Every year, we organize a Christmas gift shoebox event titled "Learning to Give and Share Love," allowing everyone to show warmth and kindness during the cold winter. Additionally, we arrange environmental education programs so that children in rural schools can also feel the warmth of society and enjoy the festive season together.

2019-2023 total number of volunteer participants 50

Benefits

In 2023, a total of 153 shoeboxes were donated, allowing urban children who may not understand material scarcity to learn the true meaning of life education. Through this experience, they can understand the essence of happiness and the joy of sharing.

Environmental education

Beach cleaning activity

→ Content

Our colleagues actively participate in the quarterly coastal cleanup events organized by the Hsinchu City Government, advocating for reduced use of single-use plastic products and emphasizing the importance of not indiscriminately discarding plastic waste.

2021-2023 total number of volunteer participants **126**

→ Benefits

In 2023, we expanded our environmental network and conducted beach cleanup activities, removing 447 kilograms of waste.

Environmental education

→ Content

Understanding practical examples and the environmental and health impacts of chemical dyeing versus natural plant dyeing. Teaching children about the environmental impact of chemical dyes and comparing it with the eco-friendly nature of plant-based dyes

2021-2023 total number of volunteer participants **14**

→ Benefits

The creative process of art has a therapeutic effect. In the hands of children, ordinary leaves are transformed into beautiful patterns, showcasing unique creations that encourage children to value resources. Additionally, through this process, children can understand the environmental friendliness of plant-based dyes, which contributes to ecological sustainability.

Volunteering at Natural Valley Habitat and Mountain Cleanup Activities.

→ Content

Collaborating with the Natural Valley and Environmental Resources teams to maintain the habitat at Guanlin Natural Valley

2021-2023 total number of volunteer participants **7**

→ Benefits

In 2023, along the famous "Feisha Zongzou" trail in the areas of Guanlin and Hengshan, volunteers cleared sections of the trail holding scissors, hoes, and other tools to remove tangled vegetation resembling a "ground net" on the forest floor. They successfully collected 6 large bags of discarded fishing nets and 3 large bags of other trash during this cleanup effort.

Supporting Cultural Development: Art and Culture Corridor

VisEra has long nurtured the cultural and artistic education of our employees. We have established an "Art and Culture Corridor" at VisEra's Hsinchu headquarters, collaborating with organizations such as World Vision, Hsinchu Mingshan Gallery, and Taipei Capital Art Center to curate exhibitions. This initiative not only provides a space for our employees to engage with art but also offers opportunities for seasoned and talented artists to showcase their work.

Spotlight

Sustained investment in social welfare

Since 2019

1,134 hours
of accumulated service hours

872
individuals served cumulatively

626
Christmas warmth shoeboxes distributed

41 boxes
of second-hand goods collected

2023 Beach cleaning

In 2023, VisEra adopted the coastline of Happiness Sand Bay, Kanhai Park, and Sports Park in Hsinchu City for beach cleaning. On the morning of October 21st, a total of 56 enthusiastic colleagues and their families joined forces for the beach cleanup. Along the 1,139-meter coastline of Happiness Sand Bay, Kanhai Park, and Sports Park, they cleared a total of 447 kilograms of waste. This effort was a humble contribution to the Earth and a gift to marine life, providing them with a beautiful home. Through this activity, participants of all ages learned the importance of reducing waste and not indiscriminately disposing of garbage, fostering a collective commitment to protecting our planet.

2023 Mountain cleaning

This initiative involved activities such as hiking, bird net removal, and garbage collection

In 2023, as part of mountain cleaning efforts, volunteers from VisEra's Volunteer Club and Mountaineering Club, along with students from Natural Valley and Kansai High School, embarked on a portion of the famous "Feisha Zongzou" trail in the Guanlin and Hengshan areas. Equipped with scissors, hoes, and other tools, they collectively cleared tangled vegetation resembling a "ground net" on the forest floor. Resulting in the removal of 6 large bags of bird nets and 3 large bags of other trash along the trail.

Glass bottles
19 kg

Polystyrene
22 kg

PET bottles
63 kg

Clean beach garbage
Weight of
each category

Other waste
46 kg

Fishing nets, fishing gear
297 kg

8 Operation and Governance

- 8.1　Corporate Governance

- 8.2　Professional Ethics

- 8.3　Financial Growth

- 8.4　Tax Governance

- 8.5　Risk Management

- 8.6　Information Security Management

8　Operation and Governance

8.1　Corporate Governance

8.1.1　Structure and Operations of the Board of Directors

The Company's Board of Director is the highest-ranking governance unit of the Company. It directs company strategies, supervises the management, and bears responsibility to the Company and shareholders. The procedures and arrangements of its corporate governance system shall ensure that, in exercising its authority, the Board of Directors complies with laws, regulations, the Articles of Incorporation, and the resolutions of the shareholders' meetings. According to the "VisEra Technologies Company Ltd. Articles of Incorporation", the Company shall have five to seven directors, who shall be elected by the shareholders'meeting from persons of adequate capacity to serve a term of three years. Their terms of service may be renewed if they are re-elected in the following election. The Company currently has 7 Directors (one Independent Directors was elected by the shareholders'meeting in 2023). To maintain the independence of the Board of Directors, the Company has 4 Independent Directors who account for over one half of all Directors. Each Independent Director meets the requirements in the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies" and there are no relations of spouses or relatives within the second degree of kinship between Directors, which meet requirements in Article 26-3, Paragraphs 3 and 4 of the Securities and Exchange Act. The Company set up the Audit Committee and Compensation Committee under the management of the Board of Directors and set up bylaws for them to implement official business. The Company's 8th Board of Directors convened 4 meetings in 2023 and the average attendance rate of Directors was 100%.

Shareholders' Meeting

Board of Directors

Compensation Committee — attendance rate **100**% Three meetings convened in 2023

Audit Committee — attendance rate **100**% Four meetings convened in 2023

- **Members** Four Independent Directors including Laura Huang, Emma Chang, Peng-Heng Chang, and Han-Fei Lin
- **Term of Office** From March 4, 2021 till March 3, 2024

Audit

Chairman and CEO

President Office

Financial organization

Head of Legal and Corporate Governance

Business Development Organization

Color Filter Organization

Wafer Level Optical Organization

Resource Planning Organization

Human Resource Department

Quality Assurance Department

Information Technology

The Company's Chairman is responsible for business judgments, business management, crisis management, international market perspectives, and demonstrating leadership and decision-making abilities to continuously adjust the Company's business strategies based on market changes. The Chairman determines the company's annual budget, final accounts, profit distribution plan, and loss make-up plan to ensure the Company's sustainable and healthy development and implementation of other plans. He is also accountable to the Board of Directors and organizes the implementation of the Board's resolutions and regulations to meet the targets set by the board and report the progress to the board.

The Company also created the position of the President to take charge of the Company's business, marketing, R&D, production, and other operation management tasks. The President organizes and implements the Company's annual business plan and investment plan to supervise operations. The two roles support each other to implement tiered management and increase overall business efficiency.

Although the Company's Chairman Kuan Hsin has served concurrently as the President after the former President retired on August 31, 2022, since the Company already specified the authorization and duties of the Chairman and the President in the Articles of Incorporation and except for the Chairman, the other six Directors are not employed by the Company, which means that more than half of the Directors are not employees or managers of the Company and more than half of the Directors are Independent Directors who can supervise the management of the Company in an independent and impartial manner with real independence, what is more, Independent Directors also serve as the members of the functional committees and they fully discuss important issues before proposing recommendations to the Board of Directors to implement corporate governance and demonstrate overall business performance, The Board of Directors and the management retain complete independence from each other.

To purpose of organizing the Audit Committee is to assist The Board of Directors to increase the performance of corporate governance, four Independent Directors serve as the member of such committee, their main duty includes: appointing and the dismissal of Certified Public Account (CPA) and its independence and performance, the appropriate presentation of financial statements, the control of existing or potential company risks, the supervision of the effective implementation of internal control, etc. The Audit Committee convenes quarterly and within its authority, it may invite the management, the internal auditor, the CPA appointed by the Company or others to sit in the meeting and provide relevant information. The head of the internal auditor reports to the Audit Committee periodically about annual internal audit plans and the review of defects of internal control systems. The report is make into records to keep track, to make improvements and are reported to The Bord of Directors. The CPA also reports in the Audit Committee about the audit and review findings of quarterly financial statements and other communication topics requested by law. It also reports to the Audit Committee under extraordinary circumstances. In 2023, the Audit Committee convened 4 times with the head of the internal auditor, 4 times with the CPA. Overall, the communications among Independent Directors, the head of the internal auditor and the CPA are well.

Liability insurance is taken out by VisEra to cover the liability of its Directors and managers and to give them courage and make them have nothing to worry about when carrying out their tasks.

8.1.2 Diversity of the Board of Directors

According to the regulations in the "Corporate Governance Best Practice Principles" and the "Regulations for Election of Directors", board members must retain as a whole the knowledge, skills, and literacy required for executing their duties. The Company seeks to fulfill the ideals of corporate governance and requires members of the Board of Directors as a whole to possess eight major skills including business judgments, accounting and financial analysis, business management, crisis management, industry knowledge, international market perspective, leadership, and decisionmaking.
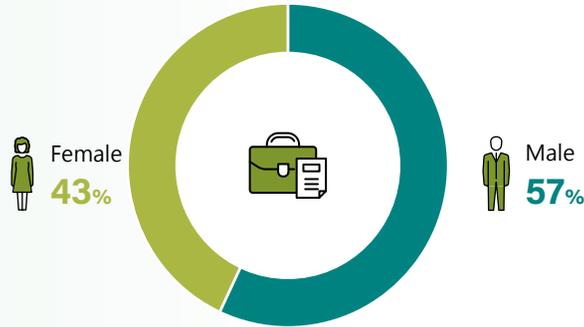
Note: For the explanation of the Diversity of the Board of Directors, please refer to Annual Report of 2023, Chapter 3 Coporate Governance Reports, Section 2 Information of Directors, Supervisors, President, Vise President, Assistant Vice President and supervisors of all departments and affiliates

All Directors of VisEra are Taiwanese nationals and only one Director is an employee. The Company also supports gender equality. Of the 7 Directors, 3 are female and they account for 43% of the Directors. In terms of the age distribution, 3 Directors are aged 51-60, 3 Directors are aged 61-70, and 1 Director is aged over 71. The gender and age distribution remained balanced. The diversification of the Company's board members is shown in the table below:
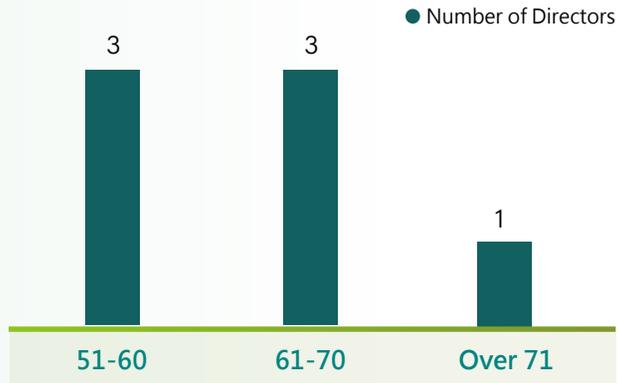
Diversity Statistics /Year			2021		2022		2023	
			Number of People	Percentage	Number of People	Percentage	Number of People	Percentage
Directors	Gender	Male	3	100%	3	100%	4	57%
		Female	3	100%	3	100%	3	43%
	Age	≦60	3	50%	3	50%	3	43%
		61~70	3	50%	2	33%	3	43%
		≧71	0	0%	1	17%	1	14%
	Educational Background	Master's Degree	6	100%	6	100%	7	100%

Note: The percentage of female Directors=(The number of Female Directors at the end of the year/ The number of Directors at the end of the year) *100 % ; The percentage of male Directors=(The number of male Directors at the end of the year/ The number of Directors at the end of the year) *100% , using rounding method to calculate.

The Percentage Distribution of the Gender of Directors

Female **43**%   Male **57**%

The Percentage Distribution of the Age of Directors

● Number of Directors

51-60	61-70	Over 71
3	3	1

8.1.3   Board Performance and Performance Evaluation

The Company established the performance evaluation system for the Board of Directors and passed the "Board of Directors Performance Evaluation Guidelines" on June 22, 2021 to increase the functions of the Company's Board of Directors and enhance the efficiency of operations. The scope of the evaluation covers the performance evaluation of the board as a whole, individual director, and functional committees. The performance evaluation methods include self-evaluation of the Board of Directors, self-evaluation of the Directors, peer evaluation, appointment of external professional institutions or experts, or other appropriate methods. The internal performance evaluation of the Board of Directors shall be conducted once every year. The Company shall appoint an external professional independent institution or a team of external experts and scholars to conduct an external performance evaluation of the Board of Directors at least once every three years. The performance evaluations of the Board of Directors shall be completed before the end of the first quarter in the following year. The implementation and results of the performance evaluation of the Board of Directors shall be reported to a board meeting in the first quarter of each year and used as the basis for determining the salary and remuneration or the selection or nomination of Directors.

The Company completed the self-evaluation of all Directors for the 2023 board performance evaluation in January 2024 in accordance with the "Board of Directors Performance Evaluation Guidelines" and received 18 valid responses. The results included the board performance evaluation, performance evaluation of the members of the Board of Directors, and the performance evaluation of the functional committees. The evaluation results are as follows:

Overall board performance evaluation

Note: For the exact scores of the overall board performance evaluation, please refer to VisEra's official website/Coporate Governance/ Performance Evaluation of Boards and Directors

All Directors evaluated the "overall performance of the board" in five evaluation categories. The average scores for all categories was 4.86 to 4.93 and the overall average score was 4.88, the score is higher thanthe score of last year in every aspect, which demonstrated that the overall board operations remained sound. This year, with regard to the newly added indicator "the board's involvement in and enforcement of ESG, the average scores was 4.71. We will continue to improve the board's involvement in the Compnay's sustainability related issues.

Performance Evaluation of Directors

Individual Directors conducted self-review and evaluations in six evaluation categories. The average score was 4.93 to 5 and the total average score was 4.96, which demonstrated that individual Directors have a firm grasp on their duties and participated in the board meetings.

Note: For the exact scores of each Individual Director, please refer to Annual Report of 2023, Chapter 4 Coporate Governance Reports.

Performance Evaluation of Functional Committees

Independent Directors conducted self-review and evaluations in five evaluation categories. The average score for all categories was 4.88 to 5 and the total average score was 4.97, which demonstrated that the Independent Directors have performed well in terms of the recognition of their duties and the quality of their decisions in both the Audit Committee and the Compensation Committee.

Note: For the exact scores of each Functional Committee, please refer to Annual Report of 2023, Chapter 4 Coporate Governance Reports.

To strengthen the functions of Directors, enhance the quality of supervision, and keep up with key trends such as corporate governance and sustainable development, VisEra notifies Directors to attend professional knowledge development courses organized by relevant institutions from time to time. The content covers corporate sustainability, artificial intelligence, tax governance, information security, etc. In 2023, all Directors attended the legally required number of hours for continuing education and met the requirements in the "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEx Listed Companies". The continuing education information is as follows:

Total Courses Hours of BOD	52
ESG Related Course Hours	52
The Propotion of ESG Related Course (Note)	100%

Note: For the course types and hours of each director, please refer to Annual Report of 2023, Chapter 4 Coporate Governance Reports. The Propotion of ESG Related Course= ESG Related Course Hours / Total Courses Hours of BOD × 100% .

8.1.4   Conflicts of Interest

VisEra implements numerous procedures to avoid conflicts of interest. When a Director or manager engages in acts within the scope of the Company's business for himself/herself or for others, he/she shall obtain prior approval from the shareholders' meeting or the Board of Directors, respectively, in accordance with the law. Each Director and manager must complete an annual related party transaction statement and report the results to the Audit Committee. In addition, the Company discloses related party transactions in the financial statements in accordance with the rigorous reporting requirements in the laws and regulations of the Republic of China.

8.1.5   Compensation Policy for Directors and Managers

The salary and compensation for the Company's Directors and managers are determined by the Compensation Committee in its regular evaluations based on the Compensation Committee Charter.The performance evaluation and the salary and remuneration of the Directors and managers are based on prevailing rates of the industry as well as their individual performance, the Company's overall performance, and reasonable assessments of future risks. In the future, in consideration of the Directors' annual performance evaluation related to ESG, we will introduce the system of the link between compensation and performance evaluation related to ESG into the compensation policy.

The managers' remuneration includes fixed salary and performance-based floating salary. The performance evaluation includes financial indicators as well as ESG indicators. They include environmental targets such as energy management (e.g., quantity of electricity saved), water resources (e.g., process water recycling rate), and waste management (e.g., waste chemical recycling rate); economic targets such as information security (e.g., information security accidents), innovation management (e.g., patents), and customer service and management (e.g., customer satisfaction); social targets such as talent attraction and retention (e.g., turnover rate) and environmental safety and health (e.g., number of occupational safety accidents).

According to the Company's Articles of Incorporation, before the Company distributes earnings, it shall set aside no more than 2% of the profit from the period of distribution as remuneration for Directors and no less than 1% as remuneration for employees. However, if the Company has accumulated losses, the Company shall set aside a part of the profit to make up for the losses. The distribution of employee remuneration shall be resolved by a majority vote at a board meeting attended by more than two thirds of the Directors and it shall be reported at the shareholders' meeting. After the allocation, the Board of Directors shall draft an earnings distribution proposal regarding the remainder of the earnings as well as accumulated undistributed earnings for the shareholders' meeting to approve the distribution of dividends and bonuses.

Please refer to the Company's annual report for the remuneration for the Directors, President, and Vice Presidents, the names of managers who received the employees' remuneration, and the distribution status. All severance pay and pension were paid in accordance with laws and the conditions were the same as those of other employees. Currently, we do not link ESG performance evaluation to a manager's compensation. However, we will continue to focus on this issue and refer to good examples of other companies and wait till the enformancement of ESG has ripened to further discuss on relevant evaluation methods.

8.1.6   Conrete Results of Corporate Governance

VisEra appointed the head of legal affairs at the board meeting in the third quarter of 2021 and organized the interdepartment coporate governenace task force to review if evaluation indicators were reached by department respectively. Year 2023 is our first year to attend the Corporate Governance Evaluation and we got to rank in the top 6%-20% of all listed companies.

8.2 Professional Ethics

"Integrity" is the most important core value of VisEra and the top priority in the Company's business philosophy. VisEra upholds integrity in all business activities and does not permit corruption or any form of fraud. The Company established the "Ethical Corporate Management Best Practice Principles" and "Code of Professional Ethics" as the foundations for the Company's corporate culture for ethical management and healthy development. Ethical corporate management is implemented based on the regulations of the Company's internal control system. The Audit Department regularly audits the compliance of the accounting system and internal control system and reports results to the Board of Directors.

Professional ethics and legal compliance

VisEra has established the Company's professional ethics and legal compliance system based on honesty and integrity. The system includes the identification of laws, establishment of company regulations, thorough implementation, self-evaluation and review, open whistleblowing channels, and whistleblower protection. The management also holds themselves accountable for comprehensive topdown implementation.

The Human Resource Department is the dedicated unit responsible for establishing and supervising the implementation of the ethical corporate management policies and prevention programs. It regularly reports to the Board of Directors (at least once a year) and implements comprehensive training and awareness campaigns for employees to continue to strengthen the corporate culture of integrity. We work with external customers and the supply chain to implement ethical corporate management in the industry for common growth and prosperity and become reliable partners.

VisEra does not permit any violation of professional ethics or related regulations. Any employee or manager who violates our ethical standards shall be subject to severe penalties in accordance with the Company's Rewards and Penalties Regulations regardless of their seniority. Penalties include dismissal and legal action will also be taken in the event of a violation of laws.

Anti-corruption

VisEra has a zero-tolerance policy for corruption and does not tolerate any bribery, fraud, extortion, abuse, misappropriation of company assets, or personal gain at the expense of the Company. The Company has established a comprehensive anti-corruption risk assessment system to identify regulations and classify corruption patterns. We established operating procedures and regulations for different businesses and require all employees to comply and implement the regulations. Plants and departments conduct annual self-evaluations and reviews and we establish smooth internal and external reporting channels and a whistleblower protection policy for early detection of anomalies and prevention of corruption.

All operations of the Company are in Taiwan. In 2023, plants and departments conducted self-evaluations and reported information and investigation results. No significant corruption risks were found and there has been no incidents of corruption in recent years.

Suppliers are crucial for the implementation of VisEra's professional ethics and legal compliance. We established the "VisEra Supplier Code of Conduct" for suppliers to understand and comply with VisEra's Code of Professional Ethics. We expand the core values of integrity across the supply chain in all business activities.

Political donations

The Company stated in the Ethical Corporate Management Best Practice Principles that the Company may not provide political donations. All donations or sponsorship provided by the Company must meet related regulations and internal operating procedures and the Company shall not surreptitiously engage in bribery.

Identification of laws and establishment of company regulations

VisEra continuously monitors changes in laws to evaluate the potential risks and impact of such changes on the Company. We also use the identification of regulations to review whether changes must be made to existing internal regulations and ensure the appropriateness and adequacy of related policies and regulations. In 2023, VisEra did not commit any material violations of social or economic regulations.

Note: VisEra disclosing threshold for significant violations is when a single fine reaches NT$ 1 million or more. For the number of cases and the amount fined for regulatory violations in 2023, please refer to 2023 Annual Report Chapter 5 Operation Overview for Environmental Protection Expenditures.

Annual professional ethics and legal compliance training

To increase employees' awareness of professional ethics and legal compliance, we provide every new employee with training on anti-corruption, professional ethics, and legal compliance. For current employees, we provided the "annual professional ethics and legal compliance" (0.5-hour online course). The content covers a variety of important compliance information, including ethics and anti-corruption, avoidance of conflicts of interest and reporting, prevension of sexual harrasment, export controls, personal data protection, and insider trading prevention. We offer a variety of training courses for each business function, including intensive face-to-face courses, face-to-face seminars as well as posters in plant areas, company internal website pages, and educational articles. The Company provides regulatory compliance guidelines and frequently asked questions for employees to obtain new knowledge of regulations at any time and strengthen their knowledge of various issues. As of 2023, 1,407 employees completed the annual training programs (the completion rate was 100%):

Mandatory courses for professional ethics and legal compliance in 2023

Employee Category	Eligible Trainees	Number of Trainees that Completed Training	Training Completion Rate
Managers	159	159	
Professional staff	703	703	
Foreign migrant workers	199	199	100%
Technical personnel	344	344	
Interns	2	2	
Total	1,407	1,407	

We also use the contractor conference to communicate the RBA Code of Conduct and key issues such as labor rights, environmental protection, and occupational safety to suppliers and share our experience. A total of 188 contractors attended the conference in 2023.

Antitrust

We organize periodic and ad hoc training programs for the Fair Trade Act and antitrust laws to enhance employees' awareness of regulations. We organized two sessions of antitrust courses for senior executives and business personnel in 2020. Related courses were not held due to the impact of the pandemic in 2021. To address this issue, we recorded digital courses in 2022 and requested managers and personnel of related businesses to take the courses. The number eligible trainees were 44 and the completion rate was 100%. In 2023, VisEra updated the courses and such courses were continuously taken by relative sales managers and personnels to enhance their awareness of newly promulgated fair trade laws or relative regulations. In 2023, VisEra was not involved in litigation pertaining to anti-competitive behavior and antitrust laws that were ongoing or concluded.

Whistleblowing and protection

VisEra heeds the feedback from both internal and external sources through a variety of reporting channels to protect the interests of stakeholders and the Company. We set up a reporting/ complaint/ response channel on the internal and external websites to accept anonymous and named reports. The Human Resource Department processes the feedback and communicates it to the relevant department and top management based on its nature. The reports received in the Company's internal and external reporting channels are adequately recorded and tracked. The identity of the whistleblower is kept confidential to prevent retribution. In 2023, there were 2 cases

of illegal infringement and 2 cases of sexual harassment in the workplace. After the verification and review of the investigation team, we instructed the employer unit to provide communication assistance and training on peer-to-peer and conflict management.

We assign a dedicated unit to investigate reported cases based on the nature of the case. We adopt a serious and prudent approach in handling these cases. For confirmed cases, we take legal actions including penalties for violations, termination of employment contracts, or necessary legal actions based on actual conditions. We use a variety of method for communication including announcements or communication seminars to increase employees' awareness and prevent the recurrence of similar cases.

Classification of reported cases and data

VisEra Channel		2019	2020	2021	2022	2023
	Feedback	0	0	2	2	7
	General complaints	0	0	2	2	0
	Illegal workplace infringement complaints	0	0	0	1	2
	Sexual harassment complaints	0	0	0	0	2
	Anti-corruption	0	0	0	0	0

Note: "Feedback" includes improvements or recommendations for issues involving employees' food, domicile, transportation, work environment, and work procedures. General complaints include employee benefits, personal rights and interests, administrative management deficiencies, and labor disputes.

8.3　Financial Growth

8.3.1　Financial Performance

The Company's revenue in 2023 totaled NT$7.24 billion and the earnings per share was NT$1.13. The financial performance was sound.

Unit: NT$ thousand

	2019	2020	2021	2022	2023
● Operating revenue	3,395,724	6,946,349	9,029,178	9,077,148	7,236,928
R&D expenses	346,489	366,794	542,020	671,886	726,535
Financial costs	4,955	5,221	12,514	12,355	90,104
Net profit for the period	613,841	2,090,545	2,165,280	1,765,795	356,080
Earnings per share (NT$)	2.11	7.18	7.41	5.80	1.13
Investment deduction	216,021	236,392	358,281	419,746	-

Note 1: The financial costs were higher in 2023 compared to previous years mainly due to the increase in interest for bank loans.
Note 2: As of December 31, 2023, the Company obtained a preferential loan from the government totaling NT$6,706,389 thousand. The loan must be used for capital
　　　　expenditures that meet the criteria for subsidies within the specified period. The loan period extends from the initial disbursement date according to the contract
　　　　until 2027, with maturity occurring continuously within five years.
Note 3: The Industrial Innovation Act is listed as an amount deducted from undistributed profits for tax authorities' verification

8.3.2　Shareholders' Equity

VisEra is committed to increasing revenue and profitability and protect the rights and interests of shareholders. To reduce the negative impact of information asymmetries on investors, we disclose business decisions and financial information in the prospectus or annual report. We set up the Investor section on the company website in both Chinese and English to help shareholders and employees quickly access information, download the Company's financial statements and annual reports, and obtain main financial, business, and governance information. We also promptly publish important resolutions of board meetings or material information and report to the competent authority in accordance with regulations.

Shareholder structure

March 24, 2024

Quantity > Shareholder Structure ⌄	Number of people	Number of shares held	Shareholding percentage
Government Agencies	-	-	-
Financial Institutions	13	2,548,765	0.80%
Other Institutions	148	221,475,262	69.88%
Individuals	24,465	69,877,767	22.05%
Foreign Institutions and Foreigners	156	23,049,325	7.27%
Total	24,782	316,951,119	100.00%

8.4　Tax Governance

The Company supports tax policies that help companies innovate and promote economic growth. We are also committed to ensuring information transparency and sustainable development.

Our commitments are as follows:

❶ All company operations shall comply with applicable tax laws and regulations

❷ Transactions between affiliated companies are based on regular transaction principles and comply with the Transfer Pricing Guidelines promulgated by the Organization for Economic Co-operation and Development (OECD)

❸ The Company shall ensure information transparency in financial reports and comply with related regulations and standards for the disclosure of taxation information

❹ The Company shall not use tax havens or plan implement tax planning for the purpose of tax avoidance.

❺ The Company shall not transfer profits generated by the Company to countries with low tax rates

❻ The Company shall establish a relationship of mutual respect with taxation authorities based on the principles of mutual trust and information transparency

❼ The Company shall consider the impact of all major decisions on taxes

❽ The Company shall analyze the business environment and implement management mechanisms for taxation risk assessments

To effectively manage taxation risks, the Company complies with internal control procedures to identify, assess, and manage taxation risks derived from changes in regulations and business activities for identifying, assessing, and managing risks in an appropriate manner. The CFO bears the ultimate responsibilities for taxation management. The Board of Directors appointed the Audit Committee to supervise the quality and integrity of the Company's accounting, audit, financial reporting procedures, and financial management. It regularly reviews major items such as the accounting policies and procedures, internal control system, compliance (including taxation compliance), and corporate risk management. The routine taxation, administration, and management are implemented by the Finance Organization. The Company also appoints qualified and experienced external taxation professionals to assist in fulfilling the Company's tax obligations.

Taxes paid in each country

The source of the Company's revenue is Taiwan and the Company pays 100% of its income tax expenses in Taiwan. The Company paid taxes totaling NT$173 million in 2023.

Tax governance performance

Unit:NT$ thousand

Year	2019	2020	2021	2022	2023
Operating revenue	3,395,724	6,946,349	9,029,178	9,077,148	7,236,928
Net profit before tax	743,372	2,555,351	2,703,946	2,100,449	315,352
Income tax expenses(benefits)	129,531	464,806	538,666	334,654	(40,728)
Effective tax rate (%)	17	18	20	16	-13
Income tax paid	100,810	125,316	585,655	536,923	172,507
Cash tax rate (%)	14	5	22	25	55

The Company's effective tax rate in 2019, 2020, 2022, and 2023 was lower than the statutory tax rate of 20% for profit-seeking enterprise income tax in the Republic of China. The main reason was the Company's eligibility for R&D investment tax credits based on the Statute for Upgrading Industries and Statute for Industrial Innovation. The lower cash tax rate in 2020 was mainly due to payment of income taxes for the previous year in 2020. While in 2020, there was a significant growth in operations compared to the previous year. The cash tax rate for 2021 was higher because the taxable income was paid in the following year (i.e., 2022). The higher cash tax rate in 2023 was mainly due to payment of income taxes for the previous year in 2023. While in 2023, there was a significant fall in operations compared to the previous year. The cash tax rate for 2023 was higher because the 2022 taxable income was paid in the following year (i.e., 2023).

8.5 Risk Management

8.5.1　Risk Management Policy and Strategy

VisEra upholds its corporate vision and sustainability commitments to the industry and society and established the Enterprise Risk Management (ERM) mechanisms. The Board of Directors established the "Risk Management Policies and Procedures" in 2021 and revised in August 2023.as the top guiding principles for the Company's risk management. VisEra established the "Risk Management Steering Committee" in which the President serves as the chair and the highest-ranking officer of the Resource Planning Organization serves as the Executive Secretary to take charge of the formulation of corporate sustainability development strategies and plans. We implement identification of risks and risk scenarios, risk level assessment, preventive measures, and contingency measures with business continuity management procedures. We also implement compliance management with specific actions and training exercises.

Corporate risk management strategy

Risk management
Risk management organization
Risk management system/architecture/process

Risk culture
Risk leadership
Risk awareness
Full participation

Risk assessment
Targeting unknown and emerging risks.
• Major risks and changing risks
• Or risks that cannot be effectively managed

Compliance management
Targeting known risks and risks managed by existing procedures

ISO 22301/CSA

8.5.2　Risk Management Organization and Operations

The Company's risk management organization consists of the Risk Management Steering Committee, Risk Management Implementation Committee, and risk management team. We use a management framework of risk identification, risk assessment, risk management, risk mitigation, risk response, risk monitoring, and risk reporting to define risk management priorities and risk ratings and adopt corresponding risk management actions. In 2023, 16 risk projects were identified during the reorganization and consolidation, and 113 risk scenario responses were derived from the risk projects. A risk matrix (Risk Map) was used to evaluate the frequency of risk events and the severity of the impact on Company's operations. Definition Risk priorities and risk levels to adopt corresponding risk management strategies. Among them, six risk items are listed as major risks, including the continued risk to customer satisfaction caused by the production line operation, the large yield loss caused by the production line and suppliers, the order risk of geopolitical extension, stricter environmental requirements, and information system service interruption, and transformation risks during the ESG transition. We conduct training and exercises with risk scenarios, impact identification, development of prevention mechanisms, and response plans for accidents. The Risk Management Implementation Committee oversees operations and conducts compliance checks to ensure that the significant risks are managed or mitigated.

We hold regular meetings of the risk management team to implement risk management mechanisms. Each unit reviews the business continuity risks of its operations at least once each quarter, including the changes in risks and new or derived emerging risks to respond to overall external changes. They use the results to review response measures and specific actions. The ERM Implementation Committee reviews the risk management status and estimates the risk trends for the next quarter every quarter. It reports the risk management results to the Board of Directors once each year. The implementation status of risk management in 2023 was reported to the board meeting in the third quarter of 2023.

Note: For the organizational chart of the enterprise risk management working group, please refer to VisEra's official website/Corporate Governance/Risk Management.

In order to reduce the impact on the company's operations when a crisis event occurs, enterprise risk management also conducts pre-crisis risk assessments for important crisis events, identifies feasible strategies to prevent crisis events, and formulates crisis handling procedures and recovery plans based on crisis events. For enhance the crisis management awareness and strengthen the risk management culture within Caiyu Company, a risk management working group was established to deal with important crises such as fires, earthquakes, information system service interruptions, information security, supply chain interruptions, major yield losses, and water and electricity supply interruptions. Incidents strengthen risk assessment and crisis response drills, and use crisis response drills to review the integrity of corporate risk management and the effectiveness of risk control to continuously improve and reduce corporate risks.

In order to achieve the enterprise risk management goal of "0 days of production interruption due to climate, disaster, and manpower shortage factors", Caiyu Company will analyze the production interruption that may result from supply chain management, information security management, and environmental, safety and health risk scenarios in 2023. Prioritize prevention and improvement. In supply chain management, we strengthen the selection of backup suppliers of key raw materials/parts and incoming materials/inventory management to ensure the stability of the supply chain, and improve suppliers' environmental, safety and health compliance through supplier environmental, safety and health workshops. Sexual awareness and responsibilities and obligations; in terms of information security management, the six major aspects of cloud security, external network (Demilitarized Zone, DMZ) security, information security governance, office area security, data center security, and production line and supplier security are strengthened. Maintain the stability of the company and production operations. During the post-2023 epidemic period, we will also strengthen the prevention of production operation interruptions and conduct continuous management drills for the entire factory operation. With precise risk prevention and control, the enterprise risk management goals will indeed be achieved in 2023.

In the 2024 enterprise risk management planning, risk management workshops will be used to consult the management and executive levels respectively on the short-term, medium-term and long-term issues of the company's risk management, and continue to identify and evaluate the impact of relevant events on the company's operating activities. for response and impact prevention.

8.5.3 Establishment of a Risk Culture

To effectively establish the Company's risk culture and increase employees' risk awareness, all new employees of the Company must complete the "ISO 22301 (Business Continuity Management System Overview)" online course within one week of reporting for duties. For internal auditors responsible for the Company's Business Continuity Management System, we provide the internal auditor courses for the ISO 22301 Business Continuity Management System or BCM/ISO22301 education and training.

In the 2023 annual management review meeting, the Risk Management Committee will arrange for risk management committee members of each unit to share risk-related topics in accordance with their responsibilities, including sharing of continuous operation management drills, supply chain management, the impact of geopolitics on order and customer management, and ESG transformation risks. , competitive risks - new processes and technologies introduce risk management, etc. to strengthen the construction of risk culture, and gradually implement risk management culture in work through cross-department work sharing and discussions.

Course topic	Training participants	Training hours	Number of participants	Pass rate
Introduction to ISO 22301	New employees	0.33 hours	44	
ISO 22301 Business Continuity Management System internal auditor course	ISO 22301 internal auditors	6 hours	32	100%
BCM/ISO 22301 education and training	ISO 22301 internal auditors	1 hour	18	

Note 1: The training targets new employees does not include technical personnel and contractors.
Note 2: The introduction to ISO 22301 course included online tests which participants must pass before they complete training.
Note 3: The 2021 ISO 22301 Business Continuity Management System internal auditor course is a professional course for external instructors. Those who obtain the training certificate after the training can serve as the company's ISO22301 internal auditors. There are currently 32 valid certificate holders.
Note 4: The new ISO BCM/ISO22301 education and training in 2023 is a professional course for external lecturers. Those who complete this course can serve as the company's ISO22301 internal auditors. There are currently 18 people who have completed the training.

8.6 Information Security Management

VisEra established information security management regulations based on ISO 27001 standards. We are committed to promoting information security, protecting and maintaining customer design and related information, and continuous improvements to meet the following targets in the requirements of the Information Security Policy:

01 Establish and implement the information security management system

02 Comply with regulations and the information security requirements in contracts

03 Assess risks and set targets and control measures to continuously improve information security

04 Communicate the information security requirements to employees and related organizations

8.6.1 Information Security Management Framework

We established the "Information Security Management Committee" for implementing information security management operations to maintain the Company's competitiveness, reduce the risks of business disruptions, ensure that the information system meets confidentiality, integrity, and availability requirements, and strengthen employees' information security awareness. We assigned a dedicated information security supervisor and dedicated information security personnel to promote, coordinate, supervise, and review information security management matters. We established an information security incident notification and response organization to identify information security risks and implement information security risk improvement measures. Update the Chief Information Officer regularly on cybersecurity-related activities and event records. The Chief Information Officer reports cybersecurity governance achievements to the General Manager on a monthly basis. During the monthly project meeting, the Information Department advocates key cybersecurity control initiatives to both the Fab plant area and supporting units. Cybersecurity incident case studies are announced monthly on the company's intranet to raise awareness among colleagues.

Structure of the Information Security Management Committee

President

Chief Information Security Officer

- Color Filter Organization
- Business Development Organization
- Finance Organization
- Human Resource Department
- Wafer Level Optical Organization
- Quality Assurance Department
- Information Technology
- Resource Planning Organization
- Zhongli Plant

8.6.2 Information Security Protection Measures

To strengthen information security, VisEra uses the six major aspects including cloud security, Demilitarized Zone (DMZ) security, information security governance, office area security, data center security, and production line and supplier security to strengthen the defenses for information security.

Note: For more details about Information Security Protection Measures, please refer to VisEra official website/ESG/Governance/Information Security Management

To effectively monitor information security intelligence, the Information Security System O&M Unit of VisEra's Information Technology Department uses the information security products and intelligence of renowned domestic and foreign companies such as Fortinet, TrendMicro, Crowd Strike, Palo Alto Networks, and Proofpoint. It established the Security Operation Center (SOC) in 2020 to monitor changes in the internal information security environment, actively detect information security problems, and take response measures for data centers, anti-virus protection, networks, operating systems, applications, and production line machine protection. We also work with the Science Park Information Security Sharing and Analysis Center to collect, exchange, and analyze information on information security risks for critical infrastructure. We monitor potential security threats and vulnerabilities and address the vulnerabilities to prevent potential threats with the security intelligence we obtained and reduce the risks of major information security incidents. After the establishment of the SOC, it monitors the use of the Internet, gateways, servers, and terminals each day. If it identifies suspected attacks from an external IP, it blocks the source IP. In 2023, CrowdStrike's Managed Detection and Response (MDR) service continued to be utilized for monitoring potential threats and responding to them. It aided in monitoring both office computers and IT server rooms for signs of malware infiltration. Cloud Machine Learning assisted in detecting and preventing the execution of malicious programs. Since its implementation, the system has successfully blocked medium to high-risk malicious software. There were no cybersecurity incidents reported in 2023.

To ensure compliance with the Company's Proprietary Information Protection Policy, the Proprietary Information Protection Officer (PIP Officer) inventories and classifies sensitive information such as proprietary information and personal data within the Company. Each unit sets up a special folder for personal data protection in the shared space with restricted data access and encryption. The PIP Officer performs quarterly self-audits to protect proprietary information and personal data.

In addition, to ensure that important operations are not affected by failure of the information system in the event of natural disasters, man-made disasters, or virus infections of the organization, the Company established internal reporting procedures for earthquakes, fires, power blackouts, information system incidents, environmental safety and health incidents, and company reputation incidents (as shown below). In the event of a crisis, employees shall determine the person responsible for immediate reporting and the reporting level for each type of crisis based on the level of impact on operations. Where necessary, they must eport the incident to the President to activate emergency response measures and minimize losses.

8.6.3 Information Security Implementation Results

Starting from 2011, we have established information security management regulations that meet ISO 27001 standards and passed third-party certification and audit. We have also passed the re-inspections based on ISO 27001 standards each year.

For DMZ (servers that provide external services), office areas, data centers, production lines, and cloud services, we implement and improve information security protection measures and we also established KPIs for related management measures and daily monitoring mechanisms.

We work with information security intelligence sharing organizations to obtain early-warning intelligence as well as information on security threats and vulnerabilities.

The Company regularly organizes information security training and social engineering exercises to increase information security awareness.

There's no significant deficiencies founded by either internal auditor nor accountant.

We purchased cyber protection insurance with coverage for data confidentiality and privacy liabilities, network security liabilities, media liabilities, incident response, and business interruption to demonstrate our commitment to customers' rights and interests.

Information security training ● 100% Coverage rate

Recipients	Contents	Number of trainees
Information security personnel	General information security training	54
Regular employees	General information security training	1,270
New employees	General information security training	44

Social engineering exercises ● 100% Qualification rate

Number of exercises in 2023	Number of participants
2	2,184

Note: The new employees does not include technical personnel and contractors.

Spotlight

With the expansion of the scope of information technology applications, many business activities are being developed through information systems to enhance efficiency. However, as information systems are developed, improper syntax usage in programming has gradually become a source of system vulnerabilities exploited by hackers. Security incidents involving hackers exploiting software vulnerabilities for attacks and data theft are increasing. Moreover, with the tightening schedules of software development and maintenance personnel during the software development lifecycle, the difficulty of security management is also increasing. The ability to identify software security risks quickly and accurately is particularly important. Therefore, Jadeite Corporation has introduced a source code scanning platform.

The source code scanning platform helps developers discover potential security vulnerabilities in the source code. Using source code scanning tools, it identifies security weaknesses hidden within applications and, coupled with security consultant analysis of the causes and professional improvement suggestions, prompts application developers to correctly and quickly address program security vulnerabilities and security loopholes. This allows developers to promptly fix security vulnerabilities, reducing the risks posed by source code vulnerabilities and strengthening the application's defense capabilities.

Through the source code scanning platform, security vulnerabilities are eliminated from the source, achieving the following goals in risk management during system development:

1. Detect existing system security issues and identify security problems in existing software.

2. Reduce the risks associated with self-developed software or software acquired from vendors.

3. Meet internal security regulations or external regulatory requirements.

4. Provide real-time visibility and interactive operation of detection results.

5. Automate detection processes and share experiences of repetitive repairs.

144

9 Appendix

- 9.1 About the Report

- 9.2 Summary of ESG Performance

- 9.3 GRI Standards Index

- 9.4 SASB Standards Index

- 9.5 Semiconductor Industry Sustainability Disclosure Indicators

- 9.6 Task Force on Climate Related Financial Disclosures（TCFD）

- 9.7 Independent Third-Party Assurance Opinion Statement

9　Appendix

9.1　About the Report

This Sustainability Report covers material issues of concern to stakeholders as well as the results of VisEra's economic, environmental, social, and governance actions. It was published on the Company's ESG website before the end of June 2024.

Reporting Period	The information disclosure period is from January 1 to December 31, 2023. To provide a complete disclosure of sustainability information, any information beyond the current fiscal year will be separately noted in this report.
Frequency of the Report	Once a year
Scope of the Report	• The scope for environmental data only waste statistics includes the Hsinchu, Longtan, and Zhongli plants, while energy, greenhouse gas emissions, water resources, and air pollution statistics only cover the Hsinchu and Longtan plants. Financial, employee, and public welfare data encompass the Hsinchu, Longtan, and Zhongli plants. • Longtan Plant was inaugurated in June 2022. To ensure the integrity of the data based on the time mass production officially began, the data shall be included in 2023 report.
Compilation Principles	GRI Standards 2021, SASB Standards 2018.10, and Operational Procedures for Listed Companies in Compiling and Reporting Sustainability Reports
Information Revised	• Chapter 3.3.1 Customer Relationship Management: Due to the calculation method was changed to weighted averages in 2023, the data from 2019 to 2023 will be recalibrated. • Chapter 9.2 Summary of ESG Peformance: The actual cybersecurity investment amounts from 2019 to 2022 were misprinted and have been corrected.
Information Reliability	• Internal audit: The information and data in this report were collected and compiled by employees of each department, reviewed by heads of the units, and submitted to the report work team for confirmation. We also appointed an external consulting team to provide recommendations for improvements. After all the data and information are prepared, they are reviewed by the heads of the units at each level. The results are reviewed by the chair of the ESG Sustainable Development Promotion Committee to ensure that the annual report covers all significant ESG topics. The company has also formulated the "Procedure for Preparation and Verification of Sustainability Reports," which is incorporated into the internal control system review report. Finally, it is disclosed after being submitted for approval by the Board of Directors. • External verification: The financial data in this report are based on the annual financial report certified by Deloitte Taiwan and are expressed in NTD. Non-financial information includes information for the Environmental Management System (ISO 14001), Energy Management System (ISO 50001), Quality Management System (ISO 9001), Hazardous Substance Management System (QC 080000), Occupational Safety and Health Management System (ISO 45001), Information Security Management System (ISO 27001), Greenhouse Gas Emission Inventory (ISO 14064-1), Product Life Cycle Assessment (ISO 14040), Carbon Footprint (ISO 14067), and Water Footprint (ISO 14046). All data have been verified by impartial third parties. This report has been verified by a third-party independent organization, DNV, in accordance with the AA1000AS v3 at Type 1 moderate level assurance. It confirms compliance with the GRI Standards 2021 requirements and includes an assurance statement, which can be referenced in the appendix.
Feedback	• Responsible unit: ESG Sustainable Development Promotion Committee • ESG website: https://esg.viseratech.com/ • Email: ESG@viseratech.com • Telephone: +886-3-666-8788 • Address: No. 12, Dusing 1st Rd., East Dist., Hsinchu City, 30078, Taiwan (R.O.C.)

9.2 Summary of ESG Performance

Role in Sustainability	Primary Indicator	2019	2020	2021	2022	2023
Corporate governance	Ranking interval for corporate governance evaluation	-	-	-	-	Top 6%~20%
Information security	Actual expenditure on information security（NT$ thousand）	9,378	12,861	23,360	21,578	28,276
	The number of participants in social engineering exercises	-	-	-	1,087	2,184
	The completion rate of information security training（%）	100%	100%	100%	100%	100%
	The total number of disaster recovery drills and ransomware response drills	3	2	3	3	5
Product innovation	R&D expenses (NT$ thousand)	346,489	366,794	542,020	671,886	726,535
	R&D funding as percentage of revenue (%)	10.20	5.28	6.00	7.40	10.04
	Number of R&D personnel	121	157	203	215	221
	R&D personnel as a percentage of total employees (%)	13.0	12.8	14.7	14.7	15.9
Responsible procurement	Percentage of local procurement of raw materials (%)	55%	60%	70%	67%	69%
	Percentage of local procurement of parts(Note 1)	86%	74%	69%	72%	64%

Role in Sustainability	Primary Indicator	2019	2020	2021	2022	2023
	Greenhouse gas emissions (metric ton-CO2e) (including Scope 1 and Scope 2; market-based method)	37,785	38,315	44,016	28,991	42,045
	Scope 1 (metric ton-CO2e)	12,904	8,167	7,725	5,728	4,910
	Scope 2 (metric ton-CO2e)	24,881	30,148	36,291	23,263	37,135
	Scope 3 (metric ton-CO2e)	-	19,025	21,968	18,448	23,411
	Total energy consumption (million kWh)	52,433	67,992	85,032	82,993	102,366
	Electricity from non-renewable energy (million kWh)	46,681	59,230	72,293	45,705	75,020
Green production	Electricity from renewable energy (million kWh)	0	0	2,999	26,157	13,903
	Natural gas (million cubic meters)	5,527	8,463	9,397	10,725	13,199
	Diesel (million kWh)	225	300	343	407	244
	Water withdrawal (m3)	128.470	190.490	226.840	277.221	301.380
	Water recycled (m3)	340.769	328.154	332.478	467.549	748.050
	Process water recycling rate (%)	88	88	88	88	91
	Wastewater discharge (m3)	79.204	120.148	145.005	141.298	184.460
	Total industrial waste quantity (metric tons)	611	1,463	2,054	2,348	1,995
	General industrial waste (metric tons)	136	370	781	930	741
	Hazardous industrial waste (metric tons)	475	1,093	1,273	1,418	1,254
	Waste Recycling Rate (%)	74.45	55.10	52.93	63.50	64.41

Role in Sustainability		Primary Indicator	2019	2020	2021	2022	2023
		Ratio of female employees in management roles (%)	18	18	20	20	20
		Internal employee substitution rate	73.1	86.0	61.7	66.7	67.4
		Manager internal promotion rate (%)	76.0	68.1	67.4	78.4	82.1
		Average training hours per employee	23.9	24.6	21.0	21.0	24.4
	Employee relations	Safety Performance Indicators (SPI)(Note2)	● (blue)	● (green)	● (blue)	● (blue)	● (blue)
		Number of material occupational safety and health accidents (employees)	0	0	0	0	0
		Number of severe occupational safety and health accidents (employees)	0	0	0	0	0
		Number of recordable occupational safety and health accidents (employees)	0	2	0	0	0
		Number of accidents (employees)	0	2	0	0	2
		Number of anomalies (employees)	4	15	11	8	10
		Number of near misses (employees)	0	64	24	5	27
		Number of cases processed by onsite physicians	-	248	610	411	897
		Number of individuals processed by psychological counsultant services	16	21	15	21	19
	Corporate Citizenship	Number of participants	115	106	173	190	288
		Total participation hours	185	176	243	260	270

Note 1: Introduction and monitoring of new processes (sputtering physical vapor deposition in the multi-film process)
Note 2: Safety Performance Indicators (SPI): ● Blue (excellent) - SPI ≧ 95; ● green (good) - 85 ≦ SPI<95; ● yellow (warning) - 70 ≦ SPI<85; ● red (warning) - SPI<70

9.3 GRI Standards Index

Usage Statement	VisEra has followed the GRI guidelines for the period January 1, 2023 to December 31, 2023.
Applicable GRI Industry Standards	None
GRI 1 used	GRI 1：foundation 2021

★ Material Topics for VisEra

GRI Standard	Disclosure Item	Related chapters/Reason for omission/Notes	Page number
GRI 2 : General Disclosures 2021	2-1 Organizational details	1.1 Company Profile	6
	2-2 Entities included in the organization's sustainability reporting	9.1 About the Report	146
	2-3 Reporting period, frequency and contact point	9.1 About the Report	146
	2-4 Restatements of information	9.1 About the Report	146
	2-5 External assurance	9.7 Independent Third-Party Assurance Opinion Statement	160
	2-6 Activities, value chain and other business relationships	1.1 Company Profile 4.1.1 Supply Chain Management	6 55
	2-7 Employees	6.1.1 Employee Distribution	95
	2-8 Workers who are not employees	The total number of non-employee workers is 75, primarily engaged in security, cleaning, catering, gardening, and on-site medical services.	
	2-9 Governance structure and composition	8.1.1 Structure and Operations of the Board of Directors 8.1.2 Diversity of the Board of Directors	131 132
	2-10 Nomination and selection of the highest governance body	8.1.1 Structure and Operations of the Board of Directors 8.1.2 Diversity of the Board of Directors	131 132
	2-11 Chair of the highest governance body	8.1.1 Structure and Operations of the Board of Directors	131
	2-12 Role of the highest governance body in overseeing the management of impacts	2.1 ESG Management Framework	15
	2-13 Delegation of responsibility for managing impacts	2.1 ESG Management Framework	15
	2-14 Role of the highest governance body in sustainability reporting	2.1 ESG Management Framework 9.1 About the Report	15 146

GRI Standard	Disclosure Item	Related chapters/Reason for omission/Notes	Page number
GRI 2 : General Disclosures 2021	2-15 Conflicts of interest	8.1.4 Conflicts of Interest	134
	2-16 Communication of critical concerns	2.1 ESG Management Framework	15
	2-17 Collective knowledge of the highest governance body	8.1.3 Board Performance and Performance Evaluation	133
	2-18 Evaluation of the performance of the highest governance body	8.1.3 Board Performance and Performance Evaluation	133
	2-19 Remuneration policies	8.1.5 Compensation Policy for Directors and Managers	134
	2-20 Process to determine remuneration	8.1.1 Structure and Operations of the Board of Directors 8.1.5 Compensation Policy for Directors and Managers	131 134
	2-21 Annual total compensation ratio	6.1.2 Talent Recruitment	96
	2-22 Statement on sustainable development strategy	Message from the Chairman	3
	2-23 Policy commitments	4.1.2 Supply Chain Sustainability Management 6.3 Human Rights 8.2 Professional Ethics	58 108 135
	2-24 Embedding policy commitments	4.1.2 Supply Chain Sustainability Management 6.3 Human Rights 8.2 Professional Ethics	58 108 135
	2-25 Processes to remediate negative impacts	6.3 Human Rights 8.2 Professional Ethics	108 135
	2-26 Mechanisms for seeking advice and raising concerns	6.3 Human Rights 8.2 Professional Ethics	108 135
	2-27 Compliance with laws and regulations	8.2 Professional Ethics	135
	2-28 Membership associations	1.2 Participation in External Initiatives, Organizations, and Associations	10
	2-29 Approach to stakeholder engagement	2.2 Materiality Analysis and Stakeholder Communication	16
	2-30 Collective bargaining agreements	6.3 Human Rights: VisEra has not signed collective bargaining agreements. However, we organize regular human rights training and quarterly labor-management meetings to report the business overview, annual activities, and benefits to all employees. We respect all employee organizations, the unions of their choice,and right to collective bargaining and participation in peaceful protests.	108

GRI Standard	Disclosure Item	Related chapters/Reason for omission/Notes	Page number
GRI 3： Material Topics 2021	3-1 Process to determine material topics	2.2 Materiality Analysis and Stakeholder Communication	16
	3-2 List of material topics	2.2 Materiality Analysis and Stakeholder Communication	16
	3-3 Management of material topics	2.3 Material Topic Management Stategies	22
GRI 202： Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	6.1.2 Talent Recruitment	96
	202-2 Proportion of senior management hired from the local community	6.1.1 Employee Distribution	95
GRI 204： Procurement Practices 2016	204-1 Proportion of spending on local suppliers	4.1.3 Local Procurement and Green Procurement	59
GRI 205： Anti-Corruption 2016	205-1 Operations assessed for risks related to corruption	8.2 Professional Ethics	135
	205-2 Communication and training about anti-corruption policies and procedures	8.2 Professional Ethics	135
	205-3 Confirmed incidents of corruption and actions taken	8.2 Professional Ethics	135
GRI 206： Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	8.2 Professional Ethics	135
★ GRI 302： Energy 2016	302-1 Energy consumption within the organization	5.3.2 Energy Structure	72
	302-3 Energy intensity	5.3.2 Energy Structure	72
	302-4 Reduction of energy consumption	5.3.3 Improve Energy Efficiency	73
★ GRI 303： Water and Effluents 2018	303-1 Interactions with water as a shared resource	5.4.1 Water Resource Risk Management	78
	303-2 Management of water discharge-related impacts	5.4.4 Effluent Management	83
	303-3 Water withdrawal	5.4.1 Water Resource Risk Management	78
	303-4 Water discharge	5.4.4 Effluent Management	83
	303-5 Water consumption	5.4.4 Effluent Management	83

GRI Standard	Disclosure Item	Related chapters/Reason for omission/Notes	Page number
★ GRI 305： Emissions 2016	305-1 Direct (Scope 1) GHG emissions	5.2.2 Greenhouse Gas Inventory	67
	305-2 Energy indirect (Scope 2) GHG emissions	5.2.2 Greenhouse Gas Inventory	67
	305-3 Other indirect (Scope 3) GHG emissions	5.2.2 Greenhouse Gas Inventory	67
	305-4 GHG emissions intensity	5.2.2 Greenhouse Gas Inventory	67
	305-5 Reduction of GHG emissions	5.2.2 Greenhouse Gas Inventory	67
	305-6 Emissions of ozone-depleting substances (ODS)	3.2.3 Product Environmental Impact Assessment	46
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	5.6 Air Pollution Prevention	92
	Supplementary Indicators Climate-1: Days of interruption in production due to climate factors	5.2 Climate Strategy	65
★ GRI 306： Waste 2020	306-1 Waste generation and significant waste-related impacts	5.5.1 Waste Production and Recycling	84
	306-2 Management of significant waste-related impacts	5.5.1 Waste Production and Recycling	84
	306-3 Waste generated	5.5.1 Waste Production and Recycling	84
	306-4 Waste diverted from disposal	5.5.1 Waste Production and Recycling	84
	306-5 Waste directed to disposal	5.5.1 Waste Production and Recycling	84
★ GRI 308： Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	4.1.1 Supply Chain Management	55
	308-2 Negative environmental impacts in the supply chain and actions taken	4.1 Sustainable Supply Chain	55

GRI Standard	Disclosure Item	Related chapters/Reason for omission/Notes	Page number
★ GRI 401：Employment 2016	401-1 New employee hires and employee turnover	6.1.1 Employee Distribution	95
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.1.2 Talent Recruitment	96
	401-3 Parental leave	6.1.2 Talent Recruitment	96
★ GRI 403：Occupational Health and Safety 2018	403-1 Occupational health and safety management system	6.4 Occupational Safety and Health	110
	403-2 Hazard identification, risk assessment, and incident investigation	6.4 Occupational Safety and Health	110
	403-3 Occupational health services	6.4 Occupational Safety and Health	110
	403-4 Worker participation, consultation, and communication on occupational health and safety	6.4 Occupational Safety and Health	110
	403-5 Worker training on occupational health and safety	6.4 Occupational Safety and Health	110
	403-6 Promotion of worker health	6.4.2 Creating a Comfortable Workplace that Fosters Employees' Physical and Mental Well-being	117
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6.4 Occupational Safety and Health	110
	403-8 Workers covered by an occupational health and safety management system	6.4 Occupational Safety and Health	110
	403-9 Work-related injuries	6.4 Occupational Safety and Health	110
	403-10 Work-related ill health	6.4 Occupational Safety and Health	110
★ GRI 404：Training and Education 2016	404-1 Average hours of training per year per employee	6.2 Talent Development	104
	404-2 Programs for upgrading employee skills and transition assistance programs	6.2 Talent Development	104
	404-3 Percentage of employees receiving regular performance and career development reviews	6.1.2 Talent Recruitment	96

GRI Standard	Disclosure Item	Related chapters/Reason for omission/Notes	Page number
GRI 405：Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	6.1.1 Employee Distribution 8.1.2 Diversity of the Board of Directors	95 132
	405-2 Ratio of basic salary and remuneration of women to men	6.1.2 Talent Recruitment	96
GRI 406：Non-Discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	4.1.2 Supply Chain Sustainability Management 6.3 Human Rights 8.2 Professional Ethics	58 108 135
★ GRI 414：Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	4.1.1 Supply Chain Management	55
	414-2 Negative social impacts in the supply chain and actions taken	4.1 Sustainable Supply Chain	55
★ GRI 418：Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	8.6.3 Information Security Implementation Results	143
	Supplementary Indicators Customer Services-1: Customer satisfaction score	2.3 Materiality Topic Management Strategies 3.3.1 Customer Relationship Management	22 51
★ Geopolitics VisEra's customized major topic	Geopolitics-1: Single customer %	2.3 Materiality Topic Management Strategies	22
★ Innvovation Management VisEra's customized major topic	Innvovation-1: The number of trade secrets & patents	2.3 Materiality Topic Management Strategies	22
	Innvovation-2: The ratio of R&D expenses to revenue	3.1.1 R&D Management	36
★ Information Security VisEra's customized major topic	Information Security-1: Information security incidents each year	8.6 Information Security Management	142
★ Enterprise Risk & Business Continuity Management VisEra's customized major topic	Risk & Operation-1: Days of interruption in production due to climate factors, disasters, or labor shortages.	8.5 Risk Management	139

9.4 SASB Standards Index

VisEra is categorized to Semiconductor Industry according to SICS®. This report adheres to the October 2018 version of the SASB Semiconductor Industry Standards.

Disclosure Topic	Indicator No.	Nature	Accounting Indicator	Report Content Description
Greenhouse gas	TC-SC-110a.1	Quantitative	❶ Scope 1 emissions	4,910 metric ton-CO2e
			❷ Amount of emissions from perfluorinated compounds (PFCs)	0 metric ton-CO2e
	TC-SC-110a.2	Qualitative	Set long-term and short-term strategies or management plans and related target performance analysis for Scope 1 emission reduction targets	Please refer to "5.2.1 Climate Risk Management"
Process energy management	TC-SC-130a.1	Quantitative	❶ Total energy consumption	365,593.4 GJ (102,366 Mwh)
			❷ Percentage of grid electricity used	73.3%
			❸ Percentage of renewable electricity	15.6%
Water resources	TC-SC-140a.1	Quantitative	Areas with high or extreme baseline water stress: ❶ Total water withdrawal; % in the area ❷ Total water consumption; % in the area	According to the Water Risk Filter developed by the World Wildlife Fund (WWF), VisEra plants are not located in areas with high water stress (stress <10%)
Waste management	TC-SC-150a.1	Quantitative	Quantity of hazardous waste produced in the production process and recycling percentage	Hazardous waste produced in the production process: 1,254 tons; percentage recycled: 97.5%
Employee health and safety	TC-SC-320a.1	Qualitative	Describe the measures for evaluating, monitoring, and reducing exposures that harm human health	Please refer to "6.4.1 Build a Human-Centric Safe Workplace"
	TC-SC-320a.2	Quantitative	Total monetary losses from litigation involving violations of employee health and safety	There were no such litigation or monetary losses Please refer to "6.4 Occupational Safety and Health"

156

Disclosure Topic		Indicator No.	Nature	Accounting Indicator	Report Content Description
Recruitment and management of global professional talents		TC-SC-330a.1	Quantitative	❶ Percentage of foreign employees	14.1%
				❷ Percentage of overseas employees	The operational locations are solely in Taiwan, with no overseas branches or facilities.
Product life cycle management		TC-SC-410a.1	Quantitative	Including the percentage of revenue from products with IEC 62474 Material Declaration for Products	0%
		TC-SC-410a.2	Quantitative	Energy efficiency of system-level processors: ❶ servers, ❷ desktop computers, ❸ laptop computers	VisEra is not a producer of final products and the corresponding contents are not applicable
Procurement of raw materials		TC-SC-440a.1	Qualitative	Describe the risk management for the use of key materials	4.1.1 Supply Chain Management 4.1.4 Management of Conflict Minerals
Protection of intellectual property rights and competitive behavior		TC-SC-520a.1	Quantitative	Total losses from litigation involving regulations on anti-competitive behavior	None Please refer to "8.2 Professional Ethics"

Activity Indicator	Indicator No.	Nature	Category
Total production volume	TC-SC-000.A	Quantitative	Image Sensors 788,000 (8" wafer equivalent) Micro-Optical Components 212,000（8" wafer equivalent）
Self-owned equipment production rate	TC-SC-000.B	Quantitative	Self-production rate 100%

9.5　Semiconductor Industry Sustainability Disclosure Indicators

No.	Indicator	Nature	Annual Disclosure Status	Unit	Remarks
❶	Total energy consumption, percentage of imported electricity, and utilization rate of renewable energy	Quantitative	Total energy consumption: 365,593.4 GJ　(102,366 MWh) Percentage of imported electricity: 86.9% Utilization rate of renewable energy: 15.6%	billion joule (GJ)、Percentage (%)	
❷	Total water intake and total water consumption	Quantitative	Total water intake 301.380 total water consumption 115.802	m³	
❸	Weight of generated hazardous waste and percentage of recycling	Quantitative	1,254 tons Percentage of recycling: 97.5%	ton, %	
❹	Description of occupational accident categories, number of occurrences, and rates	Quantitative	In 2023, there was 1 incident of personnel being grazed by a cart, resulting in 1 injured person with a total loss of one day, equating to a rate of 0.012%.	%, Quantity	
❺	Disclosure of Product Lifecycle Management: Including the weight of scrapped products and electronic waste, as well as the percentage of recycling.(Note 1)	Quantitative	4 tons Percentage of recycling：100%	ton, %	
❻	Description of risk management related to the use of key materials. (Note 2)	Qualitative	Details please refer to Chapter 4.1.1 Supply chain management	None	
❼	Total monetary losses incurred due to legal lawsuits related to antitrust regulations.	Quantitative	None	Reporting currency	
❽	Number of primary products by product category	Quantitative	9,541,031	8ʹʹ wafer equivalent - layers	

Note 1: Including the sale of scrap materials or other recycling processes, relevant explanations should be provided.
Note 2: Key materials: Materials essential to the manufacturing process of company products with supply risks.

9.6　Task Force on Climate Related Financial Disclosures（TCFD）

Basic information of VisEra	capital

☐ Companies, steel industry or cement industry with a capital of over 10 billion NT dollars

☐ Companies, steel industry or cement industry with a capital of 5 billion NT dollars or more but less than 10 billion NT dollars

☑ Companies, steel industry or cement industry with a capital of less than 5 billion NT dollars

According to the requirements of the Sustainability Development Roadmap for listed companies	at least the following disclosures should be made

☐ Parent company individual inventory check

☐ Consolidated financial report subsidiary inventory check

☐ Parent company entity confirmation

☐ Consolidated financial report subsidiary confirmation

VisEra should complete inventory of individual company in 2026 and complete assurance of individual company in 2028.

Scope of conviction	Scope 1 Total emissions (Metric tons CO2e)	Certifying institution	Criterion of Conviction	Firm opinion
VisEra Technologies Co. Ltd. Hsinchu Plants & Longtan Plants	4,910			
	Scope 2 Total emissions (Metric tons CO2e)	DNV Business Assurance Co., Ltd.	ISO 14064-3	Reasonable assurance
	37,135			
	Scope 3 (Voluntary disclosure) Total emissions (Metric tons CO2e)	**Certifying institution**	**Criterion of Conviction**	**Firm opinion**
	23,411	DNV Business Assurance Co., Ltd.	ISO 14064-3	Limited warranty

9.7 Independent Third-Party Assurance Opinion Statement

DNV

Independent Assurance Statement

Scope and Approach

VisEra Technologies Company Limited ("VisEra" or "the Company") commissioned DNV Business Assurance Co., Ltd. ("DNV" or "we") to undertake independent assurance over the Company's 2023 ESG Report for the year ended 31 December 2023 ("the Report"). The Report is prepared in accordance with the reporting principles and requirements of the Global Reporting Initiative (GRI) Standards, which also serve as the basis of our verification.

We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our assurance opinion. We are providing the evaluation of reporting principles with a Type 1, moderate level of assurance, according to the AA1000 Assurance Standard v3.

We understand that the reported financial data and information are based on the data from the Company's financial statements on a consolidated basis, which are subject to a separate independent audit process. The economic data and information have been obtained from the certified financial statements of the Company and were not in the scope of our assurance, as DNV has relied on relevant information as accurate for the purposes of our scope of work. In addition, the Company's data on greenhouse gas emissions is not within the current scope of work as the results had been verified by other assurance engagements.

The Report also incorporated disclosures with reference to relevant sustainability reporting guidelines, such as the Sustainability Accounting Standards Board's (SASB) Sustainability Accounting Standard for the Semiconductors industry (version 2018-10) and the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Responsibilities of VisEra Technologies Company Limited and the Assurance Provider

The management of VisEra has sole responsibility for the preparation of the Report in accordance with the stated criteria and for the design, implementation, and maintenance of necessary internal controls. In performing our assurance work, our responsibility is to the management of VisEra. Our statement, however, represents our independent opinion and is intended to inform all of VisEra's stakeholders.

DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement. We have no other contractual relationship or potential conflicts of interests with the Company under the current assurance engagement under the established policies and procedures, to ensure the strict adherence of independence principle.

Our assurance engagement is based on the assumption that the data and information provided by the Company are complete, sufficient, and authentic. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Basis of Our Opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at the Company's headquarters and site level. We undertook the following activities:

- Review of the current sustainability issues that could affect VisEra and are of interest to stakeholders.
- Review of VisEra's stakeholder engagement approach and recent outputs.
- Review of information provided to us by VisEra on its reporting processes and management relating to the Principles.
- Conducted interview with the senior management responsible for the management of sustainability issues and stakeholder relationship to understand the level of commitment and recent stakeholders' feedback.
- Conducted on-site visits to VisEra's Headquarters in Hsinchu, Taiwan and data checks on the Company's three main manufacturing sites in Hsinchu and Taoyuan to assess the systems and processes for implementing sustainability initiatives and preparing site-level data.
- Review of supporting evidence for key claims and 2023 data in the Report, as reported information beyond 2023 is not within the scope of the current engagement. Our checking processes were prioritised according to the materiality of issues at the consolidated corporate level. In addition, we were able to conduct interviews with the corporate functions involved, considering the nature and management of the sustainability issues concerned.
- Review of the processes for gathering and consolidating the specified performance data and, for a sample, checking the data consolidation. Where data on financial performance and greenhouse gas emissions had been checked by other assurance providers or engagements, we tested the transcription from these sources to the Report.
- An independent assessment of VisEra's reporting in accordance with the Global Reporting Initiative (GRI) Standards.
- The verification was conducted based only on the Chinese version Report.

DNV

Opinion

On the basis of the work undertaken, nothing came to our attention to suggest that the Report does not properly describe VisEra's adherence to the Principles.

In terms of reliability of the performance data, in accordance with moderate level assurance requirements, nothing came to our attention to suggest that these data have not been properly collated from the information reported at the operational level nor that the assumptions used were inappropriate.

Observations

Without affecting our assurance opinion, we also provide the following observations.

- Continual advancement of the internal data collection and consolidation protocols is recommended to lay a solid foundation for the Company's sustainability initiatives and well-grounded monitoring and reporting.
- We acknowledge the VisEra's efforts in reevaluating the time frame of its sustainability strategies for enhanced soundness, which reflects the commitment to continual improvement and we would encourage the Company to continuously assess and address issues potentially induced by the changes.
- As the concept of impact has been reaffirmed, we also encourage continued efforts in advancing the methodology of impact management across the Company's material topics and among its stakeholders.

Stakeholder Inclusiveness

The Company has identified the expectations of stakeholders through internally devised mechanisms in dialogue with different groups of stakeholders. The stakeholder concerns are well identified and documented, and the significant sustainability issues identified through this process are reflected in the Report.

Sustainability Context

The Report provides an accurate and fair representation of the level of implementation of related corporate sustainability policies and meets the requirements of the GRI Standards.

Materiality

The process developed internally has not missed out any significant, known material issues, and these issues are fairly covered in the Report. A methodology has been developed to evaluate the priority of these issues.

Completeness

The Report covers performance data against the GRI Standards disclosures that are identified as material within the Company's reporting boundary. The information in the Report includes the Company's most significant initiatives or events that occurred in the reporting period.

Accuracy and Reliability

The Company has developed the data flow for capturing and reporting its sustainability performance. In accordance with moderate level assurance requirements, we conclude that no systematic errors were detected which causes us to believe that the specified sustainability data and information presented in the Report are not reliable.

Impact

The Company presents the impacts related to its identified material topics by measuring and monitoring impacts through appropriate performance metrics demonstrating outcomes and outputs of its value creation processes. Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Impact.

For and on behalf of DNV Business Assurance Co., Ltd.
Date: 14 May,2024

Yu Chung Chen
Lead Verifier
Business Assurance
DNV Taiwan

David Hsieh
District Manager
Business Assurance
DNV Taiwan

Statement Number: C681357-2023-AG-TWN-DNV