



2023 MSI SUSTAINABILITY REPORT

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About the Report

Scope of the Report

- ◆ Report period
January 1 to December 31, 2022
- ◆ Entities included in the report information disclosure
Financial data covers the operating performance of all parent companies and subsidiaries in the overall financial statement. The non-financial performance indicator is based on MSI Zhonghe Plant (MSIT), Taoyuan Plant (MSIT1), MSI Computer (Shenzhen) Co., Ltd. (MSIS) and MSI Electronic (Kunshan) Co., Ltd. (MSIK). These four companies are hereinafter referred to as MSI Group, MSI or Us. Exceptions will be specified for non-financial information disclosure. Business management, sales, and repair service location of subsidiaries in other countries are not represented in the Report, which is different from the consolidated financial statements of the Company. Please refer to the shareholders' meeting annual report of the Company for detail. <https://www.msi.com/about/investor/annualMeetingOfShareholders>
- ◆ Restatements of information
Compared to the previous report year, the scope has not been changed for the Report this year. Organization and supply chain of MSI have not been changed significantly. No information has been restated either.

Composition of the Report

- ◆ The content structure of the Report is based on the GSSB GRI Standards 2021. The Report is composed according to the Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies. It discloses planning, strategy and management performance of relevant operating activities during the period of the Report. Refer to Appendix II for the GRI index in detail.
- ◆ The number of employees of MSIS and MSIK is not provided due to the restriction in the non-disclosure clause of customer contract.
- ◆ The amounts disclosed in the Report is in NTD; otherwise, it will be specified in the Report.

Report certification

- ◆ Internal review
 - ✓ Sustainable Development Office conducts evaluation, and bears the responsibility for consolidation, planning, data compilation, internal communication, content editing and report verification.
 - ✓ The Environmental and Corporate Social Responsibility Committee and the executive of all departments examine the content and information accuracy of each chapter.
 - ✓ The Board of Directors authorizes the President to command all full-time and part-time units to examine the strategy goal and ESG (Environment, Social, Governance) performance.
 - ✓ The Report is signed and read by the Chairman and the President and then finalized and published.

- ◆ External verification
 - ✓ The Report is verified by the BSI Pacific Limited, Taiwan Branch [BSI] based on the AA1000AS v3 Type 1, Moderate Assurance. Refer to Appendix V of the Report for the assurance statement.
 - ✓ Hardware index in the Report is disclosed according to the SASB (Sustainability Accounting Standards Board) index. Type 1 compliance assessment verification on the Report is conducted by BSI. The verification result is listed in Appendix II of the Report.
- ◆ Data quality and management system verification
Refer to the MSI Sustainability website (<https://csr.msi.com/global/management-system-certificate>) for management systems of environment, energy, occupational safety and health, hazardous substances and information security, and verification on management system of quality control, automobile industry quality, communication electronics industry, and laboratory quality.

Release history

Since the first corporate social responsibility report was released in 2008 (renamed the sustainability report since 2022), MSI still releases the report on the MSI Sustainability website and MOPS and publishes an English version, to disclose information to all stakeholders.

- ◆ Release time of the Report: June 2023
- ◆ Release time of the previous version: June 2022
- ◆ Release time of the next version: Expected to be in June 2024

Contact information

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Words from the Chairman and President

In 2022, drastic changes occurred in the industry and the political and economic environment was in turbulence. The overall PC industry still enjoyed high demand from the pandemic from the beginning of the year. Inflation was incurred from energy and food price surges due to geopolitical conflict, and the war had not ended by the end of the year. Consumers became less confident and PC demand dropped because they are directly or indirectly affected by interest rate rises in all countries for inflation suppression and global economy headwind. On that account, the overall market demand reversed rapidly, while the pandemic impact on the supply chain had an adverse effect on delivery – the business environment was full of variables. Fortunately, the management team noticed reverse demand early through close relationship between the customer and supply chain. The management team took countermeasures for sales at the front end and material preparation at the backend in time. The Company performed well throughout the year even though it faced huge challenges due to various changes in the environment in the second half of the year.

In the new year, companies in the PC industry will gradually destock products in the channel and there will be demand for product; hence, price competition will decrease. The cost of logistics and some important parts and components around the world will decrease, and all major chip suppliers are launching products. Both of these situations are beneficial to the increase in product gross margin. All of our employees will not forget where we started. Our employees stick to the same corporate culture and values through ONE MSI, and continue to make sure that the strategic directions of the Head Office and overseas locations are consistent. They endeavor to develop products that meet market needs, focus on deep-rooting the brand core value, and keep up with the market trend and business opportunities. They work as one for higher achievement. In addition, as a corporate citizen of sustainable operation, ESG is also an important mission for MSI. Besides striving to accomplish energy saving and carbon reduction, and becoming a green brand, MSI takes action to fulfill social responsibilities through public welfare, talent cultivation, and closing the digital resource gap of disadvantaged students.

Smart innovation and green production

The world faces challenges such as pandemics, climate and pollution. Drastic changes occur to the market and daily life. MSI proactively takes regulation/mitigation action and sets the goal for GHG emission, energy management, water resource use, and waste reduction. Solar power generators are available in the manufacturing plant and the energy management system is introduced in the entire factory to create good products with a low-carbon production model. After innovative products such as AI sanitization devices, smart robots and no-contact facial recognition devices are rolled out, MSI launched all-round electric car charging stations integrating with business solutions and meeting demands from different users. It is a great tool in facilitating transportation and smart life transformation. Furthermore, we communicate with supply chain partners and use fewer materials with high energy consumption or containing environmentally hazardous substances. We strive to ensure that we meet

national and international regulations, the goal of international organization, and enter the new era of sustainable supply chains hand-in-hand.

Social co-prosperity and MSI value

MSI always promotes the sustainable development strategy practically. We promote our strategy toward the UN Sustainable Development Goals (SDGs). Through responsible mineral guidelines and Responsible Business Alliance (RBA) guidelines, MSI ensures that it will comply with international human rights regulations, fulfill evaluation and management of workers, and help workers become important MSI partners to create a higher social value for MSI together. We furthermore continue to engage in social events. We elaborate our social influence as a corporation by using our original profession, implementing industry-academia collaboration, donation or direct engagement by employees. We hold fast to the idea of giving back to society and balancing group development and expect to bring more of our ability into play for education, poverty support, environmental issues, and local protection more actively, and facilitate fulfillment of corporate responsibility.

Huang Chin Ching - President

Hsu Hsiang - Chairman



MSI’s significant sustainable accomplishments in 2022



Environmental Protection Administration
Enterprises Protection Award



MSI collaborates with other parties to work on Phase 0 and
1 of the Sustainable Talent Incubator, over 100 students
benefited from the program.



MSI planted 1,500 trees in Taijiang National Park
and Zhuangwei Township in Yilan in total.



Around **5%** of the energy used in
MSI is renewable energy.



Around NT\$40 million was invested in the public welfare
programs in Taiwan. The donation for global public
welfare is **NT\$80.83 million**.



Ministry of Labor Occupational Safety and Health Index
Outstanding Corporation



MSI is listed in FTSE4good constituent stock.



Around 20 products are honored with six international awards. The
MSI brand won first place by *Benchmark Magazine*.

CH1.
SUSTAINABLE DEVELOPMENT
AND COMMUNICATION

1.1 MSI sustainable development strategy and commitment

MSI persists in the business philosophy “innovative smart intelligence,” “becoming a corporate citizen” and “achieving win-win growth together.” MSI endeavors to fulfill the responsibility and mission for social care, environmental protection, employee care, shareholder commitment and customer reliance, and accomplishes the ESG (Environment, Social, Governance) strategy of sustainable development. MSI fulfills and echoes the UN Sustainable Development Goals (SDGs) step by step through strategic actions “good governance structure,” “pilot environmental sustainability,” “diverse inclusive workplace” and “responsible production implementation.”

MSI also actively uses standards accepted globally to promote social and environmental responsibility and business ethics, such as Responsible Business Alliance (RBA) and UN Guiding Principles on Business and

Human Rights. All activities during the business process must completely conform to laws and regulations at the locations where MSI operates. The “Corporate Social Responsibility Guidelines” and “MSI Group Supplier Code of Conduct” are stipulated as the guideline for practice of corporate citizen obligations. MSI invests in improvement of all kinds of energy and resources, sets goals for environmental protection and energy saving, and pays attention to global climate change. Usage, emission and reduction management are carried out through the environmental management system as the reference for execution of the environmental policy and management. MSI continues to implement audit and improvement and considers integrating climate issues into business decision-making, to fight the impact incurred from climate change together.

Viable Governance Structure	Leadership Towards Sustainability	Diversified and Inclusive Workplace	Implementation of Responsible Production
 MSI makes its corporate policy on the basis of integrity under the corporate philosophy of integrity, transparency, and responsibility to develop the mechanisms.	 MSI will continue to apply integrative and preventive environmental strategy to the production process, products, and services to enhance ecological benefits and reduce the hazards to mankind and the environment.	 MSI seeks to improve sustainable management of the supply chain, invest in the organization, the employees, and people with diversified skills and potential to achieve the goal of inclusive growth for common good.	 MSI makes use of its R&D and management capacity to mitigate the burden on the environment and perform its responsibility pertinent to the environment as a producer, and satisfy the development and survival needs of mankind.

「 Innovation of Smart Technologies 」 「 Pursuit of Corporate Citizenship 」 「 Common Growth for Win-Win Situation 」

1.2 Identification and analysis of material topics in 2023

MSI adopted the new version of materiality identification process in GRI Standards (2021) this year to re-identify MSI’s material sustainable topics. Materiality was evaluated based on how much stakeholders care about a topic. Now it is evaluated by identifying the topic causing the most significant impact on daily corporation operation. Furthermore, in the Double Materiality Guidelines proposed by the EU in the past few years, the Report will focus on impact materiality for stakeholders. Financial materiality for investors is partially based on the GRI Standards. Partial indices of SASB are also disclosed.

Identification	Assessment	Sorting	Reporting
◆ Organization context and topic identification MSI belongs to computer hardware and peripheral manufacturing industry, actively spans AIoT and automotive business solutions. MSI’s manufacturing are in China and Taiwan, and sales are around the world. Besides considering all kinds of sustainable standards (GRI, RBA, TCFD, CDP, SASB), Sustainable Development Goals (SDGs) and the UN Global compact, we refer to benchmark competitor and market dynamics, collect various actual or potential positive and negative impacts and summarize them into 15 sustainability topics.		5 economic and governance topics	Corporate performance Ethical management and good governance Compliance Supply chain management Customer service management
◆ Stakeholder identification By referring to influence, tension, responsibility, dependency and diverse perspectives in AA1000 Stakeholder Engagement Standard (AA1000 SES), and considering international sustainable development trend and operational needs at the same time, MSI defines 7 types of stakeholders, investor/shareholder, customer, supplier, employee, media, government agency and NPO. MSI engages with these seven types of stakeholders through regular and occasional diverse communication channels, to find out and respond to the opinion, need and expectation of stakeholder. MSI’s goal is to inspire corporate sustainable value, bear social responsibility and disclose information in corresponding chapters in the Report. In the meantime, MSI examines and confirms the types of stakeholders at the Environmental and Corporate Social Responsibility Committee every year, and adjusts them depending on the current industrial and international environment.		5 enviromental topics	Product responsibility Energy management Climate change Pollution control Water resource management
		5 social topics	Talent cultivation Occupational health and safety Human rights management and labor relations Employee rights and friendly workplace Social engagement

◆ Stakeholder engagement

The stakeholder channels we built include shareholders’ meeting, Company’s official/shop/sustainability website, company email, service display flagship, service center, special internal contact, and customer satisfaction survey. They are listed below:

STAKEHOLDER	PURPOSE OF STAKEHOLDER ENGAGEMENT	COMMUNICATION CHANNEL
Investor/Shareholder	Investor/Shareholder is one of the stakeholders MSI cares the most. We operate business cautiously, guarantee shareholder rights, and create profits and values for MSI.	[Every year] Shareholders’ meeting and annual report [Occasionally] Company website or MOPS. The investor conference was held once in 2022. Contact: Jade Hung, Vice President, +886-2-3234-5599
Customer	MSI’s mission and goal are making sure that corporate customers and global consumers are satisfied with MSI’s products and have the best time when using them.	[Real-time] Company website and social media [Occasionally] Satisfaction survey [Specific time] Special internal contact, service display flagship, all service centers, 0800 customer service hotline. Customer service hotline: +886-800-018-880
Supplier	MSI keeps a close, good relationship with suppliers and continues to work with them. MSI and suppliers learn from each other, and create a sustainable value chain.	[Every year] Supplier survey, evaluation and survey [Occasionally] The supplier conference was held once in 2022. [Real-time] Green Product Management Platform (GPM) Contact: Maggie Chen, Vice President, +886-2-3234-5599
Employee	Talent is the most important capital at MSI. We encourage employees to think outside the box, take care of employee’s mental and physical health, and help employees build skills, broaden their vision, and grow with the Company.	[Occasionally] Satisfaction survey [Real-time] Suggestion box, information platform, app, Employee Assistance Program (EAP) Contact: Wayne Chien, Assistant Vice President, +886-2-3234-5599
Media	Media is a part of communication with the public. As a computer brand, MSI always interacts well with the media and conveys correct information through the media.	[Occasionally] Press conference and release Contact: Jade Hung, Vice President, +886-2-3234-5599
Government agency	Either for manufacturing or business management, MSI always complies with regulations, keeps a good relationship with the government, builds a collaboration mechanism based on mutual trust, and offers corporate resources to help society promptly.	[Every year] Sustainability report, MOPS, requirements from other competent authorities [Occasionally] Government project requirements Contact: Jade Hung, Vice President, +886-2-3234-5599
NPO	Either for climate, environmental protection, public welfare, education or talent, MSI is always open-minded, collaborates with NPOs, improves the Earth’s environment, helps the disadvantaged groups in society, supports student education, closes the industrial-academic gap, and aims to create MSI’s sustainable value.	[Occasional] Company website, sustainability report, MOPS, program requirement application, MSI contacts the NPO voluntarily. Contact: Wayne Chien, Assistant Vice President, +886-2-3234-5599

Identification	Assessment	Sorting	Reporting
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Both the GRI Standards (2021) and GRI Perspective pointed out that impact significance must be assessed for the sustainability topic. That is, severity and possibility of negative impact and the scale, scope and possibility of positive impact, are identified by using risk management method.

CATEGORY	SUSTAINABLE DEVELOPMENT TOPIC	SIGNIFICANCE OF THE IMPACT	STAKEHOLDER AFFECTED	RELEVANT GRI STANDARD
Economic and governance aspects	Corporate performance	●●●●●	Investor/Shareholder, customer, employee, government agency	Economic Performance (201)
	Ethical management and good governance	●●●	Investor/Shareholder, customer, supplier, employee, media, government agency	Diversity and Equal Opportunity (405)
	Compliance	●●●	Investor/Shareholder, customer, supplier, employee, media, government agency	Anti-corruption (205), GRI 2-27
	Supply chain management	●●●●●	Customer, supplier, employee	None
	Customer service management	●●●	Customer, employee, media, government agency	Marketing and Labeling (417), Customer Privacy (418)
Environmental aspect	Product responsibility	●●●●●	Customer, supplier, government agency	Customer Health and Safety (416)
	Energy management	●●	Customer, supplier, employee, government agency, NPO	Energy (302)
	Climate change	●●●●●●	Customer, supplier, employee, media, government agency, NPO	Emissions (305)
	Pollution control	●●	Supplier, employee, media, government agency, NPO	Effluents and Waste (306)
	Water resource management	●	Supplier, employee, government agency	Water and Effluents (303)
Social aspect	Talent cultivation	●●●●●	Employee, government agency, NPO	Training and Education (404)
	Employee rights and friendly workplace	●●●●●	Customer, supplier, employee, government agency	Market Presence (202), Employment (401), Diversity and Equal Opportunity (405)
	Occupational health and safety	●●●	Customer, supplier, employee, government agency	Occupational Health and Safety (403)
	Human rights management and labor relations	●●●	Customer, supplier, employee, media, government agency, NPO	Labor/Management Relations (402), Non-discrimination (406), Freedom of Association and Collective Bargaining (407), Child Labor (408), Forced or Compulsory Labor (409)
	Social engagement	●●	Employee, media, government agency, NPO	None

Identification	Assessment	Sorting	Reporting
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MSI employees discussed the material topics. MSI referred to the information collected from communication channels with all stakeholders throughout the year. Top governance supervisors and the executives of Sustainable Development Department examined and approved the material topics. After sorting, the material topics determined to be the most significant and which shall be reported with top priority are as follows:

Material topics in 2023 MSI Sustainability Report

<u>Economic and governance aspects</u>	<u>Environmental aspect</u>	<u>Social aspect</u>
Corporate performance Supply chain	Product responsibility Climate change	Talent cultivation Employee rights and friendly workplace

Management of material topics in 2023 ▼

CATEGORY	SUSTAINABLE DEVELOPMENT TOPIC	POSITIVE OR NEGATIVE IMPACTS	ACTION TAKEN (POSITIVE MANAGEMENT AND NEGATIVE PREVENTION AND MITIGATION)	REMEDIATION	THE CHAPTER DISCLOSING THE INFORMATION
Economic and governance aspects	Corporate performance	Corporate performance directly affects earnings of MSI investors/shareholders and is essential to corporate sustainable development.	◆ MSI continues to develop products, controls and manages inventory and sales strategies, controls the cost and expenditure rationally, creates profits and continues to grow.	MSI responds to international regional risk and market change quickly and makes adjustments accordingly.	CH2 About MSI
	Supply chain management	The branded corporation drives the upstream supply chain. This creates broader corporate values and elaborates influence for MSI.	◆ MSI drives suppliers to conduct GHG inventory and keeps track of the progress of sustainable action of suppliers. ◆ MSI relies less on or eliminates the suppliers that pose negative impacts in economic, environmental and social aspects.	MSI searches for potential negative impacts through supplier audit and proposes improvement and correction advice to suppliers.	CH4 Responsible Manufacturing and Customer Service
Environmental aspect	Product responsibility	Consumers and customers are vital to MSI product sales. Both safety and environmental protection are our priority goals.	◆ MSI products passed numerous tests in safety and health and meet regulations of all regions. ◆ Customers and consumers can bring up product risk through all service channels.	Customers and consumers can report to the MSI Product Safety Incident Reporting Team for product safety vulnerability. Refer to MSI Sustainability website for details: https://csr.msi.com/tw/product-security-advisories	3.3 Green production and manufacturing
	Climate change	Climate change mitigation is imperative for governments and corporations around the world. MSI is also committed to climate change mitigation.	◆ MSI accomplishes climate change mitigation by establishing renewable energy power generators, improving the current efficiency of manufacturing process and utility, and helping staff change behaviors for carbon reduction and energy saving.	MSI analyzes the causes of increasing power consumption and GHG emissions, and will adjust response strategies in the coming year to fulfill the goal of carbon reduction in the long run.	CH3 Climate Action and Green Manufacturing
Social aspect	Talent cultivation	Talent is the foundation for business innovation at MSI. We strive to recruit and cultivate the most outstanding talents.	◆ Five academies have been founded and divided into professional and management skills. Awards for motivating R&D and innovation are provided to cultivate employees integrally. Over ten thousand employees were enrolled in the academies in 2022. ◆ MSI joined the Gap of Learning & Field (GOLF) and helped remote areas, disadvantaged groups and local communities improve education quality.	Unlike other topics, no negative impact is incurred from talent cultivation. However, MSI always pays attention to company talent, potential talents in school and social education to ensure good resource balance and avoid losing sight of anything.	5.2 Cultivation and development
	Employee rights and friendly workplace	A corporation is composed of people. The good mental and physical health of employees and smooth, good communication channels help teams create synergy.	◆ For years, MSI has been advocating the slogan “One MSI” to ensure that employees aim for the same goal, work together for the better good and communicate smoothly. ◆ MSI provides diverse employee complaint or opinion channels to help employees solve any problem at the workplace.	If the employee’s rights have been infringed, the labor agreement and occupational safety meeting, professional legal consultant and Employee Assistance Program (EAP) are available for support. If an employee’s mental or physical health is damaged, the infirmary and occupational safety channel are provided for assistance.	5.3 Communication and care

Compared to the previous sustainability report, “Ethical management and good governance,” “Compliance,” “Occupational health and safety” and “Human rights management and labor relations” are removed from the list of material topics. It does not mean we don’t care about these topics. We focus on reporting the topics that pose the most significant impact on the Company. On the contrary, the Company has been effectively managing the most essential aspects we must execute during operation and has been implementing them for years. These items are governance, compliance, labor safety and human rights. Refer to the shareholders’ meeting annual report of the Company, sustainability reports over the years, and the disclosure information on the Company’s website. With regard to material topics, the MSI ESG Committee collects opinions from internal and external stakeholders, identifies regulations, and performs market or competitor dynamics survey regularly for the topics MSI cares about the most to respond to positive or negative impacts related to material topics.

Identification	Assessment	Sorting	Reporting
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Numerous issues during corporate sustainable development still require attention. To satisfy specific stakeholders or the requirements regarding material topics that might affect specific stakeholders indirectly, MSI still adequately discloses how material topics and SDGs affect each other in the Report. By publishing the Sustainability Report, MSI examines what actions it has taken and what efforts it has made to sustainable development. In the meantime, MSI also builds diverse communication channels with stakeholders and responds to topics they care about to satisfy stakeholders’ expectations of MSI and the attention they paid to us. We will re-examine sustainable development topics in each report period, plan for stakeholder communication depending on the topic content, and check the need for topic adjustment.



1.3 MSI and UN Sustainable Development Goals (SDGs)

MSI continues to pay attention to global topics, examines and responds to feasible SDG items, and reviews these items regularly for them to meet the current operating condition.

UN SUSTAINABLE DEVELOPMENT GOALS	TARGETS	MSI MEASURES RESPONDING TO SDGS	CHAPTER IN THE REPORT	PAGE
1 NO POVERTY  No Poverty	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.	Continue to provide appropriate resources to disadvantaged groups: ● Goal: Invest in public welfare activities every year. ● Goal: Continue to purchase raw materials in the local area.	CH6 Social Responsibility and Corporate Value 3.3 Green production and manufacturing	71 33
3 GOOD HEALTH AND WELL-BEING  Good Health and Well-being	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	Reduce environmental impact substances. Properly manage the end-of-life product mechanism of product life, and ensure environmental safety and health. ● Goal: The percentage of halogen-free materials and parts must be over 85% by 2030.	3.3 Green production and manufacturing	33
4 QUALITY EDUCATION  Quality Education	4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.	Make sure that education is provided equally and to everyone; promote lifetime learning and facilitate contribution to sustainable development. ● Goal: Pay attention to education in remote areas, continue to invest in education to close the learning gap for remote areas. ● Goal: Provide on-job-training courses for employees, provide chances for overseas expatriation, and increase employee retention rate.	CH6 Social Responsibility and Corporate Value 5.2 Cultivation and development	71 56
5 GENDER EQUALITY  Gender Equality	5.1 End all forms of discrimination against women and girls everywhere. 5.c. Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.	Eliminate all discrimination and fulfill gender equality: ● Goal: Comply with MSI CSR policies and Code of Conduct to ensure that there is no sexual discrimination. ● Goal: Ensure gender equality at the workplace through the ESG survey and RBA assessment analysis.	2.5 Ethics and compliance CH5 Talent Attraction and Development	24 50
8 DECENT WORK AND ECONOMIC GROWTH  Decent Work and Economic Growth	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. 8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms. 8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular female migrants, and those in precarious employment.	Make sure that all men and women have an adequate job. Forbid and eliminate employment of inadequate child labor. Prevent any worker from oppression. Protect laborer's human rights. Facilitate safety at the workplace. ● Goal: Make sure that the disabling frequency rate is zero and there is no disaster at the workplace. ● Goal: Provide motivating salary level. Make sure that the overall salary stays in the top 35% among competitors. ● Goal: Adhere to employment regulations applicable to all production factories, and guarantee employee working rights.	CH5 Talent Attraction and Development	50
11 SUSTAINABLE CITIES AND COMMUNITIES  Sustainable Cities and Communities	11.6 By 2030, reduce the adverse environmental impact per capita of cities, including by paying special attention to air quality and municipal and other waste management.	Reduce environmental impact, and promote inclusion, safety and sustainability of the living environment. ● Goal: Monitor air quality every year to ensure the effectiveness of air pollution control measures. ● Goal: Reduce impact incurred from sharing the water resource. Make sure that MSI's conduct of water pollution control meets regulatory requirements. ● Goal: Waste management – MSI's product equipment meets the requirement for labeling and waste recycling registration. Product recoverability rate is over 90%.	CH3 Climate Action and Green Manufacturing	28
12 RESPONSIBLE CONSUMPTION AND PRODUCTION  Responsible Consumption and Production	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release into the air, water and soil in order to minimize their adverse impacts on human health and the environment. 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.	Reduce chemical usage and waste generation through the management methods, including prevention, reduction, recycling and reuse. Reduce adverse effect on human health and environment. ● Goal: Establish the green product management platform to carry out supplier management. Ensure that the product and material meet the regulatory requirements. ● Goal: Promote reduction measures during the design stage, such as packaging material reduction, energy efficiency management, and reduction of percentage of hazardous waste.	CH3 Climate Action and Green Manufacturing	28
13 CLIMATE ACTION  Climate Action	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	Strive for energy saving and carbon reduction. Increase resilience to climate change impact. ● Goal: By 2030, reduce total GHG emission by 60% (compared to 2007). Reduce energy consumption of primary products by 20%. ● Goal: Production will not be interrupted by climate impact. ● Goal: Establish the BCP (Business Continuity Planning) management measures. Ensure continuous operation.	CH3 Climate Action and Green Manufacturing	28

CH2.
ABOUT MSI

2.1 Company profile

Founded in 1986, MSI built up a fortune from motherboard and graphics card manufacturing, and spanned the consumer electronics and business application market. Besides developing its own brand, MSI also provides professional OEM services with differentiated technology, and focuses on R&D and production of information product. In 2010, MSI spanned e-sports industry, started business from e-sports laptop, and has been a global e-sports leading brand since 2014. Our persistence in the profession and commitment to sustainable operation never change. Nowadays MSI has become a global leading brand in e-sports, creator, business and AIoT; it is motivated by advanced R&D and customer satisfaction, and sells products in over 120 countries. The graphics card, desktop, motherboard, monitor, computer periphery, laptop, server, industrial computer and automotive electronics included in all series products are favored and recognized by consumer and customer. We endeavor to create digital luxuries with excellent quality, humane design and fashionable style, continue to create user value, and become an extensive technological leading brand. As for the revenue of MSI products in 2022, 42% were system products, 53% were parts and components (e.g. motherboard and graphics card), and 5% were other products (including automotive and industrial computer). With regard to the regional market, 32% of the market share is from the Americas, 30% is from Europe and the Middle East, and 38% is from Asia-Pacific.

List of major shareholders

Statistics for the register of shareholders on the book closure date, April 17, 2023

NAME OF MAJOR SHAREHOLDERS	SHARES HELD	HOLDINGS RATIO
Hsu Hsiang	46,883,151	5.55%
Taishin International Bank Co., Ltd. acting as Custodians of Securities Cathay MSCI Taiwan ESG Sustainability High Dividend Yield ETF Securities Investment Trust Fund Account	43,734,000	5.18%
Yuanta Taiwan High Dividend Fund Account	29,711,730	3.52%
Lin Wen Tung	25,672,499	3.04%
Nan Shan Life Insurance Co., Ltd.	24,832,000	2.94%
Citibank Taiwan Acting as Custodians of Securities Singapore Government Investment Account	22,041,000	2.61%
Huang Chin Ching	20,937,377	2.48%
Lu Chi Lung	18,650,835	2.21%
Hsu Fen Lan	18,508,517	2.19%
Yu Hsien Neng	17,892,824	2.12%

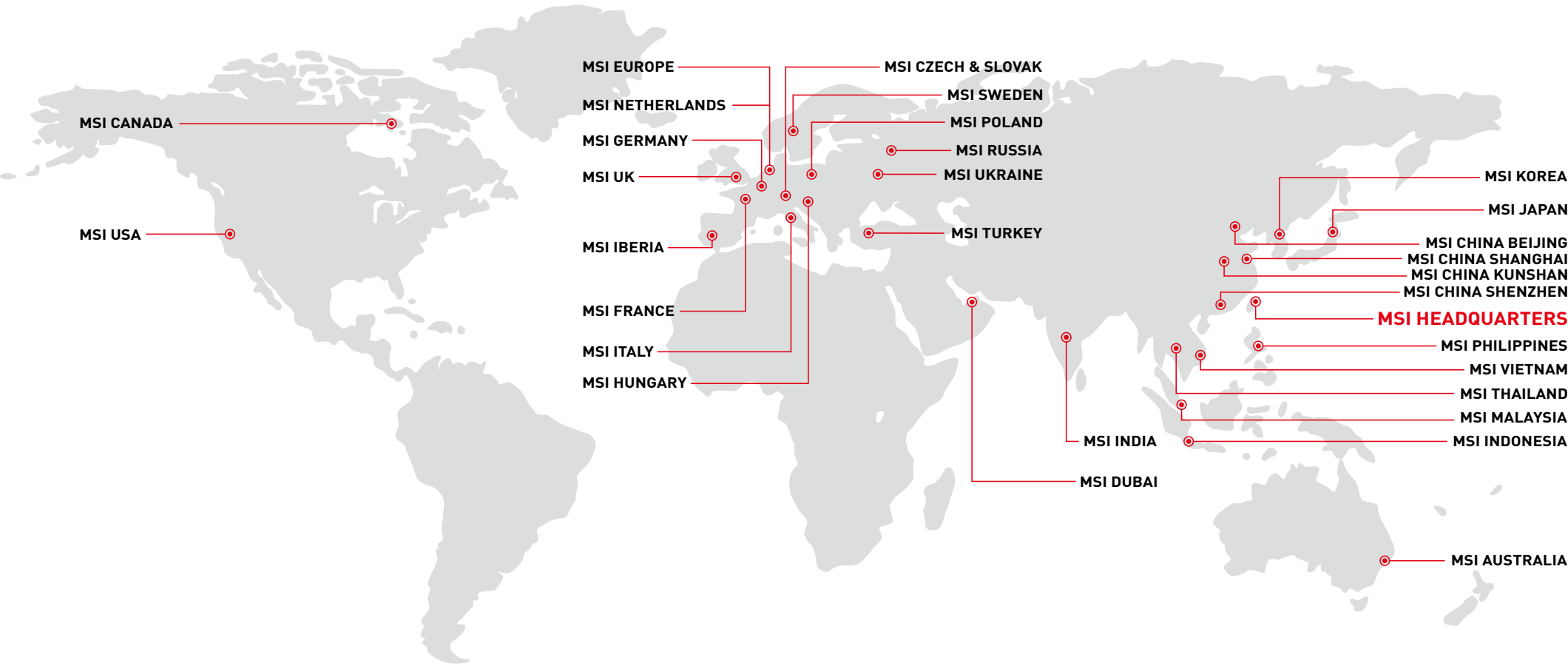
Company name	Micro-Star International Co., Ltd.
Date of company establishment	August 4, 1986
Stock symbol	2377
Industry category	Computer product manufacturing industry
Headquarter	No. 69, Lide St., Zhonghe Dist., New Taipei City, Taiwan
Business area	Globe
Paid-up capital (NTD)	8,448,561,990
Chairman	Hsu Hsiang
President	Huang Chin Ching

External engagement organization

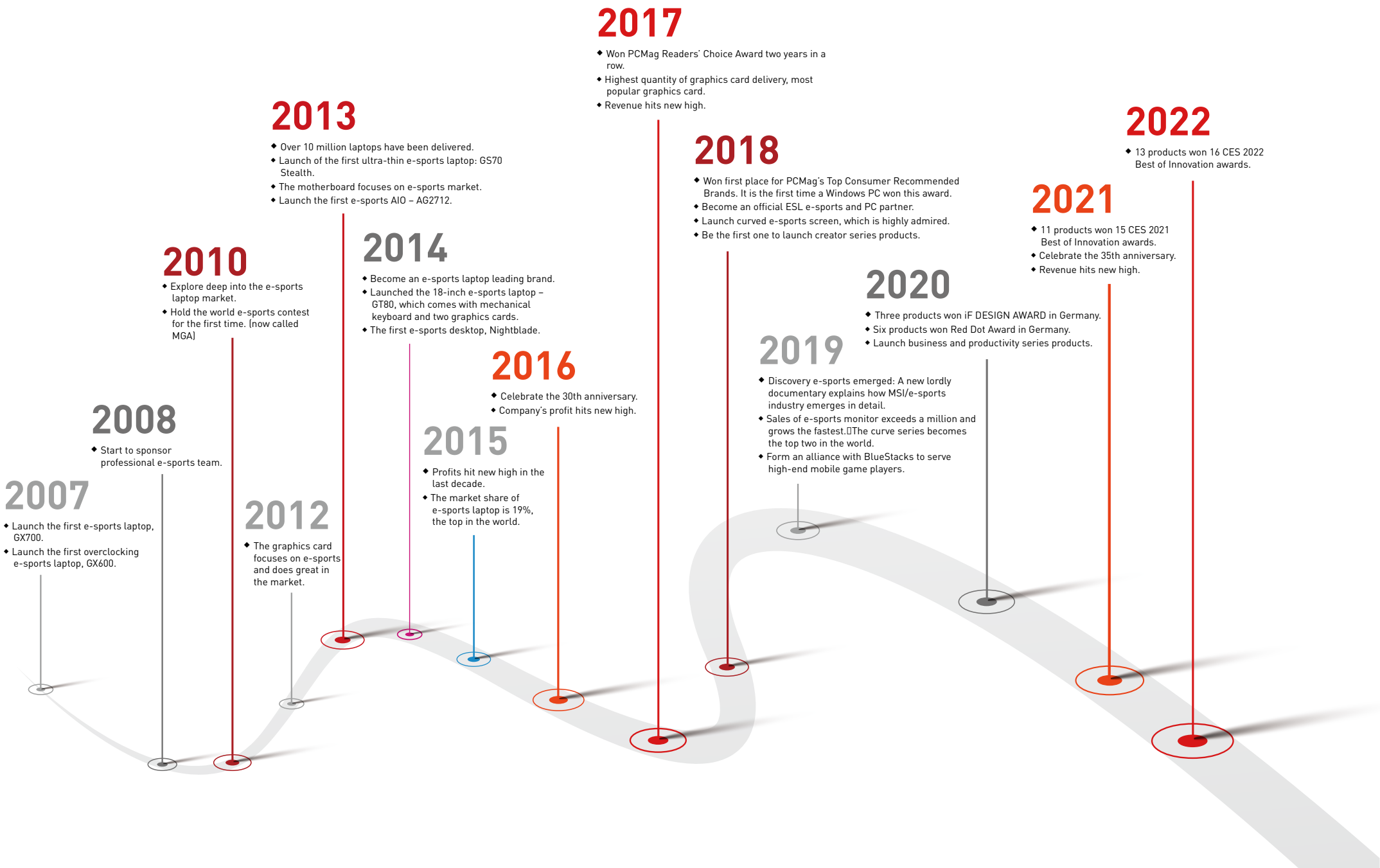
ORGANIZATION	FACTORY	IDENTITY
Taiwan Automation Intelligence and Robotics Association		
Northern Taiwan Information Electronics Industry Human Resource Supervisor Sodality		
Taipei Computer Association		
Taiwan Stock Affairs Association	MSI (HQ)	
Taiwan Printed Circuit Association		
Corporate Green Competitiveness Alliance		
Taiwan Climate Partnership		Member
Shenzhen City Integrity Alliance Association		
Aiwan Merchant Association Shenzhen Shiyan Sodality	MSIS	
Shenzhen Hi-Tech Industry Association		
Kunshan Human Resource Association		
Taiwan Compatriot Investment Enterprises Association of Kunshan	MSIK	
Kunshan Economic and Technological Development Zone Production Safety and Environmental Protection Association		

Global business locations

2023 MSI's Global Presence



Brand development overview



獲獎榮耀



Selected by *PCMag* readers as having the best laptops of 2022.



Won 13 Innovation Awards from CES 2023.



Titan GT77 laptop won "Golden Award", other 3 products received "Category Awards".



Earned the "Taiwan Excellence Award" for 25 consecutive years.



"Stealth GS77," "MEG Z690 GODLIKE" and "MPG Z690 FORCE WIFI" won the iF Design Award 2022.



reddot winner 2022

Five products won the Red Dot Product Design Awards 2022 for outstanding design.



"Summit E14 Flip" and "Modern 15" laptops won GOOD DESIGN AWARD 2022.

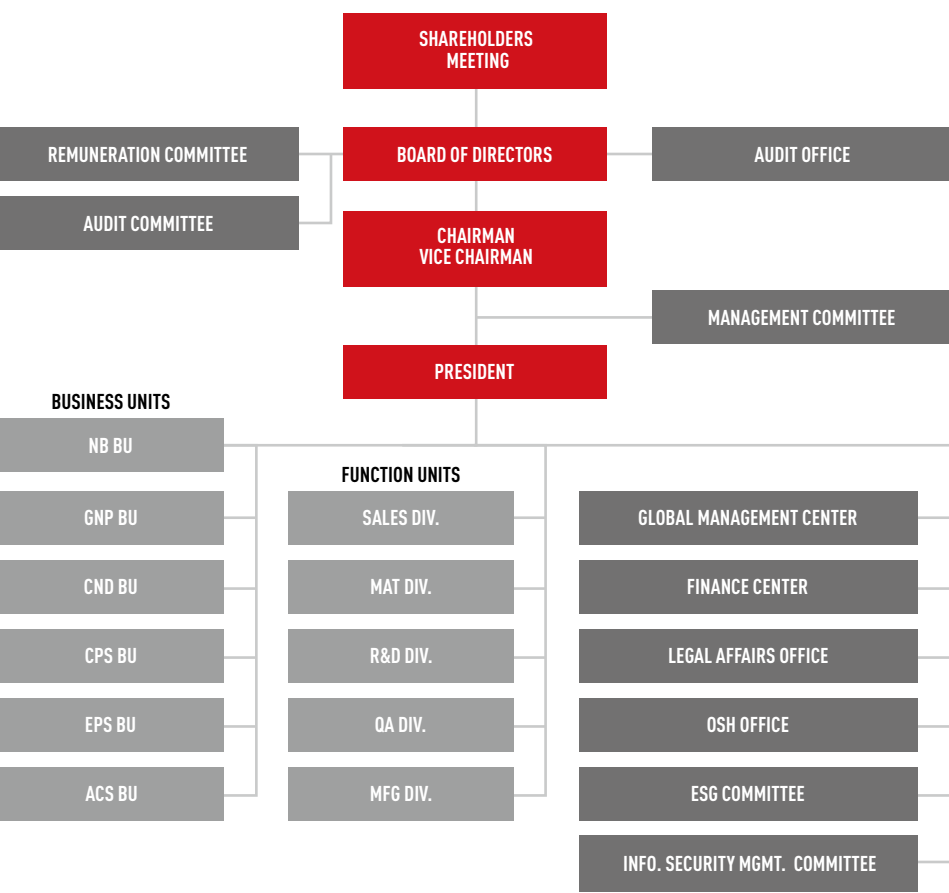


Ranked 17TH of the Best Taiwan Global Brands 2022 by Interbrand.

2.2 Governance structure

MSI cares about ethical management and good corporate governance, and believes that good management and a robust, transparent board of directors shall be the foundation of good corporate governance. The Audit Committee assists the Board of Directors in implementing its supervisory tasks. Besides this, for promotion of corporate social responsibility, the Board of Directors carries out supervision regularly to ensure that corporate social responsibility has been fulfilled.

Corporate governance information has been released on the company’s website, including organization structure, education and experience of governance members, the position and the board of directors concurrently served by governance members, participation in training and advanced studies of corporate governance topic, operation of functional committee, and contact information: <https://www.msi.com/about/investor>



2.2.1 Board of Directors

The Board of Directors is MSI’s top governance unit and major operation decision-making center. The shareholders’ meeting elects competent people for board members based on relevant regulations such as the Company Act. There are 11 current board members, including three independent directors. The composition of board members is diverse. The board members have different professional background and experience in different fields, such as operational judgment, operation management, crisis management, domain knowledge, international market perspective, leadership decision, financial accounting and law. The board members build a complete corporate governance system. Hsu Hsiang is the current President. Huang Chin Ching serves as the Vice President. Board members formulated the “Rules and Procedures of Board Meetings” in a cautious, self-disciplined, responsible and practical way. They shall avoid conflict of interest as required by the rules when executing the business in the Company’s scope of business. The board meeting is held at least once a quarter according to the MSI “Rules of Procedure for Board of Directors Meetings.” The MSI Board of Directors meeting was held six times during this report period. The average attendance rate for board meetings is 100%, including the independent directors.

Percentage of board members

AGE/GENDER	MEMBER OF GOVERNANCE UNIT	
	MALE	FEMALE
30 years old and below	-	-
31 to 50 years old	-	9%
51 years old and above	91%	-

Audit Committee

The MSI Audit Committee consists of three independent directors, responsible for helping the Board of Directors examine finance, audit, accounting and major asset transaction, and ensure that MSI operation meets regulatory requirements. The meeting is held at least once a quarter based on the MSI Audit Committee Articles of Association.” MSI Audit Committee held five meetings during this report period. The average attendance rate is 100%.
*Refer to the shareholders’ meeting annual report of the Company for operation of the Board of Directors in detail.

Remuneration Committee

The MSI Remuneration Committee consists of three independent directors. They exercise due care of a good manager, show professionalism and independence, and reduce the risk of conflict of interest with the Company. The meeting is held at least twice a year based on the “MSI Remuneration Committee Articles of Association.” The MSI Remuneration Committee held meeting four times during this report period. The average attendance rate is 100%.

2.2.2 Environmental and Corporate Social Responsibility Committee (ESG Committee)

The MSI Environmental and Corporate Social Responsibility Committee is composed of multiple departments. The Chairman directs all specialized (concurrent) units for lateral communication. The Committee meets international guidelines, bears the responsibility for promotion of environmental and sustainability topic strategy establishment, examines annual goal of economic, environmental and social aspects, and supervises progress of these goals regularly, and presents the report at the Board meeting depending on the topic at least once a year. In the meantime, all departments and units provide feedback on relevant international regulations, industry dynamics or stakeholder opinions immediately, and report feedback to teams in the Committee. Information is conveyed quickly, effectively, to respond to recurrent sustainable topics.



2.2.3 Information Security Management Committee

The Information Security Management Committee is responsible for management and supervision of information security operation at MSI, prevents theft, alteration, loss or omission of information, and confirms information confidentiality, integrity and accessibility. It expects that management, supervision and promotion of information security effectively enhance information security protection capability of the Company and employee’s awareness of information security protection. We continue to introduce the ISO 27001:2013 Information Security Management System in the head office in Taipei. We accomplish protection of company information by examining confidentiality, integrity and accessibility of company information and technology top-down.



Social engineering drill

The social engineering drill for all employees was completed in 2022. Physical or online education training for employees who opened the phishing email. The education training completion rate is 96.6%. MSI will keep conducting information dissemination and education for employees.

Website penetration test

Numerous information security hazard events have occurred in major companies these years. MSI scanned vulnerabilities and carried out penetration test for the website. After two test stages, all vulnerabilities or risks have been corrected or improved.

2023/4/7 Hacker event description

Parts of MSI's information systems were hacked at the beginning of April 2023. The Information Department activated relevant defense mechanisms and conducted recovery immediately after detecting network abnormality, and reported the abnormality to the enforcement department and information security unit. The affected system resumed operation in a day, having no material impact on finance or business. Refer to MSI's website – News for the relevant news description: <https://tw.msi.com/news>

Information security protection for product development, manufacturing and after-sales service

MSI products meet EU Radio Equipment Directive (RED). To avoid interference incurred from radio spectrum, and avoid information leakage occurring to the product in future, some of our notebook products undergo the CE certification test. Besides this, MSI treats product safety problems seriously. We evaluate and solve problems with all efforts quickly. After receiving the safety problem, MSI will invest adequate resources into analysis and verification, and provide solutions. We welcome and encourage developers and high-end users to disclose potential or confirmed security breaches in MSI products to MSI (Product Security Incident Response Team) PSIRT. After receiving the problem report, MSI will provide the tracking serial number to the reporter in three workdays, assign relevant units to the problem in 30 days, and provide solutions or relevant descriptions in 90 days.

You may report via the following.

 Email: psirt@msi.com



Please refer to Sustainability MSI website for detail:
<https://csr.msi.com/global/product-security-advisories>

2.3 Operating performance

MSI focuses on its original business and develops competitiveness. Since MSI transformed itself to develop the e-sports industry, by focus on the market, resource integration and focused executive power, MSI continues to improve profitability, create good financial performance, and bring up explicit business objectives for investors/shareholders to understand MSI's investment value. Our market performance in the past few years proves that MSI is able to maintain good ROE and reveal capability of sustainable operation. MSI continues to develop more diverse electronic products, business solutions and AioT product services in the IoT era. While operation physique grows steadily, MSI takes the challenge to create economic performance to give back to stakeholders, and boost the Company's investment value.MSI financial information is summarized according to the International Financial Reporting. Standards (IFRS) and attested by an accountant. All business locations comply with the local tax regulations where they are located and pay tax regularly.

Financial and economic value distribution data comes from annual financial statement. Information can be obtained through the following:

 **MOPS** <http://mops.twse.com.tw> (Stock symbol: 2377)



MSI investor information section <https://www.msi.com/about/investor>

Financial performance

The consolidated financial statement of MSI Group is shown below:

ITEM/YEAR	2020	2021	2022
Operating revenue (million NTD)	146,503	201,810	180,411
EBT (million NTD)	9,597	20,631	12,284
EPS (NTD)	9.42	20.03	11.79
ROE (%)	23.92	40.96	20.87

Stakeholder economic value distribution

Unit: Thousand NTD

ITEM/YEAR	2020	2021	2022
Operating cost	125,199,949	163,565,876	154,683,162
Employee salary and benefit	8,192,801	11,408,802	10,088,220
Cash dividend	5,153,623	8,870,990	5,576,051
Interest paid	29,945	19,392	39,627
Income tax expense	1,637,388	3,709,667	2,321,165
Community investment*	19,484	78,174	80,831
Economic value retained (million NTD)	6,269.8	14,157.1	7,621.9

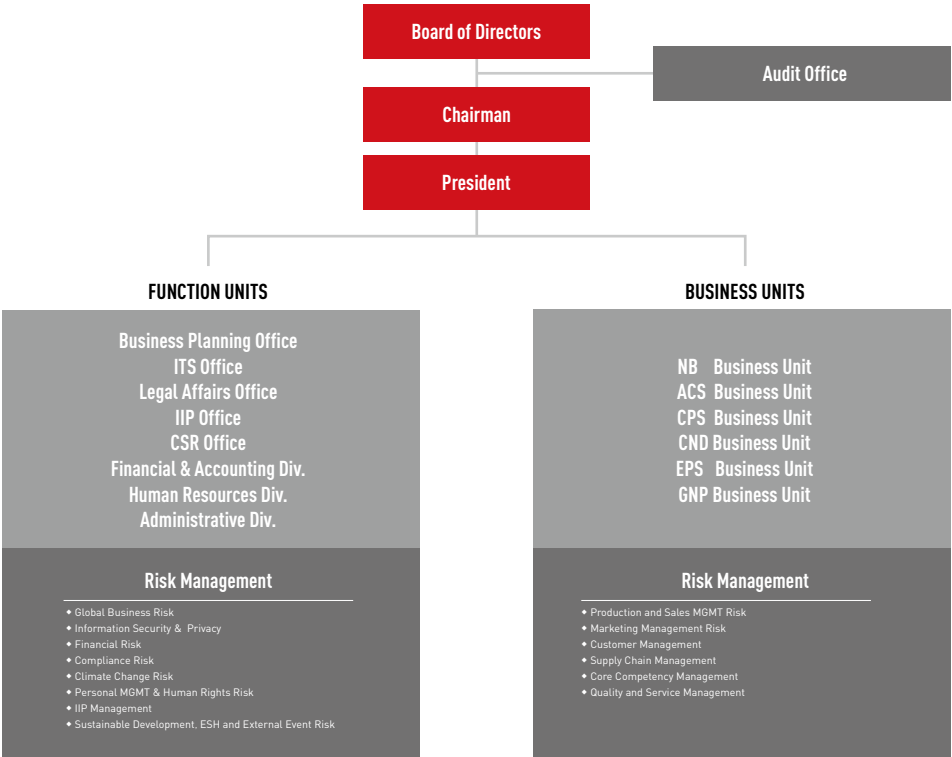
*Description: Amount for community investment has been disclosed as the group combined since 2021.

2.4 Risk management

MSI operates business practically and understands importance of risk control evaluation. To maintain sustainable operation of corporation, and reduce the impact and damage when a corporation faces uncertain risks, the “BCM Procedure” is stipulated to strive to identify and respond to all kinds of potential risks, and put effort into economic, environmental and social sustainable development.

Risk management organization structure

MSI builds systematic risk management based on the existing organization structure and internal control management. It is cost-effective and systematic risk management that can combine with the existing management system, which is advantageous. It is easy to promote the management strategy and countermeasures, and reduce risks of operational crisis incidents.



Risk alert control

MSI assesses all kinds of risk items based on PDCA (Plan-Do-Check-Act) during risk control cycle. The Company adopts management measures such as mitigation, transfer, aversion and assumption under controllable conduct, continues to execute improvement action, and builds adaptability. To carry out risk alert control at MSI, all functional and business units identify the risks covered by these units. Important risk items are listed after sorting, then adequate indicators and implementation measures are set up for these items. The items are managed via regular examination. Continuous rolling review and optimization are carried out for executive performance to ensure effectiveness of protective measures.

Risk Early Warning and Control Matrix

OCCURRENCE FREQUENCY	HIGH	◆ Supplier Management (work hours/ juvenile workers/discrimination) ◆ Occupational health and safety (ergonomic hazards)	◆ Environmental influence (climate change) ◆ Product responsibility (safety and health) ◆ Supplier management (responsible minerals)	◆ Corporate management (market needs, political and economic changes)
	MID	◆ Environmental influence (air, water, dumps, poison, noise) ◆ Financial (information disclosure)	◆ Product responsibility (customer privacy rights) ◆ Human resources (work hours, employee development)	◆ Corporate management (performance, strategy) ◆ Compliance management (legal risk) ◆ Information security risk
	LOW	◆ Compliance with environmental laws ◆ Compliance with social laws ◆ Human resources (complaints, protection of whistleblowers)	◆ Compliance with economic laws ◆ Financial (market, credit, and liquidity risk)	◆ Occupational health and safety (fire safety, chemical substances) ◆ Ethics and good will (bribery)
		LOW	MID	HIGH
INFLUENCE OF RISK				

Risk alert scope and measures

Risk control information analysis executed during this report period ascertained risk factors that might affect operation. We are responsible for risk control and control risks by adjusting the procedure and carrying out execution operation. The outcome of all risk operations is monitored in the management system and indicator setting. Therefore, the chance of damage incurred from risks is reduced and converted to business opportunities. No material risk topic eventually affected corporate operation during the report period. This shows that the existing risk control of MSI has been supervised effectively. Refer to the shareholders' meeting annual report this year for control measures in detail.

*Please refer to 3.2 Climate change response in the report for climate change-related risks.

Business Continuity Planning (BCP) management

The purpose of setting up the BCP is to mitigate the impact of major emergencies in the Company, and reduce the time for service termination. This aims to reduce operating loss, maintain corporate reputation, increase customer satisfaction, protect employees and communicate in crisis. MSI may examine its emergency response plan and execution of response to the incident, and evaluate whether the emergency response plan is perfect, the strength of resilience, and whether the following benefits have been achieved:

- ◆ Protect the company reputation and investor rights.
- ◆ Reduce sudden information and communication interruptions, and ensure normal operation.
- ◆ Create a good workplace, and reduce environmental and operational hazard incidents.
- ◆ Build industrial supply chain management that responds quickly, and boost market competitiveness.

Emergency response drill and items to be improved in 2022 are as follows:

ITEM/FACTORY	MSIT	MSIT1	MSIS	MSIK
Number of drills	3	8	12	6
Goal	3	8	12	6
Items to be improved	① Re-check adequacy of fire broadcasting equipment. ② Staff are suggested to trot instead of walk for evacuation. ③ Call the roll faster. ④ Implement access control on the lane to prevent injury during the drill.	None	Night emergency fire drill shall be adjusted based on actual needs.	More types of drills shall be implemented, such as tabletop exercise (e.g. typhoon).

2.5 Ethics and compliance

MSI’s operation activities conform to laws and market regulations of the countries in which the factories are located. Employees must not provide, promise, require or accept unfair benefits directly or indirectly while doing business, or execute unethical business conduct violating ethics, illegal behavior, or fiduciary duty, in order to obtain or maintain benefits. MSI will continue to draw up ethics-based policies according to honest, transparent and responsible business philosophy. MSI will also build a good corporate governance and risk control mechanism, and create a business environment implementing sustainable development. MSI’s governance unit regularly monitors regulations imposing material impact on operation, pays attention to change of risk, identifies regulations via all business locations, and ensures that MSI’s business activities around the world conform to regulations in different countries. Corruption-related risk assessment is conducted for all of the four MSI factories. Internal control management prevents possible unethical behavior, minimizes risks, and avoids corrupt practice and malpractice.

2.5.1 Ethics and human rights

To fulfill ethical operation effectively, and create a business environment implementing sustainable development, the Company formulated the “Corporate Social Responsibility Guidelines,” “Ethical Corporate Management Best-Practice Principles,” “Codes of Ethical Conduct,” “Work Rules” and “RBA Code of Conduct.” Dissemination and management are carried out regularly. Internal and external grievance channels are provided to listen to stakeholder’s needs and fulfill compliance and ethics of corporate management.

The primary spirit of RBA audit management is to ensure workplace safety for the electronics industry and its supply chain, and make sure that employees are respected, business operation is environmentally friendly, and business management is ethical. MSI RBA development history is as follows:

- 2008: Introduced the Electronic Industry Citizenship Coalition (EICC).
- 2009: Published the “Corporate Social Requirements.”
- 2010: Conducted onsite audit for material suppliers.
- 2015: The VAP audit was executed for MSIS for the first time (V5.1).
- 2019: VAP audit was executed for MSIS (V6.0).
- 2020: The VAP audit underwent MSIS (V6.0). The VAP audit was executed for MSIK and MSIT1 for the first time (V6.0).
- 2021: MSIS, MSIK and MSIT1 passed VAP audit (V7.0).
- 2022: MSIS, MSIK and MSIT1 passed the VAP audit (V7.1).

Education training

As for ethics and integrity promotion, besides new employees having to complete education training courses, we promote and declare the code of ethics and integrity on the internal website and in the contract document, and explain and clarify the concept of ethics and integrity by email occasionally. The concept of ethics and integrity is promoted to all staff of MSI Group, including information security protection, intellectual property protection, anti-corruption, responsible minerals, environmental protection, privacy, and retaliation prevention. We make sure that employees understand the code of ethics they must pay attention to at work and that the Company implements the zero-tolerance policy for ethics violations.

*Refer to 5.2 Cultivation and development in the Report for training outcome.

Ethics and integrity risk evaluation

MSI assesses risks of corruption based on the nature of business. The assessment method is described below:

- ① The anti-corruption commitment letter is signed for anti-corruption declaration and procurement agreement, ensuring that the business contact person and supplier abide by the code of practices.
- ② The management is required to perform Internal Control Self-Assessment (CSA). The internal check is carried out for MSI and its subsidiaries based on the internal control system of the Company. Execution of the CSA is disclosed in the shareholders’ annual report. Refer to 2022 MSI Annual Shareholders’ Meeting Report.
- ③ A corruption reporting channel has been set up to check and control any possible risk of corruption.
- ④ Regular identification and self-assessment of environmental, social and economic regulations.

According to the anti-corruption commitment letter for anti-corruption declaration and procurement agreement during the report period, Internal Control Self-Assessment (CSA), corruption reporting channel, result of identification of environmental/social and economic regulations, ethics and integrity risk for MSI has been controlled adequately. No significant risk has been discovered.

2.5.2 Compliance

MSI’s business and service locations are all over the world. To ensure that we comply with relevant regulations in different countries, we regularly pay attention to domestic and overseas policies and regulatory trends that may affect the Company’s operation and finance. We also report the latest regulations dynamics obtained to relevant departments to make sure that relevant departments of the Company implement the regulations, and set up relevant policies and guidelines via different regulatory requirements.

Relevant conducts include but are not limited to formulation of policies and regulations associated with the Fair Trade Act, environmental protection, financial statement preparation/internal control/insider trading, labor standard, anti-harassment, anti-discrimination, anti-corruption, personal data protection, document management, ethics requirements, intellectual property rights, information security protection, and conflict minerals management. The management policy above is very important to MSI’s management of business ethics and compliance requirement. Besides satisfying the basic business requirements, all employees must understand regulations of the relevant business to make the correct moral judgment and business

decisions. Refer to the table below for the current condition of compliance to relevant regulations during the report period:

CATEGORY	REGULATION INDICATOR	OUTCOME OF CORPORATE SOCIAL RESPONSIBILITY GOVERNANCE
Social	Anti-corruption	There is no profiteering, including violation against code of practices, or impairment of the Company’s rights or interests.
	Anti-competitive behavior	MSI was not involved in improper business activities, such as anti-competitive behavior, antitrust law or monopolistic behavior.
	Compliance	There is no heavy fine or non-economic sanction for violation against social regulations.
	Supplier social impact assessment	There is no occupational accident or economic loss due to violation against operation directions by the contractor.
	Grievance mechanism for impact of social problem	There is no stakeholder filing any grievance about social impact issue through the reporting channel.
Human rights	Non-discrimination	There is no trespass of human rights such as discrimination, infringement of human rights, forced labor or sexual harassment.
	Forced or compulsory labor	
	Human rights practice grievance mechanism	
Environmental	Child labor	No child labor was found to be hired at any business location or by any supplier.
	Effluents and waste	◆ No waste was generated from international shipment or business activity. ◆ No substance leakage causing severe hazard occurred. ◆ All of the results of wastewater inspection at the factory meet local regulations and no severe leakage occurred. ◆ There is no impact on local ecological environment or relevant habitat.
	Compliance	There is no heavy fine or non-monetary sanction for violating environmental regulations.
	Total number of severe leakages and total leakage quantity	No severe leakage of chemical occurred.
	Environmental problem grievance mechanism	There is no environmental impact grievance filed through the stakeholder grievance channel.
Product responsibility	Customer health and safety	No product or service violated health or safety regulations in different countries.
	Product service and labeling	There is no violation against product or service labeling during regulations.
	Marketing communication	◆ There is no violation against advertising, selling or sponsor marketing regulations. ◆ No prohibited or controversial product has been produced. ◆ No product being sold in any specific market has been prohibited.
	Customer privacy	There is no grievance about impairment of customer privacy or customer data loss.
	Compliance	There is no huge fine imposed for violating regulations due to service or product use.

2.5.3 Grievance reporting mechanism

The reporting and grievance response mechanism is established and implemented according to Article 20 of the MSI Ethical Corporate Management Best-Practice Principles and Article 49 of the Code on Corporate Governance. Protective measures are provided for bona fide reporters and relevant investigators to protect them from revenge due to whistleblowing or participating in investigation. In addition, employees may apply for legal and taxation counseling services provided by professional counselors through the Employee Assistance Project (EAP). Employees may also file a grievance through external channels. We are willing to communicate with employees fairly, equally.

When receiving a grievance from the stakeholder, MSI set up the regulations about how the audit office should accept and handle the grievance. The audit executive will instruct subordinates on the way to handle the grievance in three days, and report to the independent director according to the procedure. The number of cases and handling of the case are summarized and reported to the independent directors every year. Refer to MSI website for details.

Corruption reporting channel

Reporting number	MSIT&MSIT1: +886-2-3234-5599 ext. 1606; or +886-2-2227-1606 MSIS: +86-755-28101899 ext. 8802; or +86-755-27637600 MSIK: +86-512-57718888 ext. 1001; or +86-1836-1990252
Reporting mailbox	MSIT&MSIT1: audit@msi.com MSIS: jubao@msi.com MSIK: lian Zheng@msi.com
Reporting address	MSI Internal Audit Office: No. 69, Lide St., Zhonghe Dist., New Taipei City 235030 MSIS Internal Audit Office: No. 37, Tangtuo Avenue, Tangtuo Community, Shiyan Street, Shiyan Sub-district, Bao'an District, Shenzhen City, China 518108 MSIK Internal Audit Office: No. 88, East Qianjin Road, Kunshan City, Jiangsu Province, China 215300

Stakeholder communication channel

Reporting number	0213234-5599
Reporting mailbox	080419864@msi.com
Reporting address	No. 69, Lide St., Zhonghe Dist., New Taipei City 235030

CH3.
CLIMATE ACTION AND
GREEN MANUFACTURING



3.1 Environmental management goal

Environmental management during the report period

Performance of all environmental management items in 2022 are as follows:

MANAGEMENT ITEM	SHORT-TERM GOAL	MID AND LONG-TERM GOAL	OUTCOME COMPARED TO THE PREVIOUS YEAR (2021)	
			ABSOLUTE EMISSIONS/USAGE/GENERATION CAPACITY	EMISSIONS/USAGE/GENERATION CAPACITY OF REVENUE PER MILLION
Scope 1+2 GHG reduction	At least 1% is reduced per year.	It is based on 2007 (113,675 ton CO2e). By 2030, emissions will be reduced by 60%.	-21%	-12%
Fossil fuel energy reduction	At least 1% is reduced per year.		-65%	-61%
Reduction of water resource usage	Total water consumption is 1% less than the previous report year.		-19%	-10%
Waste reduction	Total waste is 1% less than the previous report year.		+15%	+28%
Compliance	Make sure that all business activities at MSI subject to the environmental regulation meet the requirements of the area where the factory is located.		There is no other heavy fine or non-monetary sanction for violating environmental regulations.	
Green power usage	Continue to assess the establishment of self-generated renewable energy and green power purchase.		The power used by the equipment for self-generated solar power is 3,304MWh, 5% of the Group.	
Wastewater emissions	The wastewater emissions test meets regulatory requirements of the area where each factory is located.			
Air testing	Test CO2 and PM2.5 air quality every quarter to see if they meet standards.		Carry out the test regularly and continue to meet regulations or standards.	
Surrounding air and noise pollution test	Test them regularly.			

► Chang Tzu Ching, the Director of the Environmental Protection Administration and Sam, MSI Marketing Vice President when this photo was taken



MSI is responsible for good corporate management, including environmental protection, pollution control and green production. Therefore, MSI introduces the international environmental management system, actively invests in all eco-friendly measures, and sets the management plan and action plan every year to continue to improve executive performance, and reduce impact of operation on the environment and community. We fulfill the eco-friendly commitment, identify potential risks in the environment, and reduce the environmental impact of operation and product based on the environmental management policies and management regulations. We regularly check conformity to regulations and current execution of environmental management, to promote and maintain the environmental management system effectively. Besides this, annual internal/external audit verification ensures that our environmental management is executed according to the PDCA (Plan-Do-Check-Act) Cycle, to make sure that we achieve sustainable improvement. Refer to MSI Sustainability website for management systems such as ISO 14001, ISO 50001 and IECQ/QC 080000, and verification of ISO 14064-1: <https://csr.msi.com/global/management-system-certificate> .

In 2022, MSI was honored the Home-National Enterprise Environmental Protection Award by the Environmental Protection Administration, recognizing MSI’s contribution to energy saving, waste reduction and green manufacturing.

3.2 Climate change response

3.2.1 Climate change risk management and response

With regard to the impact of climate change on electronics industry, risk analysis and extreme event impact are material topics regarding the aspect of disaster. We refer to the Task Force on Climate-Related Financial Disclosures (TCFD) released by the Financial Stability Board (FSB), and abide by the disclosure framework “Governance,” “Strategy,” “Risk Management” and “Metrics and Targets.” We conduct impact analysis on vulnerability and risk assessment in climate and environmental change factors to examine the current protection. Therefore, we can control risk overview and further seek potential chances for development. Furthermore, MSI does not belong to an energy intensive industry. Besides proactively declaring control of GHG emissions, and formulating and signing a letter of commitment, MSI works on daily life and operational process. Control strategies for GHG emissions reduction and response measures for environmental and business impact have been drawn up.

1 Governance: Governance of risk and opportunity related to organization and climate is disclosed.

MANAGEMENT APPROACH	MANAGEMENT ACTION
Climate change-related risk and opportunity	Possible risks incurred from climate change have been included into the scope of corporate risk management. The Vice President for financial accounting and corporate governance supervises the overall management outcome and reports the corporate risk and response measures at the board meeting every year. Refer to 2.4 Risk management for the process and content of risk management in detail.
Evaluate and manage climate related-risks and opportunities.	Environmental and Corporate Social Responsibility Committee: The President acts as the chairman of the top management unit for management of response to climate change. The chairman directs all specialized (concurrent) units for communication on topics, and supervises and examines current promotion of climate change-related topics. The Vice President for corporate social responsibility management reports to the accomplishment of climate change-related topics at the board meeting every year.

2 Strategy: Disclose actual and potential climate-related impact for organization business, strategy and financial planning.

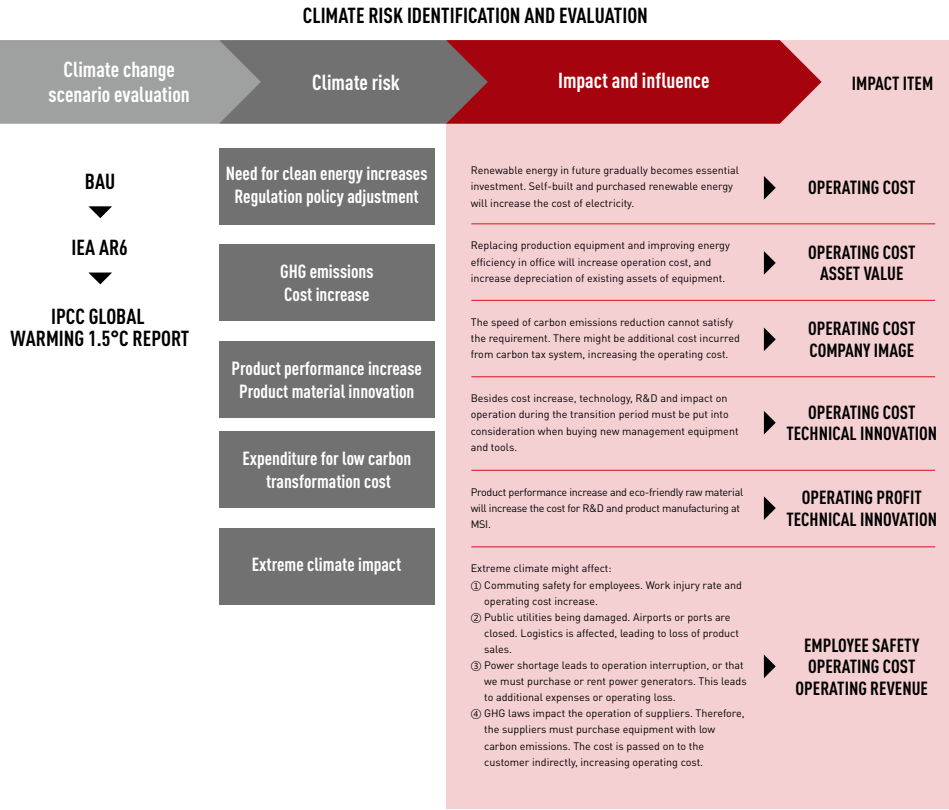
MANAGEMENT APPROACH	MANAGEMENT ACTION					
① Identified short, mid and long-term climate-related risks and opportunities ② Impact of organization's business, strategy and financial planning on climate-related risk and opportunity ③ Consider potential impact of different climate scenarios on the organization regarding the operation strategy.	Considering that it might take longer for the impact of climate-related risk on the organization to become apparent, MSI's target schedule for climate change management is hence five years for the short-term goal, five to ten years for the mid-term goal, and over ten years for the long-term goal.					
	CLIMATE CHANGE RISK AND OPPORTUNITY					
	RISK CONSIDERATION	RISK		OPPORTUNITY		ADAPTATION AND MITIGATION STRATEGY
		IMPACT DESCRIPTION	SCHEDULE	INFLUENCE DESCRIPTION	SCHEDULE	
	Total carbon emissions control	Capacity is limited.	Mid term	Mitigate industry expansion and improve industry nature.	Short term	① Pay attention to relevant changes of domestic and international regulations after the Global Climate Summit and evaluate the response within the corporation. ② Carry out communication and offer suggestions on bills to ensure fairness and rationality of the system. ③ Check and update MSI's carbon emissions regularly to achieve the goal for GHG emissions at the organization. ④ Evaluate feasible technologies and materials to design products and reduce energy consumption of the product.
	Carbon economy (carbon tax/ carbon fee, etc.)	Increase in operating cost	Mid term	Reduce carbon footprint of product, facilitate development of green energy industry, and enhance energy saving technology of corporation.	Long term	
	Voluntary reduction agreement.	Rise of investment cost in equipment.	Mid term	Speed up carbon emission reduction of corporation and strive for quota of carbon rights.	Short term	
	Product efficiency standard.	Cannot meet corporate commitment or regulatory requirements.	Short term	Satisfy the customer's requirements for energy saving products and increase revenue.	Short term	
	Drought	Natural disaster occurrence and severity affect production and operation.	Mid term	Can increase production needs for high adaptation factory.	Mid term	① Save water, increase reuse of rainwater and wastewater, and establish the water resource emergency response measures. ② Evaluate the risk mitigation mechanism for natural disasters incurred from climate change. improve and reinforce factory facilities adequately. Urge the government to improve how public utilities respond to climate risk. ③ Reduce occurrence of natural disaster through business insurance and production emergency response procedure.
	Smog		Short term		Short term	
	Snowstorm		Long term		Long term	
	High temperature/ Heat wave		Short term		Short term	
	Typhoon/ Torrential rain		Short term	Short term		
	Earthquake/ Tsunami		Short term	Short term		
	Rise of energy prices	Pressure when facing the rising energy prices and increase in equipment performance will affect energy and resource use.	Mid term	Improve the production performance of equipment and reduce pressure from operating cost.	Mid term	① Promote energy and carbon reduction at the workplace, set the annual goal for power saving, and continue to execute GHG inventory. ② Evaluate adequacy of supplier. Help the supplier build adaptability when necessary and include the adaptability into the procurement strategy evaluation of the Company. ③ Build a dialogue channel between the public sector and social media, and make goodwill communication.
	Supply chain management	The ability for mitigation and adaptability is poor. The operating cost becomes higher.	Short term	Mitigate industry expansion. Improve industry nature. Drive the growth of value chain. Enhance corporate image.	Short term	
	Economic and political attention	Economic and political change affect corporate profitability.	Long term	Pay attention to climate change development and climate justice movement in the business area. Conduct operation response and adjustment as soon as possible. Mitigate impact on corporate operation.	Long term	
	Currently MSI refers to Assessment Report (AR6) released by (Intergovernmental Panel on Climate Change (IPCC) in August 2021, and evaluates all kinds of physical risks in the scenario of 1.5°C. Meanwhile, we continue to pay attention to the reduction goals, policies and regulations set by governments or regions around the world, and evaluate the impact of reduction goals, policies and regulations on MSI's operation.					

3 Risk management: The organization identifies, evaluates and manages the process of climate-related risk.

MANAGEMENT APPROACH

- ◆ Identification and evaluation process of climate-related risk
- ◆ Management process of climate-related risk
- ◆ Identify, evaluate and manage the process of climate-related topic to find out how to integrate the process into the overall risk management system.

MANAGEMENT ACTION



4 Indicator and objective: The indicators and objectives used by the organization to assess and manage climate-related topics

MANAGEMENT APPROACHMANAGEMENT ACTION

While the organization follows the strategy and risk management process, it assesses the indicators used by climate-related risks and opportunities.	This refers to the indicators for evaluating climate-related risks, including overall electricity intensity, direct and indirect energy consumption intensity, water consumption intensity, and waste generation capacity of product R&D sites and primary production sites.
Disclose GHG emissions and relevant risks in Scopes 1, 2 and 3.	◆ Check the organizational GHG emissions and accept external assurance based on the ISO 14064-1 standard every year. ◆ Disclose partial indirect GHG emissions (Scope 3) according to standard specifications in ISO 14064-1:2018, e.g. indirect emissions related to transportation. ◆ The inventory result is released on the MSI sustainability report and MOPS.
Manage the goal used for climate-related risks and opportunities, and implement the performance of the goal.	◆ The carbon emissions in 2030 is 60% less than the emissions in Scopes 1+2 in 2007. It is 58.9% less by 2022. ◆ Continue to invest in equipment for energy saving improvement in head office and factory. Currently the green power consumption of the Group is over 4.7%. ◆ The performance of all goals is disclosed in the sustainability report.

3.2.2 GHG emissions

MSI has been promoting GHG inventory since 2008 and continues to invest in energy saving, rectification reformation, and equipment replacement. We set the carbon emissions (113,675.33 ton CO2e) in Scopes 1+2 in 2007 as the standard in short run. The goal is to reduce 60% of carbon by 2030. We continue to invest in manufacturing efficiency enhancement, carbon management of operation, and reuse of renewable energy. We expect to forge ahead to the international net zero emissions goal in the long run and make efforts for the mitigation of climate change. By the end of 2022, compared to carbon emissions in the base year, MSI has reduced 58% of emissions, and will set up a more active carbon emissions goal in 2023 based on the route of international scientific carbon emissions.

◆ GHG emissions in the past three years

GHG EMISSIONS MANAGEMENT ITEM/YEAR	2020	2021	2022	GOAL
Scope 1 total GHG emissions (ton CO2e)	1,748	2,003	1,097	The GHG emissions in Scopes 1+2 is reduced by 60% by 2030 based on 2007.
Scope 2 total GHG emissions (ton CO2e)	54,740	57,149	45,627	
Scopes 1+2 total GHG emissions (ton CO2e)	56,488	59,152	46,724	
Changes compared to the previous year (%)	-4.41	+4.72	-21%	Continue to disclose this information every year.
GHG emissions intensity (ton CO2e/revenue per million NTD)	0.386 ▼	0.293 ▼	0.259 ▼	
Scope 3 GHG emissions (ton CO2e)	4,858	6,099	4,903	
GHG emissions intensity (ton CO2e/revenue per million NTD)	0.033	0.030	0.027	

Description:
1. Data of total GHG emissions passed verification by the Bureau Veritas Certification Taiwan (BVC).
2. Source of Global warming potential (GWP): The 5th IPCC evaluation report (2013), and EPA GHG list 6.0.4. Source of power emissions coefficient: Taiwan – Bureau of Energy, Ministry of Economic Affairs, MSIK – Ministry of Ecology and Environment, and MSIS – China Southern Power Grid.
3. Categories of GHG inventory: Carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated chemicals (PFCs), sulfur hexafluoride (SF6), and nitrogen trifluoride (NF3).
4. The goals for inventory item in Scope 3 from 2020 to 2021: Overseas business trips for employees of the head office, downstream goods transportation and delivery at MSIT, waste disposal for factories in Taiwan, LPG usage of restaurant subcontractors of MSIT, and indirect energy emissions from rent space of factories in MSIK. The goals for inventory item in Scope 3 in 2022: Overseas business trips for employees of the head office, downstream goods transportation and delivery at MSIT, waste disposal for factories in Taiwan, LPG usage of restaurant subcontractors of MSIT, and indirect energy emissions from rent space of factories in MSIK.



3.2.3 Energy use and management

MSI energy saving measures

ADJUST ENERGY USE	LIGHTING MANAGEMENT
◆ At the factory dormitories, the solar water heater is used, and the thermal energy equipment of heat pump and recycling air compressor have been built to provide hot water for employees. ◆ Control outlet temperature of ice water and reduce the time for using ice machine, and reduce power consumption. ◆ Execute dynamic inspection regularly. Adjust the air conditioning temperature (set to 26°C).	◆ Execute dynamic inspection regularly. Turn on unnecessary lighting facilities. ◆ Turn off the light during lunch break. ◆ Control lighting of the office after work (except for emergency exit light).
PUBLIC FACILITY MANAGEMENT	ENHANCE PROMOTION OF ENERGY SAVING
◆ Use power saving mode for the printer. Turn off the printer after work and on holidays. ◆ Use power saving mode for the water dispenser. Turn off the water dispenser on holidays. ◆ Manage air conditioning in different areas separately. Turn on the air conditioning depending on usage needs. ◆ Plan to replace energy saving equipment according to the schedule.	◆ The Company provides bonus for improvement proposal and encourages employees to save power. ◆ Promote the concept to all employees (e.g. printed literature and email). ◆ Hold all kinds of environmental activities such as the Earth day, to raise employee’s awareness on sustainability.

Energy use at MSI

At MSI, fossil fuel is only used for company car, boiler, emergency power generator, and cooking at cafeteria in all factories, not used for other business purposes.

◆ Direct energy consumption

FOSSIL FUEL MANAGEMENT ITEM/YEAR	2020	2021	2022
Fossil fuel consumption (GJ)	6,831.2	13,400.7	4,712.2
Changes compared to the previous year (%)	+12.15	+96.17	-64.84
Fossil fuel consumption intensity (GJ/Revenue per million NTD)	0.047 ▼	0.066 ▲	0.026 ▼
Description: Power supply for different regions was unstable in 2021. Diesel generators are often in operation, hence fossil fuel consumption is doubled. In 2022, fossil fuel consumption resumes to the steady, normal level.			

◆ Indirect energy consumption

POWER CONSUMPTION MANAGEMENT ITEM/YEAR	2020	2021	2022
Power consumption (megawatt hour, MWh)	72,337	77,484	68,570
Power consumption (GJ)	267,646.8	286,692.4	253,709.5
Changes compared to the previous year (%)	+5.79	+7.12	-11.5
Power consumption intensity(GJ/Revenue per million NTD)	1.802 ▼	1.405 ▼	1.406 ▲

Renewable energy usage

MSI knows how difficult it is to reduce carbon emissions voluntarily, and ensure eco-friendliness by use of renewable energy. Both of the actions are necessary for net zero emissions in the long run. Therefore, MSI took the lead by installing solar photovoltaic panels at the end of 2020 (panel capacity: 2,274kWp). Parallel generation has been initiated in 2021. In the middle of 2022, MSIK installed solar panels (capacity: 1,936kWp). Renewable energy generation at MSI is as follows:

- ◆ Percentage of renewable energy generation out of the entire power generation in the factory

FACTORY/YEAR	2021	2022
MSIS	7.3%	8.5%
MSIK	-	2.3%

Description: The statistical period for MSIK starts from October 1, 2022.

- ◆ Total renewable energy generation

ITEM/YEAR	2021	2022
Renewable energy generation (MWh)	2,988.3	3,303.7
Renewable energy generation (GJ)	11,056.71	12,223.69
Percentage out of the total power generation of the Group (%)	3.86	4.72

Description: The statistical period for MSIK starts from October 1, 2022.

▼ MSIK installed solar panels



3.3 Green production and manufacturing

MSI always aims to provide high-quality product and service. By establishing the internal procedure and review process, MSI strives for promoting product responsibility management, and sustainable green production. MSI offers safe, secure, sustainable products and increases brand value by good, reliable quality, and Earth-friendly ecology footprints. To ensure that MSI’s products are healthy and safe, all of our main products, including motherboard, graphics card, desktop/laptop/AIO, have been managed according to the management measures below.



MANAGEMENT GOAL	CONSIDERATION	MANAGEMENT MEASURES	OUTCOME DURING THE REPORT PERIOD	FUTURE GOAL
Reduce release of pollutant.	Reduce use of hazardous substance.	We continue to manage and announce all raw materials according to prohibited and restricted substances in RoHS, POP, REACH regulations. Execute hazardous substance management of product at the Green Product Management (GPM) platform.	All requirements have been met.	Continue to manage and assess prohibited and restricted substances every year.
	Meet the IECQ/QC 080000 Standard.	Completed identification of hazardous substance regulation and put applicable requirements under management.	Identified and managed 402 hazardous substances. Obtained IECQ/ QC 080000 certification. Carried out product conformity assessment and risk management according to EU EN IEC 63000:2018 harmonized specifications. Updated the “Green Product Control Specifications” to ver. 14.	Continue to implement the identification result into specifications every year.
Save energy and resource.	Reduce energy and resource consumption, and carbon emissions.	The product box is only available in five sizes, preventing overpackaging and increasing carrying capacity by about 3%.	All requirements have been met.	Assess possibility for optimizing carrying capacity.
		Increase average conversion efficiency of external power supply from 88% to 89%. 80plus bronze products and above are used for internal power supply of the desktop instead. Efficiency is 2% higher than using 80plus white products and above.	Level VI efficiency level is used for all external power supplies. All requirements have been met.	Estimate the possibility for optimizing average conversion efficiency. Continue to use 80plus products.
Easy to disassemble and recycle.	Resource recycling	Reduce the use of composite material. Use a single or compatible plastic material. Increase plastic recycling rate.	Plastic recycling rate reaches 90%.	Increase plastic recycling rate to 92%.
		Label materials for plastic and paper packaging material for recycling and reproduction. Reduce the percentage of the parts and components of the product mostly treated by incineration or landfill.	The labeling rate is 100%. The weight of the parts and components is reduced from 5% of total weight of product to 2.5% and below.	Continue to attach labels. Make sure that the weight of the parts and components stays at 2.5% of the total weight of product.
Waste reduction	Regulatory impact	Identified global waste/recycling regulations. Released internal management regulations and included them into requirements for management.	MSI Green Product Control Specifications – ver. 14	Continue to update regulations.
		The recycling rate of MSI’s electrical and electronics equipment during the report period is higher than 80%, required by EU WEEE.	The recycling rate is higher than 90%.	Meet WEEE requirements.

3.3.1 Sustainable product

Over these years, the world continues to focus more on environmental performance of products in the manufacturing industry. Continuing to integrate environmental elements into product development has become a major trend in the manufacturing industry. Therefore, reduction of natural resource consumption in the product lifecycle and possible environmental impact of product drives MSI to combine factors considered for the environment into product design and development process systematically. While MSI implements policies “reducing release of pollutant,” “saving energy and resource,” “easy to disassemble and recycle” and “waste reduction” into development of all kinds of programs, MSI’s goal is to mitigate environmental impact and increase market competitiveness by following the 3R rule, Reduce, Recycle and Reuse.

Reduce

- ◆ Increase product performance.
- ◆ Reduce the type of packaging material.
- ◆ Reduce the use of packaging material.
- ◆ Mitigate toxic hazard.
- ◆ Reduce carbon emissions from transportation.

Recycle

- ◆ Introduce the PCR plastic and pulp from the market.
- ◆ Reduce the use of composite material.
- ◆ Easy to disassemble and recycle.

Reuse

- ◆ Modular product design.
- ◆ Reuse of packaging material (pallet, SHG crate etc.).

Ecological thinking of product lifecycle

Considering economic and technical feasibility, MSI evaluates product lifecycle based on product lifecycle thinking. The goal is to help us choose the product and service minimizing environmental impact, and help products become friendlier to environment and society.

ITEM/SCOPE	DEVELOPMENT GOAL	STRATEGY
RAW MATERIAL ACQUISITION	Reduce hazardous substance	◆ Use eco-friendly raw material [e.g. halogen free material] - Use renewable material ◆ Forbid use of any halogen flame retardant in the shell and rack of electronic display.
MANUFACTURING	Optimize production technology	◆ Choose green production technology. ◆ Simplify production procedures. ◆ Reduce waste during production process.
TRANSPORTATION	Best logistics management	◆ Reusable packaging material. ◆ Increase transportation efficiency. ◆ Logistics carrier planning. ◆ Logistics distance adjustment.
USE	Improve energy/material efficiency	◆ Reduce energy consumption of the product. ◆ Use less materials and execute modular design.
WASTE	Optimize waste management	◆ Reduce waste for packaging material. ◆ Reduce waste for the body of the product. ◆ Increase recycling rate. ◆ Can be incinerated or buried in landfill safely.

Sustainable action of product sales

While planning for marketing campaign, MSI considers excellent service and environmental strategy at the same time. It mostly adopts the online virtual social media model for lower cost and better outcome. The paper and objects needed for physical offline marketing campaigns are reduced. MSI closely and promptly interacts with consumers, ascertains consumer needs, and offers the most attentive service. We offer green product design and focus on paperless policy. We fully introduced QR Code application, including catalog and printed literature. Customers can obtain product details and services quickly by using the mobile device to scan the QR Code on all products. We significantly reduce paper and ink use to do our bit for environmental protection and carbon reduction for the Earth, and put in efforts to build an eco-brand image.

Most of the language versions of the product manual are available in electronic format, reducing paper consumption, and further reducing impact of logging on GHG.

To reduce ink consumption, full-print four-color printing design on the graphic carton and carton manufacturing of the product is reduced. Eco-friendly soybean ink is used to reduce environmental pollution. The monochrome watermark is introduced to the packaging of desktop, laptop and monitor-related products. Paper waste and volume use are reduced for packaging structure. 75–100% recyclable pulp is purchased as the basic material of graphic carton.

Energy saving of product

Through carbon footprint inventory of the product, we realized that energy consumption during use is a primary source of the carbon footprint of the product. Using existing feasible technologies to improve energy efficiency has become important when considering product design. As for hardware, choosing highly efficient materials and parts can increase energy efficiency of the product. As for software and firmware, performance can be adjusted through different scenario settings, to satisfy effective distribution of electrical energy. Besides reducing the user’s power usage, the carbon footprint of the product can be reduced effectively. The table below lists the efficiency of energy consumption for MSI’s laptop, desktop and AIO during the period.

PRODUCT CATEGORY	MODEL	E _{TEC} *CALCULATED VALUE**		E _{TEC} *MAXIMUM CALCULATED VALUE**		PERCENTAGE OF E _{TEC} SAVED
		(KWH/YEAR/ COMPUTER)	(GJ/YEAR/ COMPUTER)	(KWH/YEAR/ COMPUTER)	(GJ/YEAR/ COMPUTER)	
LAPTOP	MS-13P3	21.60	79.92	36.44	134.83	40.72%
	MS-14F1	16.90	62.53	36.63	135.53	53.86%
	MS-17Q1	73.32	271.284	108.98	403.23	32.72%
DESKTOP	MS-B941	80.00	296.00	129.64	479.67	38.29%
	MS-B929	102.71	380.027	137.34	508.16	25.21%
	MS-B0A6	48.65	180.005	61.48	227.48	20.87%
AIO	MS-AE06	70.23	259.851	77.67	287.38	9.58%
	MS-AF82	75.32	278.684	83.08	307.40	9.34%
	MS-AF83	80.37	297.369	83.08	307.40	3.26%

* Annual ETEC (Typical Energy Consumption): It comes from measuring the power consumption during the theoretical average operating mode (kWh) in the typical usage mode (duty cycle).
** Please refer to the calculation formula of ENERGY STAR 8.0 standards for the formula of ETEC calculated value and maximum calculated value.

3.3.2 Product safety and hazardous substance management

Electronic products contain numerous advanced or rare substances. To facilitate product safety, we evaluate safety cautiously according to global regulations and advice from the industry:

Risk Identification	Risk Characteristics	Risk Management	Risk Communication
Analyze in accordance with the following hazard identification and product assessment: ◆ Legal requirements ◆ Voluntary industry requirements ◆ Influence of the impact of hazardous substances	After the identification and analysis of risk, confirm the level of risk and risk exposure by product category, and describe the assessment of the potential hazards of products.	Basing on the result of the assessment on the characteristics of product hazards, we take appropriate risk management measures on relevant products.	The MSI provides various information sources for stakeholders to help them understand the potential risk of each category of products, including: ◆ SDS(Safety Data Sheet) ◆ Note to waste of products. ◆ Note to product safety.

During the report period, all of MSI’s products are evaluated as meeting laws and regulatory requirements in all countries. Specific labeling of safety, environmental aspects or substances have been completed. Meanwhile, we keep updating the “MSI Green Product Control Specifications.” MSI voluntarily tests or declares products to obtain external authentication to make sure that users feel secure.

Scope of application for product for product safety evaluation:

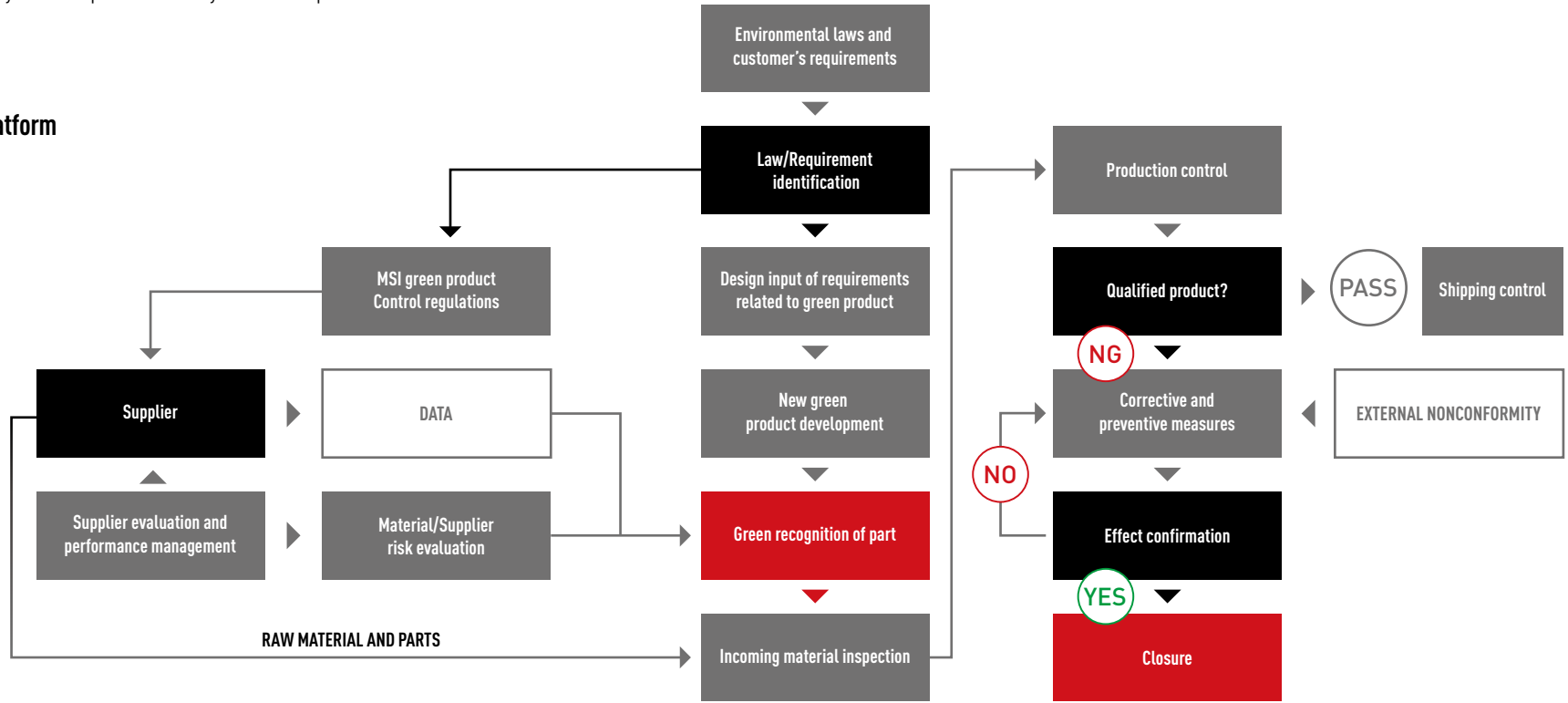
IMPACT CATEGORY	SCOPE OF APPLICATION	EVALUATION ITEM	EVALUATION CONTENT
Safety	Computer system	Safety standard	Electromagnetics, safety standard, radio frequency
	Equipment ermal	High-Definition Multimedia Interface (HDMI) certification Universal Serial Bus (USB) certification	Safety for hardware terminal
Health	Parts and components of the product	Hazardous substance control	Environmental hazardous substance management
	Battery product	Waste battery management	
	Parts and components of the product	Chemical Substances Control Law (CSCL) Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)	
		Persistent Organic Pollutants (POPs)	
Environmental protection	Packaging material	Directive on Packaging and Packaging Waste (PPW)	Percentage of disposal and recycling of used item
	Computer system	Packaging material labeling	
		Waste Electrical and Electronic Equipment (WEEE) Directive	
	Packaging material	Directive on Packaging and Packaging Waste (PPW)	
	Battery product	Labeling of waste battery	Energy efficiency rating
	Computer system	Energy-relating Product (ERP) Directive	
		Energy Star	
		Energy efficiency of California Energy Commission (CEC) Energy efficiency of external power supply specified by the United States Department of Energy	
		Minimum Energy Performance Standards (MEPS)	

Substance management

MSI considers the negative environmental impact incurred from production and operation, and commitment to eco-friendly material use, and conforms to regulations and customer requirements at the same time. We require suppliers and internal units to strictly abide by MSI's "MSI Green Product Control Specifications." In the procurement contract, it is explicitly specified that products or services provided by suppliers must comply with and fulfill relevant environmental requirement specifications. We expect to facilitate the responsibility for complying with regulations, and mitigating the impact on environmental ecosystem. We expect to offer eco-friendly products to consumers. Since 2010, MSI has established the Green Product Management (GPM) platform. Suppliers can convey and declare hazardous substance information via this online management system. MSI's internal management units analyze and examine information to ensure final compliance of products. In the meantime, MSI conveys the latest international regulation information and MSI's green products to suppliers through this platform. In the internal units of the Company, the omissions occurred from data under manual control are reduced, and the time for repetitive work is reduced.

In 2022, to enhance the function and performance of the GPM system, MSI collaborated with an external professional software company to develop a new GPM system and expects to launch it in mid-2023.

◆ Illustration for GPM platform



Achievement of GPM platform during the report period

- ✓ There was no penalty, fine, sales ban, return or complaint incurred from any product or service violating environmental regulations.
- ✓ Up to 1,095 suppliers promised to comply with environmental requirements and signed MSI's "Guarantee of Complying with Environmental Requirements."
- ✓ 181,992 entries of acknowledgement to part management were completed.
- ✓ Qualified suppliers completely executed management by using environmental standards.
- ✓ There are 256 substances in the report (including REACH Substances of Very High Concern (SVHC), standards in different industries, and substances required by customers).

Management of halogen-free flame retardant

While selecting materials for product development, besides complying with existing regulatory requirement of hazardous substance, MSI actively manages substances that potentially impact the environment. In addition, MSI is committed to using less SVHC and potential risk substance. Halogen flame retardant (BFR/ CFR) is not a prohibited and restricted substance specified in the existing regulation, but it poses a certain degree of potential negative risk to the environment, ecology and human. Therefore, MSI particularly divides green feature of material into halogen and halogen-free (HF) material for control, and continues to evaluate and increase the possibility for using halogen-free material. In the early stage of design, we has been cautiously evaluating and selecting low-hazard raw materials, and provided innovative, green sustainable products to customers. Currently we are starting to plan for and implement halogen-free flame retardant considering controllability of the material of the product, and economic value, endeavor to reduce hazardous substances, and offer diverse eco-friendly products to customers. As for now, all the circuit boards MSI has used contain halogen-free flame retardant. MSI also continues to use less hazardous substances for other products.

ITEMS FOR MANAGEMENT OF HALOGEN-FREE FLAME RETARDANT	OUTCOME DURING THE REPORT PERIOD	FUTURE GOAL
Use of halogen-free flame retardant in the Bill Of Material (BOM)	Achievement rate: 80%	◆ Higher than 2% every year ◆ Increases to 85% by 2025 (base year: 2018)
Implementation of circuit board that contains halogen-free flame retardant	Achievement rate for laptops: 100% Achievement rate for graphics card: 100% Achievement rate for motherboard: 65%	◆ Achievement rate for laptop products: 100% ◆ Achievement rate for graphics card products: 100% ◆ 100% achievement rate for halogen-free material of motherboard by 2025 (the goal has been reset after 65% of the former goal has been achieved in 2021)
Halogen-free flame-retardant plastics is used for the shell of AIO and shell/ rack of graphics card.	Achievement rate: 100%	Continue to execute implementation every year.

3.3.3 Water resource management

Considering clean production and environmental protection, no-water process is adopted for all products from all of MSI's factories. Primary water consumption is domestic water use of employees. Only domestic sewage will be generated. 100% of the water source for domestic water is municipal water supply (tap water). No water from rivers, lakes, underground water system or oceans is used, hence there is no significant impact on water sources or community water use.

Water resource management strategy and commitment

MSI is committed to continuing to supervise water resource use and improve sewage discharge quality to avoid wasting water or impact on water resource. For the time being, MSI strives for optimization of water efficiency and water resource management measures. For evaluation of equipment replacement, water saving devices are prioritized to avoid wasting water. MSI also promotes water saving to employees.

Risk identification and response measures for water resource

RISK IDENTIFICATION	RISK CONSIDERATION	RISK DESCRIPTION	RESPONSE MEASURES
Regulatory requirements	Management of wastewater discharge quality becomes strict.	Wastewater discharge quality is poor. Risks of penalty by the government and protest from stakeholders increase, impacting corporate image.	◆ Test wastewater regularly and ensure that water quality of wastewater meets requirements. ◆ Continue to evaluate the feasibility for introducing new wastewater treatment technology to factories.
	Water conservation charge	Excessive water consumption increases operating cost and affects corporate profits.	◆ Popularize water saving education. ◆ Water use during business activities in MSI is primarily domestic water. The water consumption is low and has an extremely small effect on operating cost.
Climate change	Water resource shortage	The risk of infectious disease incurred from water resource shortage increases, affecting operation of the Company. It's hard to allocate water resources, affecting overall operation of supply chain.	◆ Evaluate to introduce other water resources. ◆ Reinforce promotion of public health. ◆ Evaluate the alert mechanism of water resource. ◆ Build the second or remote supply chain.
	Typhoon and torrential rain	Typhoon and torrential rain occur more often and become stronger, impacting response and recovery of disaster prevention system.	◆ Build the water gate. ◆ Establish the emergency. response plan and the response team. ◆ Check the location of the factory and evaluate information on nearby waters to reduce the risk of river flooding.

Water resource management information during the report period

As for sewage management, sewage control equipment is available at MSIT and managed by specialists. Discharge under supervision is executed regularly. Wastewater generated is discharged to the sewage management system. MSIT1 is a rented factory. Sewage treatment equipment is available at MSIT1 and passed the regulations by competent authorities. Eventually sewage is discharged to the sewage treatment plant in Guishan Industrial Park. Sewage from MSIK is directly discharged to the sewage treatment plant in Kunshan. All sewage is treated by the sewage treatment plant. The reclaimed water system is available in MSIS. Recycled water is used for watering plants and restroom. All MSI factories are in the industrial park, not in ecologically sensitive areas. All the results of wastewater examination meet local regulations. Factories have no severe impact on local surrounding ecological environments or relevant habitats.

ITEM/FACTORY	MSIT	MSIT1	MSIK	MSIS
Factory	Zhonghe District, New Taipei City	Guishan District, Taoyuan	Kunshan City, Suzhou City	Baoan District, Shenzhen City
Water resource	Feicui Reservoir (Xindian River)	Shimen Reservoir (Dahan River)	Taihu Lake	Dongjiang Lake
Quantity of water intake (tap water)	52.79	19.93	178.85	625.51
Quantity of water intake (underground water)	Unused			
Quantity of water intake (surface water)				
Quantity of recycled water	N/A	N/A	N/A	90.61
Discharge quantity	30.08	15.95	143.08	322.64
Quantity of water consumption ²	22.71	3.99	35.77	302.87
Overall water resource risk ³	Low – Medium [1-2]	Low – Medium [1-2]	Medium – High [2-3]	High [3-4]
Is this a risky factory? ⁴	No	No	No	Yes

Unit: Million liters; description:

- ① Wastewater from MSIK is directly discharged to the specified wastewater treatment plant in the local industrial park (no flow meter was established). The quantity of sewage discharge is estimated to be 80% of water consumption.
- ② Quantity of water consumption = Total quantity of water intake - Total discharge quantity.
- ③ This table is based on information analyzed according to Aqueduct Water Risk Atlas by World Resources Institute.
- ④ The risky area indicates the factory with water stress. Riskiness is judged based on reliability, overall water resource risk, and output value.

Statistics on water usage

POWER CONSUMPTION MANAGEMENT ITEM/YEAR	2020	2021	2022
Total water consumption (million liters)	1,005.840	1,086.426	877.089
Changes compared to the previous year (%)	+6.68	+8.01	-19.27
Total water consumption intensity (thousand liters/revenue per million NTD)	6.87 ▼	5.38 ▼	4.86 ▼

Statistics on reclaimed water recycling during the report period (MSIS)

RECLAIMED WATER RECYCLING MANAGEMENT ITEM/YEAR	2020	2021	2022
Quantity of reclaimed water recycled by MSIS (million liters)	110.834	92.58	90.6
Percentage of quantity of reclaimed water recycled by MSIS to total water consumption (%)	11.02	8.52	10.33
Intensity of quantity of reclaimed water recycled by MSIS (thousand liters/revenue per million NTD)	0.76	0.46	0.50

3.4 Pollution and waste

When MSI aims to develop high-quality, diverse electronic products, it also endeavors to enhance environment quality and solve pollution problems during operation. We continue to improve production technology, optimize treatment procedure, reduce the cost for environmental treatment, and abide by regulatory requirements for pollution control.

Air pollution control

Air pollution at MSI comes from VOCs generated from auxiliary materials during the production process (solder, flux, etc.) Exhaust gas during the production process is treated through the exhaust gas control equipment (e.g. activated carbon adsorption device). All the discharged gas complies with air pollution control laws and air pollutant emission standards. Air quality is monitored regularly to ensure effectiveness of air pollution control measures. Furthermore, we did not use any ODS during the process. No gaseous pollutant such as nitrogen oxide or sulfur oxide was emitted.

MANAGEMENT GOAL	MANAGEMENT MEASURES	POLLUTION CONTROL
Optimize indoor air quality.	◆ Reduce storage and use of high volatile and toxic material. ◆ Use alcohol for cleaning instead of cleaning naphtha. ◆ Use of products released from organic solvent in enclosed operating area and office area is restricted.	◆ Air interchange is executed at the process and office area regularly to maintain air quality. ◆ Walk around to monitor and manage the area occasionally (e.g. CO2, PM2.5) to maintain air quality. ◆ Clean and replace the filter regularly to maintain air quality.
Air pollutant emissions control for the surrounding of the factory	◆ Use low-sulfur fuel for emergency generator. ◆ Improve pollution emissions process.	◆ The equipment for activated carbon adsorption treatment has been established. ◆ Regular ambient air test.

Wastewater emissions management

MSI complies with environmental regulations. Sewage from MSI is primarily domestic sewage and it is always discharged through the sewage treatment system. (Sewage from MSIK is discharged directly to and treated by wastewater treatment plant in Kunshan. It will be discharged after being treated and it meets discharge requirements.) Wastewater control is executed through real-time supervision treatment equipment. Water is treated, released and discharged when it meets relevant requirements. The supervision unit performs sampling inspection for wastewater quality occasionally. The wastewater quality always meets the standard. Sewage discharge quality for all factories during the report period complies with the regulations. The supervision unit performs sampling inspection for wastewater quality occasionally. There is no significant impact on receiving body of discharged water. In addition, no major leakage or overflow occurred at any factory.

[illegible]

Waste management

To prevent pollution, fulfill producer responsibility, and satisfy international environmental requirements, MSI takes use, disassembly, recycling and low toxicity into consideration for product design, to reduce quantity of waste treatment and recycling difficulty and improve environmental performance. Qualified local vendors are selected for each factory to execute outsourced corresponding waste treatment. Waste generated from our operation is divided into general and hazardous business waste, and managed according to the environmental management system. Generation, sorting and collection, recycling, removal and disposal of waste is managed and recorded properly.

WASTE ITEM		AMOUNT OF WASTE GENERATED IN 2022 (KG)	TREATMENT MEASURES
Non-recyclable waste	Hazardous business waste	168,574	We entrust qualified waste treatment companies to carry out recycling, heat treatment, incineration or landfill, to prevent secondary environmental pollution.
	General business waste (non-recyclable household waste included)	5,619,841	
Recyclable waste		3,935,275	

Description: Hazardous waste refers to business and medical waste.

Besides unpreventable natural disaster and unpredictable change of operation, we will aim to adjust process and sorting management, reduce unnecessary waste, and manage waste product under controllable conditions to achieve our goal.

WASTE MANAGEMENT ITEM/YEAR	2020	2021	2022
Quantity of waste generated (kg)	6,977,645	8,478,178	9,723,690
Changes compared to the previous year (%)	+15.38	+21.5	+14.7
Intensity of the quantity of waste generated (kg/revenue per million NTD)	47.63 ▼	42.01 ▼	53.90 ▲

Surrounding noise control

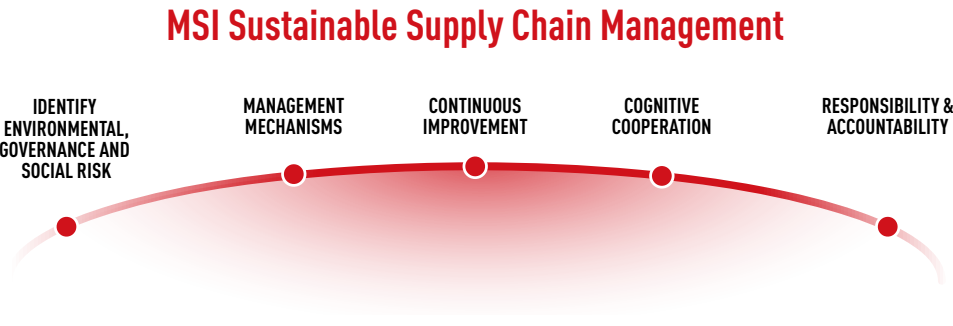
MSI monitors and manages surrounding noise, and authorizes the testing unit to measure surrounding noise every year. Noise from the activity and equipment in the factory is monitored continuously to meet the legal surrounding noise level in the environment. All of our factories are in the industrial or science park. All of the test results meet the regulatory requirements. We can make sure that the nearby community remains quiet.



CH4.
RESPONSIBLE MANUFACTURING
AND CUSTOMER SERVICE

4.1 Supplier management

MSI’s products currently include motherboard, graphics card, server, desktop, laptop, automotive electronics, display, chassis and AMR, covering numerous consumer electronics and professional computer peripheral products. These products are in the midstream and downstream section of supply chain. Upstream partners include the suppliers for semiconductor, metal and plastics elements, and software program. Midstream partners include the suppliers for power supply, heat sink device, chassis, and other input and output equipment. Please refer to MSI’s shareholders’ meeting annual report for more information on supply chain and industry.



MSI holds fast to philosophy of kindness in business. We will treat supply chain partners as a part of sustainable operation. MSI sets a good example by taking corporate social responsibility and further extends the requirements for consubstantial management. In light of this, MSI extends sustainable development strategies to supplier collaboration, elaborates its influence as an industrial leader, drives growth and transformation of its suppliers, and develops sustainable supply chain with suppliers.

Sustainable Supplier management

With regard to supply chain management, besides quality, cost, and lead time management time standards, MSI drew up the evaluation standard and agreement for current and new suppliers according to international code of conduct and regulations (e.g. RBA, International Labor Organization (ILO)). As for labor, health and safety, environment, code of ethics, management system and compliance, suppliers are required to execute stewardship and adhere to local regulatory requirements. We occasionally inspect and audit suppliers occasionally, hold supplier conference or implement real-time GPM system to continue to track supplier’s conduct and promote sustainability to suppliers.

We develop a sustainable supply chain from existing supply chain management. From the procedures in the management process, including environment identification, governance and social risk, management mechanism, continuous improvement, technological cooperation, and responsibility and accountability, we continue to deepen and communicate on sustainability. Corresponding management measures are established for existing and new suppliers. We check management implementation according to occasional audit to achieve win-win growth.

MANAGEMENT GOAL	MANAGEMENT MEASURES	OUTCOME DURING THE REPORT PERIOD	FUTURE GOAL
Do not use conflict minerals.	- Carry out investigation according to the due diligence structure of the Organization for Economic Cooperation and Development (OECD). - The resource from the Responsible Minerals Assurance Process (RMAP) provided by the Responsible Minerals Initiative is adopted every year to help MSI’s suppliers purchase raw materials that are not conflict minerals.	None of the conflict mineral is used.	
MSI’s corporate social responsibility requirements for suppliers	- Supplier survey evaluation - Supplier promotion or training - Critical supplier onsite inspection	Completely comply with requirements	Continue to promote carbon reduction in supply chain, reduce emissions in Scope 3 for MSI, and set the sustainable goal for supply chain.
Management mechanism	- Execute management and communication through the procurement department and GPM system. - Set up the complaint reporting mechanism. Set the internal audit office as the reporting contact.	No relevant negative issue occurred.	
Continuous improvement	If there’s a concern that the supplier might violate corporate social responsibility requirements, the supplier is required to make improvements within a limited time period and accept occasional inspection.	No material weakness was discovered.	
Perception collaboration	- Share training resources with suppliers. - Perform onsite inspection and interaction and achieve a co-development relationship.	Completed.	
Responsibility and accountability	- Offer improvement advice to suppliers. - Provide surveys to suppliers for them to examine their implementation and set the improvement goal.	Completed.	

Refer to MSI Sustainability website for policy and code of conduct of supplier: <https://csr.msi.com/tw/supplier-policy>

Supplier risk identification

We evaluate the business environment, corporate quality, service level, cooperation compatibility and supply availability for critical suppliers and identify risk issues related to MSI. Evaluation is carried out through stakeholder negotiation, international organization initiative and customer requirement, and based on strategy, agreement fulfillment, market, performance and needs of supplier. Based on risk identification procedure, including the category of supplier’s industry, location and substitutability, we set up risk ranking of supplier via identification result of risk evaluation item. High risk suppliers will receive regular and occasional audit or examination. We will continue to guide them, track their improvement progress, and reduce the management risk of supplier.

◆ Identification requirement for MSI’s critical suppliers:

- ✓ Percentage of amount from high purchase and sales

✓ Product exclusivity

✓ Ability for fulfilling sustainable operation
- ✓ High technical threshold

✓ Category of high pollution process

✓ High labor intensity

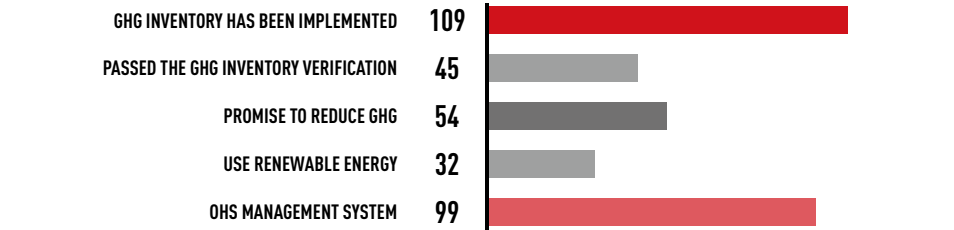
EVALUATION ASPECT	ECONOMY	ENVIRONMENT	SOCIETY
Sustainable risk	Compliance Ethics and integrity Product exclusiveness Quality, lead time and cost	Compliance Management system Climate change adaptation Waste management	Health safety Human rights management Conflict minerals Work hours of labor practice
	IC	Panel, wire and plastic mechanism	
Supplier category	PCB		

◆ Management measures for high risk critical supplier:

MANAGEMENT MEASURES FOR HIGH RISK SUPPLIER	
Business continuity management	- Integrate company needs. Require suppliers to set up the response procedure and plan for the natural or anthropogenic hazards incurred from product and service to ensure uninterrupted operation. - Build a flexible multilateral supply chain to avoid exclusive supply channels threatening operation of overall supply. - Implement flexible contract management. Negotiate flexible terms. Execute the contract in different sections. Reduce huge operating loss caused by market price fluctuation.
Sustainable environmental management	- Suppliers are required to build the emergency reporting mechanism for natural disasters, to report the condition immediately and continue to update the recovery progress when a disaster occurs for MSI to keep track of recovery. - Suppliers are required to prepare response measures, e.g. remote production and inventory increase, to reduce impact incurred from natural disaster, violation incidents and hazardous events. - Adhere to environmental regulatory requirements. Provide product and services produced from clean production. Fulfill requirements for environmental management system.
Compliance with the code of conduct	- Prohibit any conduct violating the code of practice, and establish the mechanism for confidentiality of the identity of the informant and respondent. - Suppliers are required to formulate and fulfill the management standard by referring to international initiatives for labor and human rights (e.g. RBA, OECD Guidelines for Multinational Enterprises on Responsible Business Conduct). Their basic requirements must be the regulations of the location where their factory is located. - Ensure business information confidentiality and storage. Suppliers are required to abide by business assets and intellectual property rights of both parties. - In order to guarantee human rights and comply with regulation policies, suppliers shall fulfill their management responsibility and execute investigation, to make sure that raw materials and products are not from ore plants and smelters carrying out illegal mining.

Sustainable investigation on suppliers

In 2022, it is the first time we conduct environmental and social sustainable investigation on critical suppliers. Sustainable performance of 209 critical suppliers is as follows:



In 2023, MSI will continue to communicate with critical suppliers. MSI proposes a guidance plan to supplier partners with higher risk of carbon emissions, help them complete GHG emissions inventory, offer advice on energy equipment improvement, and sets a short-and mid-term goal for carbon emissions in future. MSI works with suppliers to accomplish product lifecycle manufacturing with low carbon emission and sustainability, and do their part to mitigate climate change.

4.2 Responsible minerals management

Continuing to improve the way to express ethics, environmental and social performance is essential for MSI to show good governance to stakeholders. Through regular due diligence in the Responsible Minerals Assurance Process (RMAP) carried out by the Responsible Minerals Initiative (RMI), we require suppliers to purchase non-conflict raw materials, and avoid using conflict minerals, which indirectly infringes human rights behavior and violates national or international law.

Conflict minerals management

MSI respects international human rights and fulfills corporate social responsibility. Therefore, MSI avoids using minerals from sources of armed conflict and human rights infringement for products. Besides the statement of conflict minerals, MSI’s internal unit drew up the “Conflict Minerals Management Guidelines” to investigate and control conflict minerals. Every year we use the Conflict Minerals Reporting Template (CMRT) to investigate the smelter qualification of suppliers and track the progress of signing, to manage the supply chain effectively and reduce the risk of breach of contract. If any supplier does not reply, we continue to guide the supplier to fill out the form and urge them to reply based on the level of management risk.

Refer to MSI Sustainability website for information (conflict minerals policy, due diligence measures, and smelter list statement): <https://csr.msi.com/global/responsible-minerals>

CONTROL ITEM	IMPLEMENTATION MEASURES	CONTROL GOAL	OUTCOME DURING THE REPORT PERIOD	FUTURE GOAL
Commitment signing by suppliers	Signing of procurement agreement, green product control specification, electronic industry code of conduct agreement, and corporate social responsibility requirement	Signed by all suppliers	100% achievement rate	Signed by all new suppliers
Management document	Conflict Minerals Management Guidelines	Establishment of management guidelines	Completed.	Continue to pay attention to the management and check update for management items.
Conflict minerals investigation action	Distribution of Responsible Minerals Initiative (RMI) – Conflict Minerals Reporting Template (CMRT)	Complete collection at the end of every March.	91.6% of smelters are qualified. We strive to make sure that the rest of them will be qualified.	Keep qualification rate at least 90%.
	Due diligence analysis	Analyze the surveys from suppliers.	All the minerals used are RMI-certified mineral factories.	Keep qualification rate to 100%.
Disclosure of due diligence information	Conflict mineral report of company level	The CMRT company level report is provided starting from April every year.	Information has been provided to customers in need.	It is provided in April every year.
	The investigation result is disclosed on the official website.	The list of smelters used for the products is disclosed starting from April on MSI’s website every year.	It has been disclosed on the official website.	
Disqualified supplier	Nonconformity management procedure	Establishment of management procedure	No disqualified supplier was found.	Continue to make sure that products are qualified.

Cobalt investigation and management

MSI must adapt to energy saving and carbon reduction around the world, and the development of various consumer electronics and automotive electronics. Batteries are the core element of these electronic products. Cobalt is one of the essential metals for producing lithium-ion batteries. However, cobalt sources are chaotic and highly controversial. Half of cobalt is from the Republic of Congo. The deplorable working condition and child labor exploitation of the local mining industry has caught the attention of human rights organizations. Therefore, since 2018, MSI has required suppliers of materials containing cobalt to disclose the smelter providing the cobalt, to make sure that the mining source of suppliers has not violated human rights.

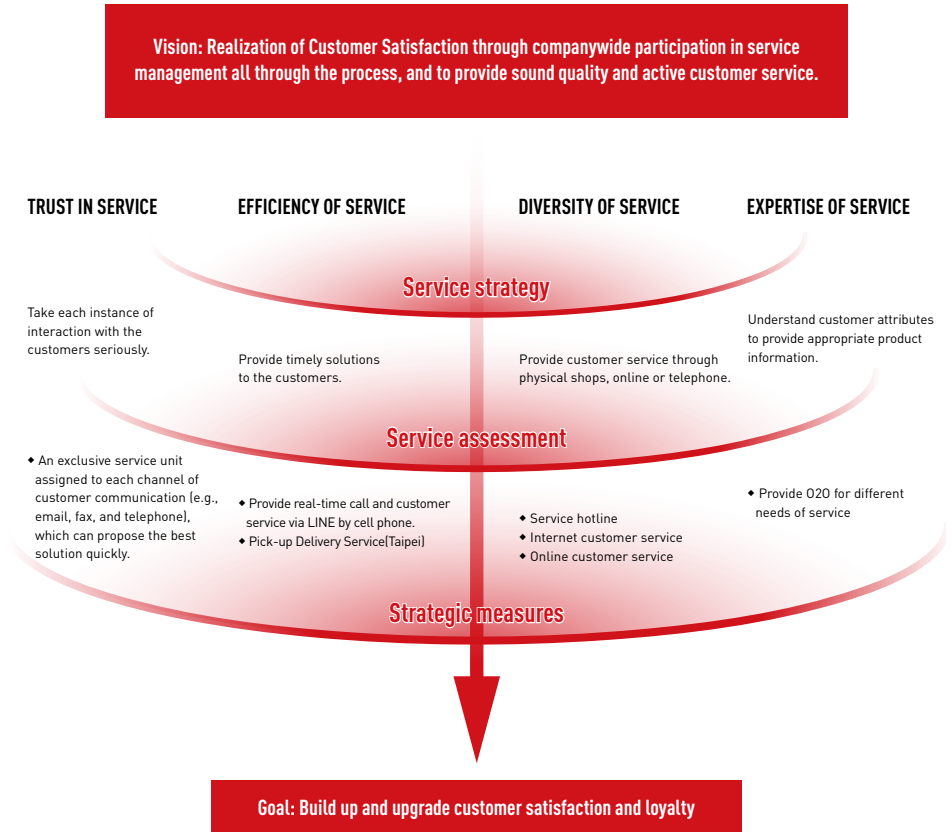
CONTROL ITEM	Cobalt metal mineral investigation action
IMPLEMENTATION MEASURES	Distribution of Responsible Minerals Initiative (RMI) – Cobalt Reporting Template (CRT)
CONTROL GOAL	Complete collection at the end of every March.
OUTCOME DURING THE REPORT PERIOD	The response rate is 90%.
FUTURE GOAL	Continue to update regularly.



4.3 Customer service and privacy

4.3.1 Customer service

Through feedback such as encouragement/complaint from the customer service, and positive/negative opinions, we evaluate customer satisfaction based on product value, staff service, service environment and overall performance to create a good service experience.



We focus on promoting customer engagement. Our services are highly connected to customers. By listening to customer needs, improving the process and offering real-time response, we build a robust, lasting customer relationship, and increase customer loyalty. This helps drive customer engagement, reduce service cost and increase company profits.

Product after-sales service

MSI has over 6,500 service distribution locations in over 120 countries, offering convenient local product sales and after-sales service support to consumers. Our service locations offer excellent services such

as exchange, testing, technical counseling, accessory purchase and free laptop health-check-up. Besides visiting local repair centers, global customers can search for information on technical problems, track repair progress, report repair online and fill out customer satisfaction survey through the online repair information system.

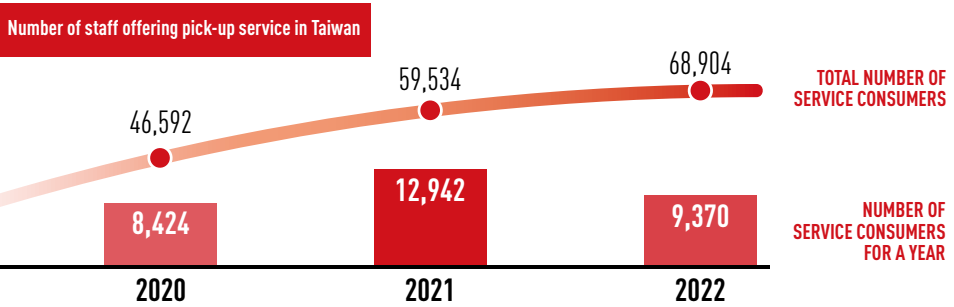
After-sales channel:

- ✓ Customer service hotline: +886-800018880
- ✓ MSI forum
- ✓ MSI member
- ✓ Online customer service system
- ✓ Service distribution location
- ✓ Real-time online customer service

Pick-up service in Taiwan

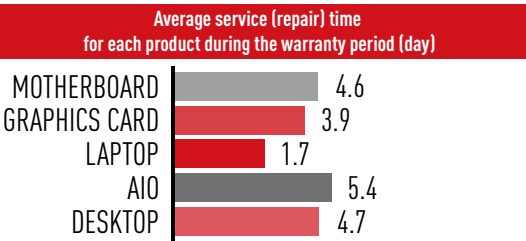
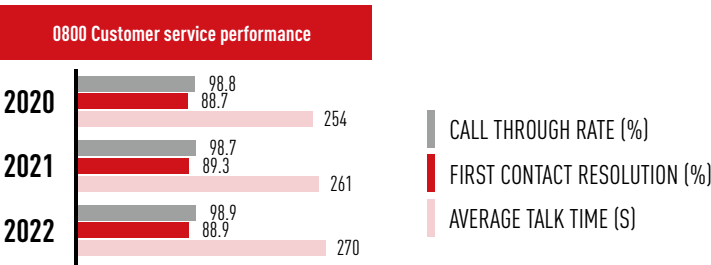
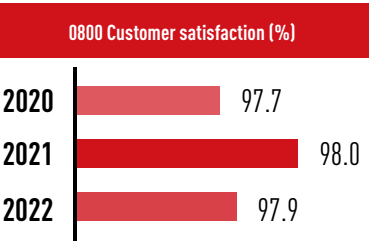
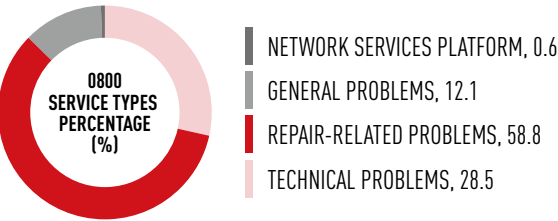
We offer pick-up service for certain products to consumers in Taiwan. Consumers can send products for repair at home. After sending products for repair, we contact the consumer for repair progress, notify the consumer when the repaired product will be sent back to the consumer, care about how the consumer feels about the product, and troubleshoot abnormalities immediately. Meanwhile, we interview the consumer to determine what the consumer thinks and obtain advice from consumers on MSI’s service as a reference for enhancing customer service quality. 68,904 consumers have been served from 2015 to 2022. By including consumers using the FamilyMart pick-up service, ended in July 2020, over 123 thousand consumers have been served since 2012.

Based on sales region and product type, we offer after-sales technical service support through online digital and physical stores. After service is completed each time, we offer satisfaction survey depending on customer’s will. (Satisfaction survey is adjusted dynamically, depending on the market condition.) After the customer tells us what he is unsatisfied with, we track improvement progress, visit the customer again, and offer the customer opinion to relevant units for review and improvement. We will provide this survey results analysis to the sales unit as the reference for product planning.



Performance of online customer service

Online customer service calls are mostly about guarantee and repair. An MSI customer specialist checks the serial number of the machine and the location of the customer, and offers information orally or through messages. Besides this, we ask the customer whether he is satisfied with the customer service and continue to increase service efficiency. Relevant performance in 2022 is as follows:



Computer health check-up service in spring and summer

Every March MSI holds computer health check-up. Consumers can bring laptops, desktops or AIOs to MSI's service center for free health check-up. Meanwhile, we offer store shopping gifts, raffles, and fan cleaning, thermal module maintenance, and basic function testing and scanning for free. We further diagnose all hardware problems or update firmware. Part replacement for repair procedure quotation and repair fee are 10% off.

Besides this, AIO and desktop pick-up service is provided for health check-up service in spring 2022. For remote areas, pick-up service is provided for any product. MSI's consumers can check the health of the product regularly and use the product at ease throughout the year. New experience is our focus for summer 2022, including display of value-added service, discount and sales of daily goods, such as charms, mobile phone holder, backpacks and delicate water bottle. Consumers who love our brand can connect more to MSI.



4.3.2 Customer privacy protection

Protecting customer information privacy is our basic service principle. We abide by the Personal Data Protection Act and relevant regulations for protection, collection and confidentiality of personal information and privacy. Based on the rules for personal privacy protection, we use personal information limitedly and handle personal information agreed by the customer legally, and further make sure that customers can use products and services provided by MSI at ease. Please refer to MSI's privacy policy <https://www.msi.com/page/privacy-policy> to find out how we collect, use and handle personal information details. Customer rights were not impaired due to customer privacy violation or personal information leakage during the report period. We will aim to protect customer privacy based on high standards.

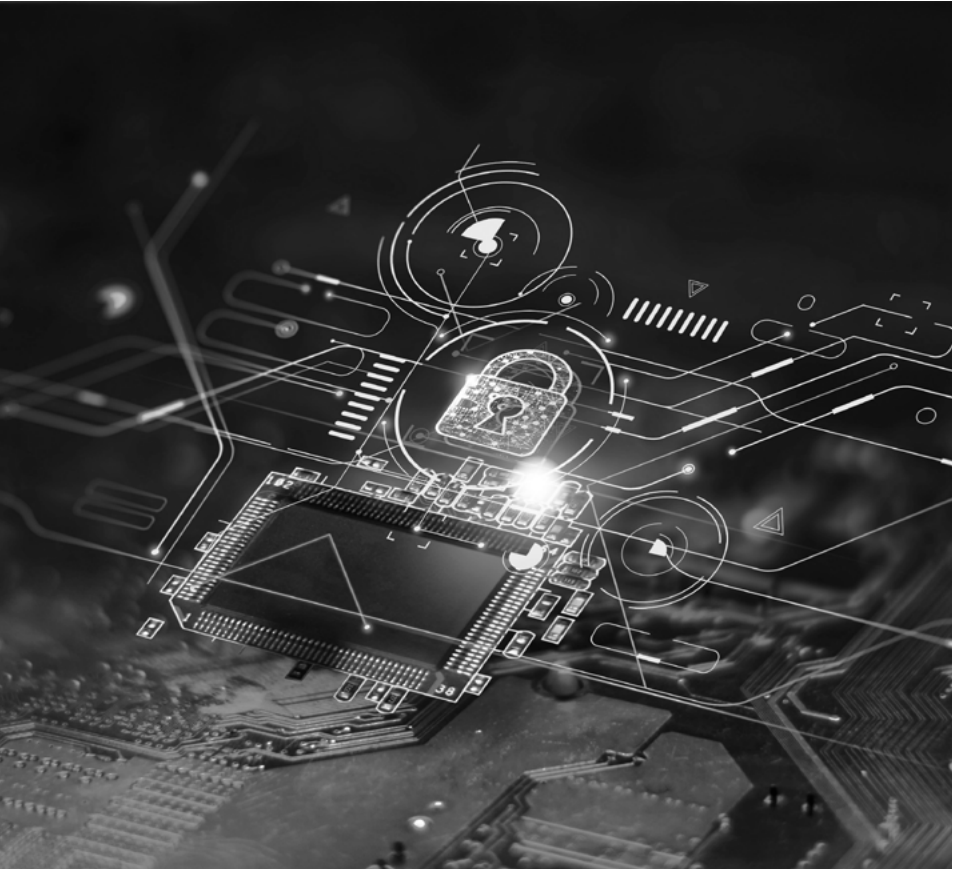
Customer privacy

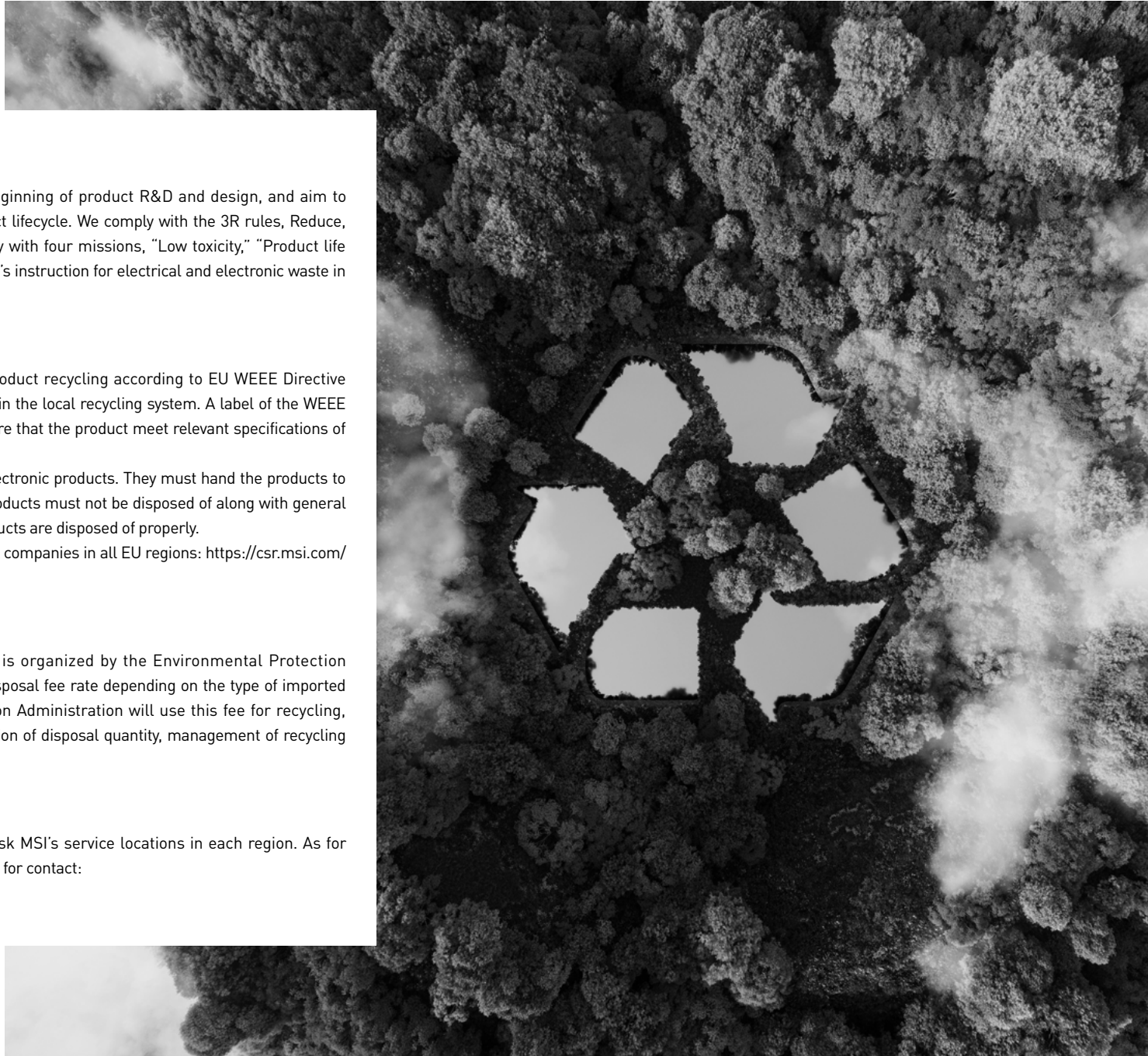
To ensure storage of customer confidential information, MSI checks the information below before offering product repair or service:

- ✓ Computer data backup (including but not limited to account, password, photo or music file)
- ✓ Remind of the risk of data loss.
- ✓ Privacy policy, terms of service and matters to be observed
- ✓ The customer decides whether to use MSI's product and service.

Personal data management mechanism

CATEGORY	MANAGEMENT POLICY
Organization management	◆ The personal data protection team has been set up to promote personal data protection and operation execution. ◆ A data protection officer is available for operation of information and communication security of the Company. ◆ The Head Office continues to pass the ISO 27001 information security management system certification to promote information security management of company operation.
Policy management	◆ Formulate, issue and enforce personal information protection policies and specifications. Announce them on the company website. Examine and amend the policies and specifications based on compliance and discovered risk topics every year. ◆ To adapt to the Personal Data Protection Act, we provide consumers with protection functions, such as the rights to look up and browse their personal information, request to terminate marketing information, and delete their personal information.
Procedure management	◆ Formulate the internal/external privacy, cookie, data storage/safety policy. ◆ Internal data processing procedure. ◆ Data transfer protocol and record. ◆ Data leakage incident evaluation and reporting procedure. ◆ Procedure for the owner of personal information to exercise rights.
Personnel management	◆ Basic information of customers is listed as confidential documents. All personal information is stored in a planned, exclusive location and cannot be accessed by employees voluntarily. ◆ All employees received education training in personal data protection. ◆ The trustee entrusted with the operation must sign relevant NDA.





4.4 Product disposal and recycling

We put ecological design into consideration at the beginning of product R&D and design, and aim to mitigate environmental impact during stages of product lifecycle. We comply with the 3R rules, Reduce, Recycle and Reuse, to ensure that all products comply with four missions, “Low toxicity,” “Product life extension,” “Energy saving” and “Easily recyclable.” MSI’s instruction for electrical and electronic waste in different regions is shown below:

EU:

We join the recycling system or the plan for waste product recycling according to EU WEEE Directive and local EU laws. Products sold in EU regions must join the local recycling system. A label of the WEEE recycle bin must be attached to the product to make sure that the product meet relevant specifications of EU WEEE Directive.

Users in EU regions must scrap MSI’s electrical and electronic products. They must hand the products to local qualified recycling companies for disposal. The products must not be disposed of along with general domestic waste. Users must make sure that waste products are disposed of properly.

Refer to MSI Sustainability website for qualified disposal companies in all EU regions: https://csr.msi.com/global/pevn_ewaste

Taiwan:

Recycling of waste information products in Taiwan is organized by the Environmental Protection Administration. MSI pays for recycling, cleaning and disposal fee rate depending on the type of imported commodities every year. The Environmental Protection Administration will use this fee for recycling, distributing subsidy for disposal, auditing and certification of disposal quantity, management of recycling company, and administrative management.

Other regions:

For MSI products recycling in other regions, please ask MSI’s service locations in each region. As for service location information, please refer to the web link for contact:

<https://www.msi.com/page/service-location-new>

CH5. TALENT ATTRACTION AND DEVELOPMENT



5.1 Attraction and retention

MSI grows and thrives continuously because it relies on devotion and contribution of employee. We care about talents and treat employees as the most important assets. MSI recruits great talents around the world, and retains employees with good salary and welfare. MSI also focuses on diverse development, including professional technology, management capability, communication capability and creativity, for employees to grow continuously, and enhance the Company's business performance and community power.

5.1.1 Employee overview
Total number (or percentage) of permanent employees during the report period

REGION/FACTORY ITEM	TAIWAN				CHINA			
	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Full-time employee	1,563	976	230	199	49.1%	27.7%	46.7%	31.3%
Part-time employee	0	0	0	0	-	-	-	0.1%
Non-guaranteed hours employee ¹	0	0	0	0	16.3%	6.3%	-	-
Temporary worker ²	32	14	15	18	0.5%	0.1%	14.9%	7.0%
Total	1,595	990	245	217	N/A	N/A	N/A	N/A
Total for factories	2,585		462		100%		100%	
Total for regions	3,047				N/A			

1: Non-guaranteed hours employee refers to intern and short-term worker.
2: Temporary workers include contract workers.
Description: The number of employees in China is not provided due to NDA in customer contract. It is indicated by the percentage of the employees in "the factory."

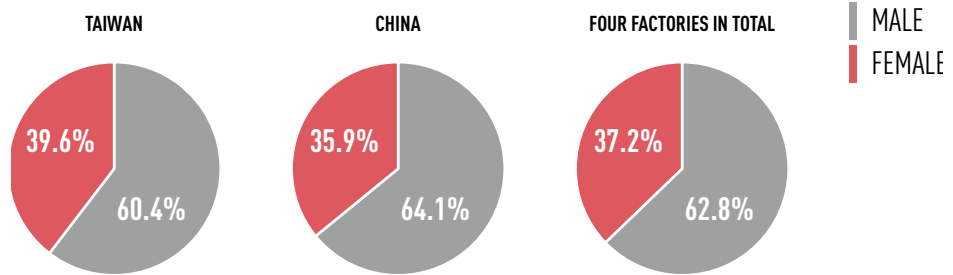
Total number of non-employee workers during the report period

TYPE/NUMBER OF PEOPLE/REGION	MSIT	MSIT1	MSIS	MSIK
Temp security guard	19	38	789	-
Temp cleaning worker	11	6	21	41
Temp kitchen worker	23	3	-	46
Contract/sub-contract onsite staff	27	-	-	-
Contractor/Construction worker	327	4	-	25
Volunteer	0	73	-	0
Total	407	124	810	112
Total	1,453			

Age and gender distribution of permanent employee during the report period

REGION/FACTORY AGE DISTRIBUTION	TAIWAN				CHINA			
	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
30 years old and below	11.1%	8.7%	14.9%	10.8%	38.2%	16.6%	43.0%	23.0%
31 to 50 years old	44.2%	26.9%	37.2%	34.4%	27.1%	17.3%	17.6%	15.3%
51 years old and above	6.4%	2.7%	0.9%	1.8%	0.6%	0.2%	1.0%	0.1%
Subtotal	61.7%	38.3%	53.0%	47.0%	65.9%	34.1%	61.6%	38.4%
Total	100%		100%		100%		100%	

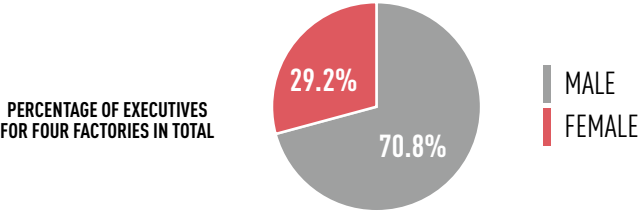
Gender distribution of permanent employee during the report period – disclosed by region



Rank and gender distribution of permanent employee during the report period

REGION/FACTORY AGE DISTRIBUTION	TAIWAN				CHINA			
	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Senior executive	1.8%	0.3%	N/A	N/A	0.1%	N/A	0.5%	0.1%
General executive	13.7%	4.8%	4.1%	1.3%	10.6%	4.9%	8.3%	4.2%
General employee	46.2%	33.2%	48.9%	45.7%	55.2%	29.2%	52.8%	34.1%
Subtotal	61.7%	38.3%	53.0%	47.0%	65.9%	34.1%	61.6%	38.4%
Total	100%		100%		100%		100%	

Description:
1. Senior executive refers to associate vice president and above. General executive refers to the executives from foreman and section chief to senior manager. General employee refers to official employees who are not managers (including any staff under performance appraisal, with full pay and work full time).
2. There is no senior executive in MSIT1. There is no female senior executive in MSIS.



Diverse employment during the report period

TYPE/FACTORY/GENDER	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Percentage of disadvantaged employee	0.46%	0.27%	0.43%	-	-	-	6.75%	3.39%
Percentage of foreign worker	0.46%	0.31%	3.03%	3.90%	-	-	1.31%	0.20%

Description:
1. No disadvantaged employee or foreign worker is hired at MSIS.
2. Disadvantaged groups include people with physical and mental disabilities and ethnic minorities.

Number of local-hired senior executives during the report period

LOCATION IMPORTANT BUSINESS LOCATIONS	TAIWAN		CHINA	
	MSIT	MSIT1	MSIS	MSIK
Percentage of local-hired senior executives	100%		0%	23%

Description:
1. Definition of senior executive: Associate vice president and above.
2. Important business locations: About 90% of the employees are in major business locations in Taiwan and China. About 10% of the employees are in subsidiaries in other regions. Therefore, the number is subject to the scope disclosed in the report.

No child labor

MSI holds fast to the corporate spirit of good operation, subjects to international human rights initiatives and specifications, and strictly abide by relevant regulations in local labor laws in Taiwan and China. MSI keeps track of the risk of child labor at business locations through a transparent recruitment system. It is prohibited to hire children under 15, or require children under 18 to perform heavy or dangerous work. Meanwhile, MSI actively creates a sustainable supply chain with suppliers through business ethics initiative. In addition, if the employee provides a fake certification and as a result the employer hires child labor by mistake, MSI will execute further handling measures according to the regulatory requirements or management guidelines formulated where the factory is located. (Refer to the table below.)

ITEM/FACTORY	MSIT AND MSIT1	MSIS	MSIK
Child labor relief measures	Labor Standards Act	Child labor relief and underage worker management procedure	Child labor relief and underage worker management procedure

5.1.2 New and resigned employee

We emphasize the spirit of “One MSI,” and endeavors to increase employee’s recognition and implementation of core value. In the meantime, we plan for a remuneration and welfare system that meet employee’s needs. By optimizing human resources, and creating an environment of transparent communication, employees can reach their potential freely. Both ourselves and employees can forge ahead to the same goal and create a win-win growth value. Meanwhile, we build an open, fair and equal workplace. New employees can adapt to the environment and become proficient in work quickly. Employees and executives of the human resource department communicate and visit new employees occasionally to prevent them from resigning because they cannot adapt to the workplace.

Percentage and distribution of new employee by age and gender during the report period

AGE DISTRIBUTION	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Number of employees	96	72	57	40	The number of employees is not provided due to the restriction in the non-disclosure clause of customer contract.			
Percentage of new employees in the factory								
30 years old and below	2.6%	2.3%	5.8%	3.2%	159.2%	46.2%	123.6%	51.1%
31 to 50 years old	1.1%	0.5%	6.3%	5.4%	48.9%	16.6%	10.6%	9.7%
51 years old and above	-	-	0.2%	-	-	0.1%	-	-
Distribution of new employees out of total number of new employees in the factory								
30 years old and below	39.9%	35.1%	27.8%	15.5%	58.8%	17.1%	63.4%	26.2%
31 to 50 years old	17.3%	7.7%	29.9%	25.8%	18.0%	6.0%	5.4%	5.0%
51 years old and above	-	-	1.0%	-	-	0.1%	-	-

Description:
1. “-” means that there is no new employee in this age group during the report period.
2. The percentage of new employee is higher at MSIS and MSIK is primarily because frontline operators resigned and new employees must be appointed to the production unit accordingly.

Percentage of new employees regardless of age during the report period

AGE DISTRIBUTION	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
By gender	3.7%	2.8%	12.3%	8.7%	208.0%	62.8%	134.2%	60.9%
By factory	6.5%		21.0%		270.9%		195.1%	
By region	8.7%				239.6%			

Note: Percentage of new employee = Total number of new employees / Total number of employees of the factory

Percentage and distribution of resigned employee by

age and gender during the report period

AGE DISTRIBUTION	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Number of resigned employees	126	84	131	80	The number of employees is not provided due to the restriction in the non-disclosure clause of customer contract.			
Percentage of resigned employees in the factory								
30 years old and below	2.6%	1.9%	10.6%	5.6%	177.1%	52.7%	132.5%	55.8%
31 to 50 years old	2.1%	1.3%	17.7%	11.5%	55.1%	18.8%	12.0%	11.6%
51 years old and above	0.2%	0.1%	-	0.2%	0.1%	0.1%	0.1%	-
Distribution of resigned employees out of total number of new employees in the factory								
30 years old and below	31.9%	23.3%	23.2%	12.3%	58.3%	17.3%	62.5%	26.3%
31 to 50 years old	26.2%	15.7%	38.9%	25.1%	18.1%	6.1%	5.6%	5.5%
51 years old and above	1.9%	1.0%	-	0.5%	0.1%	0.1%	0.1%	-

Description:
1. “-” means that there is no resigned employee in this age group during the report period.
2. Resignation rate is higher for MSIT1, MSIS and MSIK is primarily because frontline operators resigned due to labor shortage of local environment, industry competitiveness and job content. The management unit of factory continues to pay attention to the resignation rate and makes sure that it has no significant impact on production and operation at MSI.

Percentage of resigned employees regardless of age during the report period

AGE DISTRIBUTION	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
By gender	4.9%	3.2%	28.4%	17.3%	232.3%	71.5%	144.5%	67.4%
By factory	8.1%		45.7%		303.79%		211.9%	
By region	13.8%				87.4%			

Note: Resignation rate = Total number of resigned employees / Total number of employees on active duty

Care for resigned employee

If the employee wishes to resign due to a certain reason, the human resource unit interviews with him or asks him to fill out a survey to find out the reason for resignation, and matches him to other internal job openings to facilitate retention rate. If he still resigned, the Company holds internal discussion and communicates and examines with the executive on the pay, job content or interview criteria to try to mitigate impact after a new employee is hired in future.

5.1.3 Parental and paternity leave

MSI offers parental leave, maternity leave and paternity leave based on the regulations of the location where the factory is located for employees to balance work and family. A complete employee resumption system is planned, including arrangement for leave without pay, and support for career path. Maternity pension and welfare measures are provided for employees to feel care and warmth from the Company.

A list of parental leave without pay during the report period (Taiwan)

DESCRIPTION	MSIT		MSIT1	
	MALE	FEMALE	MALE	FEMALE
The number of employees qualified for parental leave (without pay) in 2022 [It refers to the number of employees applying for parental, maternity and paternity leave. An employee applying for more than one type of leave is not counted repetitively.]	57	37	6	9
The actual number of employees applying for parental leave (without pay) in 2022	2	16	1	2
The number of employees expecting to resume the work in 2022 (A)	2	13	1	4
The number of actual employees returning to work in 2022 (A)	1	15	1	2
The number of employees on active duty for a year after returning from parental leave (without pay) in 2022 (C)	0	7	1	0
The number of actual employees returning to work in 2021 (D)	0	7	1	0
Percentage of employees returning from parental leave (without pay) (B/A)%	50.00%	115.38%	100.00%	50.00%
Percentage of employees retained after returning from parental leave (without pay) (C/D)%	0.00%	100.00%	100.00%	0.00%

Description:
Calculation formula of “resumption rate” = The number of employees resumed from parental leave (including without pay) in 2022 / Total number of employees expecting to resume the work in 2022. There are employees who resumed the work early in 2022, the actual number of employees returning to work is higher than the number of employees expecting to resume the work.
Calculation formula of “retention rate” = The total number of employees still on active duty in 12 months after returning from parental leave (without pay) / Total number of employees returning to work in 2021.

A list of maternity and paternity leave without pay during the report period (China)

DESCRIPTION	MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE
Number of employees qualified for maternity and paternity leave in 2022 (Number of employees applying for maternity and paternity leave)	39	65	892	711
Number of actual employees applying for maternity and paternity leave in 2022	39	65	23	37
The number of employees expecting to resume the work in 2022 (A)	39	65	22	30
The number of actual employees returning to work in 2022 (A)	38	56	22	25
The number of employees on active duty for a year after returning from maternity and paternity leave in 2021 (C)	25	40	14	38
The number of actual employees returning to work in 2021 (D)	29	45	15	43
Percentage of employees returning from maternity and paternity leave (B/A)%	97.44%	86.15%	100.00%	83.33%
Percentage of employees retained after taking maternity and paternity leave (C/D)%	86.21%	88.89%	93.33%	88.37%

Description:
Calculation formula of “resumption rate” = The number of employees resumed the work after the maternity (and paternity leave) in 2022 / The total number of employees expected to resume the work in 2022
Calculation formula of “retention rate” = The total number of employees still on active duty in 12 months after returning from maternity (and paternity leave) / Total number of employees returning to work in 2021.
It is hereby certified that the statutory maternity leave is longer for employees in factories in China. The time returning to work is often extended from the current to the next report year. The gap between the applicants and the number of employees returning to work in the report period is large.

5.1.4 Remuneration and welfare

MSI offers a complete remuneration system and combines it with numerous welfares superior to those specified in regulations. Besides satisfying worker’s work and life needs, this actively facilitates corporate operation and development. We check the salary level and fairness in the market every year, and offer competitive remuneration to employees, to ensure that internal excellent employees are retained and external talents are attracted effectively.

The mean and median salary of full-time non-managerial employee in Taiwan during the report period

ITEM/FACTORY/YEAR	MSIT & MSIT1
Number of general employees (A)	2,962
The difference between the number of general employees of the current and previous report period	198
Total amount of full-time pay during the report period (thousand NTD) (B)	5,071,359
Growth of total full-time pay compared to the previous report period (%)	-5.2%
Mean salary during the report period (thousand NTD) (C=B/A)	1,712
The difference between the mean salary of the current and previous report period (thousand NTD)	-223
Median salary during the report period (thousand NTD)	1,478
The difference between the median salary of the current and previous report period (thousand NTD)	-128 ▼
Description: 1. Annual salary: Including annual minimum wage and annual bonus. 2. General employee: General employee refers to the executives from foreman and section chief to senior manager. General employee refers to official employees who are not managers (including any staff under performance appraisal, with full pay and work full time).	

Ratio of standard entry level wage compared to local minimum wage during the report period

We determine the remuneration standard and reward system depending on employee’s education and experience, professional knowledge, seniority and personal performance through regular performance appraisal. The starting salary of all new full-time employees of all factories is higher than local minimum wage. It is not varied by human rights requirements, such as gender, marital status, religion or political stance. Besides this, we adjust the salary and offer a salary higher than the market level by regularly examining compensation level and taking marketing competitiveness into consideration. As for non-employee workers (e.g. contractor), MSI requires the employer of contractors to meet regulations when signing the contract based on ethics and the code of conduct. Non-employee workers must not violate regulations or MSI contractor guidelines.

ITEM/FACTORY/GENDER	MSIT/TAOYUAN		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Ratio of standard entry level wage compared to local minimum wage	1.03	1.03	1.02	1.02	1.14	1.14
Description: The scope of disclosure for the basic staff in this table includes permanent employee.						

A list of MSI employee welfares

MSI’s welfare is allocated regularly from revenue and employee salary. It is used for annual large events, year-end party, arts and culture seminar, cash gift/gift for New Year, Dragon Boat & Mid-Autumn Festival, club allowance, travel subsidy, employee birthday cash gift, employee emergency assistance, maternity pension, marriage allowance, department gathering, cross-departmental matchmaking event allowance, and employee recreational facility. All kinds of financial information is posted on the internal website transparently, openly, and for employees to understand the purpose of welfare. Refer to the Company’s shareholders’ meeting annual report for welfare expense at MSI.

WELFARE ITEM/FACTORY	MSIT	MSIT1	MSIS	MSIK
Bonus	V	V	V	V
Employee insurance (including life, accident and medical insurance)	V	V	-	-
Social insurance (including pension, medical treatment, unemployment, work injury, maternity)	-	-	V	V
Housing provident fund	-	-	V	V
Parental leave	V	V	-	-
Maternity and paternity leave	V	V	V	V
Family care leave	V	V	-	-
Pension	V	V	-	-
Other	Club activity	V	V	V
	On-job-training	V	V	V
	Gift for New Year, Dragon Boat & Mid-Autumn Festival	V	V	V
	Massage service	V	V	-

Welfare subsidy

MSI established the Employee Welfare Committee, and offered an excellent, complete welfare system to take care of employee’s life, and facilitated mental and physical health and welfare.

WELFARE SUBSIDY ITEM	◆ Personal welfare item: Festival bonus, birthday bonus, travel subsidy, maternity pension, marriage allowance, funeral allowance, etc. ◆ Group welfare item: Club allowance, department gathering, cross-departmental matchmaking event allowance, etc. ◆ Free employee health check-up ◆ Full subsidy for external vocational training
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Flexible work hours

MSI organized a friendly system, arranged work time, and offered the number of days of leave higher than the one specified in the regulations, expecting each employee to achieve work and family balance.

- ✓ Flexible work hour system for non-factory operation
- ✓ Offer the full-pay leave with three days of flexible leave
- ✓ Employees may get off work a half hour earlier by working 7.5 hours on Friday. On the workday before a three-day weekend or longer, employees may get off work one hour earlier by working 7.5 hours.

Pension appropriation

FACTORY IN TAIWAN	The Labor Pension Act implemented on July 1, 2005 is applicable to seniority of all full-time employees, and the further seniority of the employees decided that they will continue to choose the seniority rules in the Labor Standards Act. The pension is deposited to the special account in Taiwan Bank by the Supervisory Committee of Business Entities’ Labor Retirement Reserve.
FACTORY IN CHINA	Pension insurance payment is appropriated according to a certain percentage of gross salary of local employee monthly based on the pension insurance system as required by law. The pension of each employee is managed, organized and arranged by the government.



5.2 Cultivation and development

MSI thinks from the overall talent development strategy, and establishes a management evaluation system for selection, employment, education, appraisal and retention of talent. We have been investing resources into talent fostering for a long time to strengthen workforce quality, and offer a diverse learning and growth channel for employees in technical and managerial positions. Through internal and external education training course, chance of expatriate, seminar, speech, and online learning system “MSI University,” employees may engage in advanced studies and improve professional skills. The Company will pay the tuition fee.

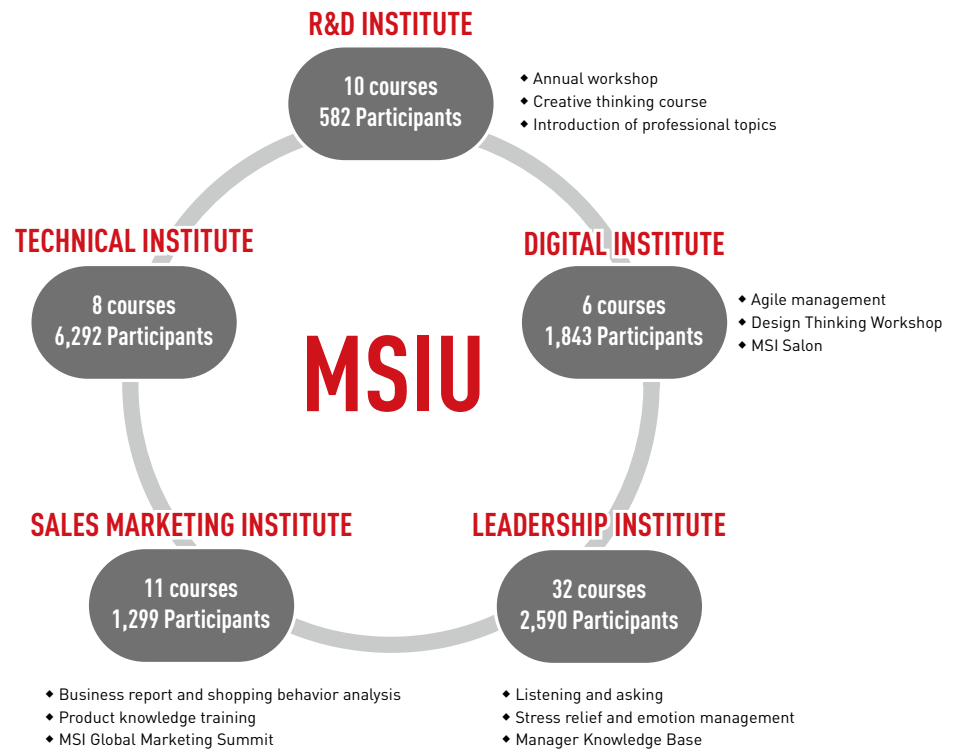
Talent development is an important driving force for company sustainable operation and innovative transformation. We offer adequate career development planning to employees, including encouraging them to learn knowledge, develop diverse function and brainstorm. We aim to facilitate organization learning and knowledge transformation, increase employee’s work performance, optimize organization structure, and further drive overall positive development of MSI.

5.2.1 Training and development
Career development planning

WORKPLACE POTENTIAL DEVELOPMENT	On-job-training, language training, general education, professional training	New employee general education: The online general course at “MSI University” started immediately right after on-boarding, for employees to take courses on company culture and management to understand relevant human rights, intellectual property rights, information security, and occupational safety and health management. This helps implement labor quickly. Professional training: Basic professional training is executed based on the position, including operation of online system, quality management, and specific operating training of professional position classification. On-job-training: Employees may raise the request for external training depending on their needs, and take external professional courses to improve their own skills. Language learning: The Company signed a contract with numerous language centers and purchased learning journals for employees to learn a foreign language flexibly at an adequate institution to increase workplace competitiveness.
PROFESSIONAL FUNCTION CULTIVATION	Leadership Institute, Sales Marketing Institute, R&D Institute, Technical Institute, Digital Institute	MSI University was founded in 2009, including five institutes, Leadership Institute, Sales Marketing Institute, R&D Institute, Technical Institute, and Digital Institute. The training is integrated with the overall company strategy. Critical training, professional categorization, and differential talent management are executed by using limited resources, to build different professional functions.
LAYERED TRAINING MANAGEMENT	Corporate culture, experience inheritance, core value	Corporate identity training for deepening corporate culture and building the core value is executed for managerial staff in the growth period. These staff engage in experience inheritance learning depending on the position and academic aptitude, to learn further in company operating management.
LEADERSHIP ABILITY TRAINING	Operating management, leadership, market analysis, strategy management	Critical operating and managerial talents engage in decision-making training, including market analysis, leadership, strategic management and operating management through internal and external course and feedback. The Leadership Institute exclusive to managerial employee has been established to shape the company culture and enhance management function, in order to create a good operating team, and ensure good corporate governance.

MSIU – MSI University

The five institutes focus on management, R&D, technology, sales and digital. They offer different levels of training and mind building vertically according to the position and function, and provide support and guidance of specific topic laterally based on the need of the unit or work development. In addition, all business units and functional units may propose a request for internal training to the human resource training unit to open courses occasionally and help employees gain new insights through restudying old material. Furthermore, different courses of subtopics are held for different types of courses depending on the actual situation. Please refer to the example in the diagram below. The number of participants in 2022 is shown below (including MSI’s subsidiaries around the world):



Digital Institute – MSI Salon

MSI occasionally invites experts or famous people in the industry to work with MSI’s executives to guide employees to study. They share general business knowledge, communication method, thinking mode, digital transformation, marketing, industry dynamics and metaverse through online book club. The discussion topics are not limited. The perspective and sharing from experts and executives are included in the book review. Employees in any function and position may learn the essence from good books, broaden horizons, and strengthen soft and hard skills online.

MSI Salon was held ten times in 2022, drawing 1,659 employees. It is recognized by most of the employees.



The average number of training hours divided by gender and rank during the report period

POSITION/FACTORY/ GENDER	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Senior executive	17.77	12.95	-	-	29.69	-	10.00	0.0
General executive	26.29	20.90	9.82	9.41	75.96	75.43	21.74	19.64
General employee	9.87	13.13	8.11	7.35	3.50	4.58	13.68	15.24

Description:

1. Senior executive refers to associate vice president and above. General executive refers to the executives from foreman and section chief to senior manager. General employee refers to official employees who are not managers (including any staff under performance appraisal, with full pay and work full time).
2. There is no senior executive in MSIT1. There is no female senior executive in MSIS.

Leadership ability training

Courses of three topics are held for executives on different levels to build critical talents in operating management for the Company. The topics are “Industry trend and company direction,” “Management skill and essential knowledge” and “Emotion management and communication skill.” They help executives understand the key core of downward communication and upward management. To help junior executives change roles, we particularly help them transform and upgrade their way of thinking. While leading the team to achieve the goal, junior executives will possess observation, listening, guidance and motivation skills, to create more great talents, build a team with better collaboration, and express the spirit of “ONE MSI” for the Company.

INDUSTRY TREND AND COMPANY DIRECTION	Political and economic incidents and pandemics around the world pose a great impact on the economy, and supply and demand of industry. An executive must understand global market change, how the Company responds to the impact and makes development, and the role Company expects him to play in an ever-changing, competitive business environment.
MANAGEMENT SKILL AND ESSENTIAL KNOWLEDGE	• Management responsibility and skill • Selection and interview skill • Talk about finding the right person, doing the right thing, and doing thing right from CPAS test tool. • Labor regulation practice • Organize effective performance of OKR and KPI • Work guidance and subordinate training • Coaching-based organization workshop • Highly efficient successful workplace habit workshop • Financial statement and cost control, and utilize financial data to increase business performance
EMOTION MANAGEMENT AND COMMUNICATION SKILL	• Stress relief and emotion management • Employee care and guidance skill • Listening and asking – Coach-based guidance

Human rights training information of employee during the report period

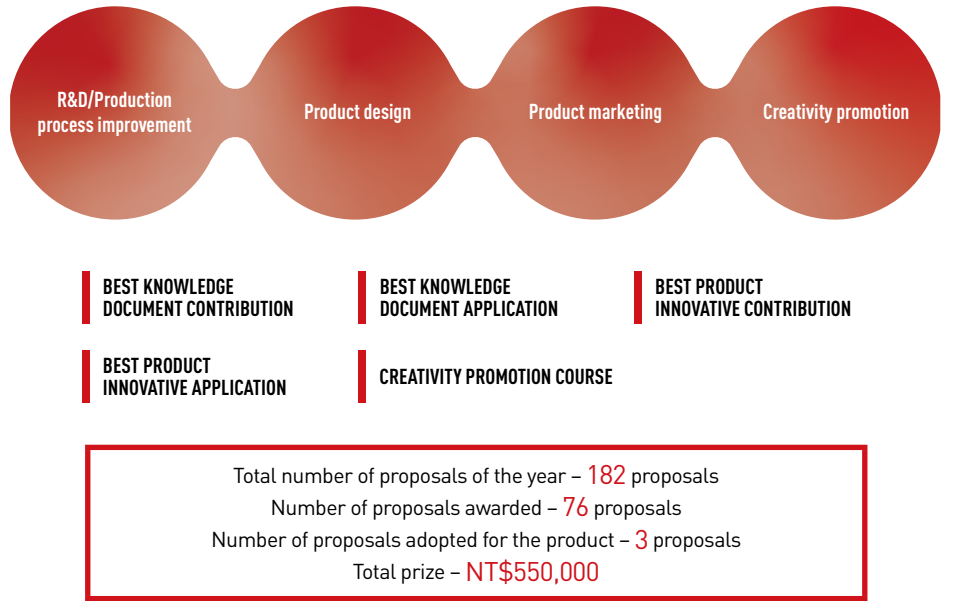
ITEM/FACTORY		MSIT	MSIT1	MSIS	MSIK
Percentage of employees receiving education on anti-discrimination, ethics (including anti-corruption), employee right (including human rights) promotion, forced labor and sexual harassment promotion during the report period	Management level	100%	100%	100%	100%
	General employee	100%	100%	100%	100%
	New employee	100%	100%	100%	100%

Description:

1. Please refer to 2022 MSI Annual Shareholders’ Meeting Report for advanced studies and training regarding courses on corporate governance for board members and senior managers.
2. We promote the human rights concept to full-time employees by sending emails occasionally and posting the concept on the internal website. All of new employees must complete the relevant education training.
3. Factories in China recruited contract workers from the labor service company. These workers must also receive human rights training.
4. Management level: From foreman and section chief to vice president General employee: General employee refers to official employees who are not managers (including any staff under performance appraisal, with full pay and work full time).

5.2.2 R&D and innovation

In a rapidly changing technological industry, it is very important to keep going. MSI encourages employees to come up with creative design, idea, course or any helpful opinion, and holds the “R&D innovation motivation activity” every half year. This incentive event is divided into four types, “R&D/Production process improvement,” “Product design,” “Product marketing” and “Innovation promotion.” Up to 150 employees will be rewarded in total in a year. The bonus is from NT\$5,000 to 40,000, depending on the type. After employees bring up proposals, executives of relevant units are invited for evaluation. A bonus will be awarded for selected proposals. A reward will be granted if the design idea has been adopted by the new product to encourage employees to be devoted to creative ideas. The outcome of the R&D innovative motivation event in 2022 is shown below:



Best proposal in 2022

Smart Thermal Module, heat dissipation system of portable electronic devices

Feature: It can perform light and heavy load heat dissipation of CPU/GPU to achieve heat bypass and buffer register. The space of the module is small and the noise level is low.

* If the load of CPU heat source is light, heat is conducted unidirectionally to GPU for heat absorption to distribute heat. Heat is still dissipated normally when the load is heavy.

* If the load of CPU heat source is heavy, the lapped heat pipe dissipates heat normally, and the heat pipe not connected to the CPU can be activated.

Actual outcome: The proposal has obtained invention patent in Taiwan and the U.S. It has been implemented in laptop for mass production.

5.2.3 Performance appraisal

MSI executes performance appraisal of employee management every year, and carries out core function appraisal based on the organization goal specified by each unit. MSI checks the work goal achievement and performance outcome of the employee, and use them as the reference for promotion, bonus and remuneration, and education training. Each employee is evaluated by at least two executives, including immediate supervisor interview mechanism, to improve work performance and facilitate labor–management communication accordingly.

Percentage of distribution of performance appraisal for male and female employees during the report period

POSITION/FACTORY/ GENDER	MSIT		MSIT1		MSIS		MSIK	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Senior executive	100%	100%	-	-	63%	-	36%	100%
General executive	100%	100%	100%	100%	95%	100%	87%	102%
General employee	95%	93%	85%	94%	47%	56%	50%	62%

Description:
1. The number is based on the number of employees receiving the year-end KPI appraisal (including resigned staff. The Taiwanese managers in the factory are excluded from MSI).
2. Senior executive refers to associate vice president and above. General executive refers to the executives from foreman and section chief to senior manager. General employee refers to official employees who are not managers (including any staff under performance appraisal, with full pay and work full time).
3. There is no senior executive in MSIT1. There is no female senior executive in MSIS.
4. Not all employees received performance appraisal because some employees were on leave without pay, new employees that have been on board for less than 3 months, or on personal or sick leave for over 30 workdays.

5.3 Communication and care

Harmonious labor–management relationship is a foundation for continuous stable development for the Company. To hear true opinions from employees, MSI established a diverse channel, and an open, transparent platform for effective, boundary-less communication between the Company and employees. Meanwhile, the Company absolutely keeps employee’s personal information confidential for all employees to express opinions bravely, and actively maintain and facilitate employee relationship.

5.3.1 Communication channel and employee interaction

An internal website platform is available at MSI for employees to receive important notice from the Company and all kinds of welfare information from the Welfare Committee immediately, to enhance rights and well-being of employees. The internal website integrates numerous internal management service systems for employees to enjoy all kinds of care. Besides this, the Company sends important news, MSI IT Daily News, to employees by Outlook every day for employees to understand the latest industry trend and major news in the industry.

In addition, responsibility is divided and planned for different business groups. Different meetings are held every week, month and quarter (Occupational Safety and Health Committee, labor–management meeting, department meeting, management meeting). The meeting covers the current operating condition, major announcements, and labor–management communication. Employees can raise opinions through relevant channels for the management to understand the current governance situation, communicate with employees, and build consensus to facilitate harmony of labor–management relationship.

Employee communication outcome during the report period

ITEM/FACTORY	MSIT/TAOYUAN	MSIS	MSIK
Collective bargaining agreement	Held every quarter	Held every quarter	Once a year
Occupational Safety and Health Committee	Held every quarter	Held every quarter	Held every quarter
Department meeting	Occasionally	Occasionally	Occasionally
Employee labor union	No	Yes	Yes
Percentage of number of employees who are union members [%]	Not applicable	100	100
Number of negotiated disputes	0	0	0
Satisfaction survey type	◆ New employee orientation check ◆ Administrative service ◆ Welfare Committee activity ◆ Restaurant meal ◆ Surrounding living environment [Taoyuan]	◆ New employee orientation check ◆ Employee seminar (MSIK) ◆ Restaurant meal ◆ Renovation noise	

Note: There is no employee labor union or representative in MSIT or MSIT1. Employees may communicate with the Company through diverse channels such as the Occupational Safety and Health Committee, department meeting or employee assistance program. MSIS and MSIK did not sign any written agreement for collective bargaining agreement. They made negotiation at regular meeting and created a record.

Engagement, counseling and communication of occupational safety and health of all workers

We encourage all employees to participate in and fulfill occupational safety and health items. We expect all employees to take responsibility for occupational safety and health, and integrate themselves into the occupational safety and health management system. MSI promises that all operations meet protection requirements for employees, customers and surroundings. In addition, to evaluate executive performance effectively, we hold the meeting of Occupational Safety and Health Committee every quarter, execute internal and external audit annually, and modify the management method and execute policy based on the audit result. We further achieve the goal of continuing to improve performance of occupational safety and health management.

ITEM/FACTORY	MSIT	MSIT1	MSIS	MSIK
Labor union representative	N/A	N/A	Ms. Li Fang	Mr. Yu Shen Sheng
Contact for labor union representative	N/A	N/A	Factory ext. 8890	Factory ext. 8061
Number of labor representatives from the Occupational Safety and Health Committee	36	9	46	27
Total number of members of the Occupational Safety and Health Committee	43	27	87	43
Percentage of employee representatives in the Occupational Safety and Health Committee	83.72%	33.33%	52.87%	62.79%
Percentage of the rights for freedom of association and collective bargaining	100%	100%	100%	100%
Number of cases violating freedom of Association and collective bargaining	0	0	0	0
Critical topics of health and safety	① Operating environment monitoring ② Traffic safety promotion ③ Health and safety risk management ④ Health promotion ⑤ Machinery equipment protection		① Occupational safety ② Firefighting equipment management ③ Chemicals management ④ Machine tool equipment protection	① Occupational safety ② Firefighting equipment management ③ Chemicals management ④ Restaurant hygiene
Obtained ISO 45001 certification, occupational health & safety management system.	V	V	V	V

Shortest notice period of significant operational change

If the employment relationship must be terminated due to significant operational change or employee incompetence, the employee will be notified in advance as required by law or execute collective bargaining to explain to the employee specifically. Besides this, severance pay is paid and relevant certificate provided to the employee to make sure that his right of work is not affected.

Description:
1. The affected employee will be informed of the labor contract termination at least 10 days ahead according to Article 17 in Chapter 2 of MSI's Work Rules.
2. If the company policy or resolution (e.g. salary adjustment, expatriate) will pose a material impact on employee's rights, the affected employee will be notified at least 10 days in advance.
3. If there's any material impact on shareholder's rights or securities price, material information is explained within a specific time period as required by TWSE.
4. The rest of the notification period of material operating changes are handled according to local laws.

Employee grievance channel

For concerns on illegitimacy, discrimination, environment and health and safety, employees may communicate with the Company through diverse channels such as Occupational Safety and Health Committee, labor-management meeting, department meeting, and employee assistance program, to guarantee the employee's rights and facilitate labor-management harmony.

EMPLOYEE GRIEVANCE CHANNEL CONTACT	
Occupational, environmental safety and health management mailbox	esh@msi.com
Stakeholder communication mailbox	080419864@msi.com

Workplace sexual harassment prevention

To create a friendly, safe workplace, MSI forbids any form of sexual harassment at the workplace. Gender Equality Committee and sexual harassment grievance hotline and email are available to ensure privacy of the subject for the grievance mechanism. Besides new employees having to receive sexual harassment prevention promotion, current employees receive occasional gender equality promotion. Therefore, we make sure that each employee learns the right knowledge for workplace equality and understands the proper way to handle sexual harassment and seek help. There was no sexual harassment grievance during the report period.

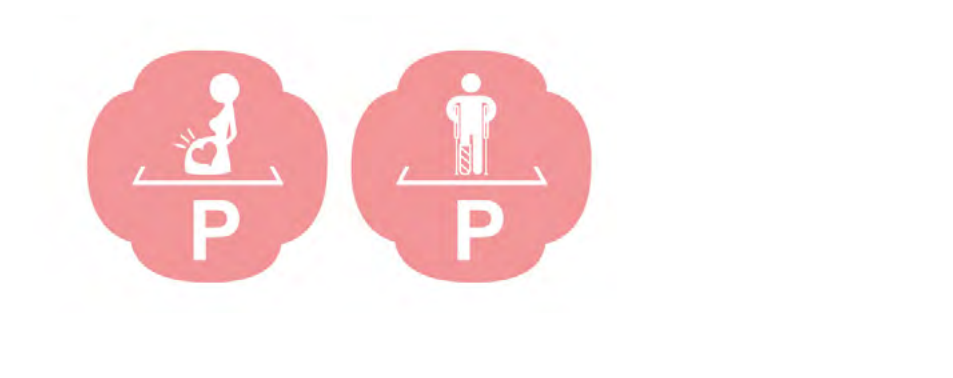
FACTORY	SEXUAL HARASSMENT GRIEVANCE CHANNEL
MSIT/Taoyuan	Hotline: Ext. 1333
	Email: 113@msi.com.tw
	Sexual harassment prevention website: Employee section on the internal website
MSIS	Hotline: Ext. 8858
	Email: carrieliu@msi.com
MSIK	MSIK APP

The aforementioned handling of the employee grievance channel is the same as the one for 2.5.3 Grievance reporting mechanism.

5.3.2 Physical and mental employee care

We organized good health and leisure welfare measures to offer service and space for body and mind relaxation:

- ✓ The clinic and onsite physician are available for counseling and medical service.
- ✓ The employee care nurse is available to take care of employee's health voluntarily and offer health counseling service.
- ✓ The cafeteria and coffee shop are available to provide diverse dining choices and leisure space.
- ✓ Free massaging service is provided at MSIT and MSIS.
- ✓ Friendly parking space for employees who are pregnant or with physical disability is provided.



Employee Assistance Program (EAP)

MSI introduced the employee assistance program in 2010. By combining internal and external resources, MSI offers systematic Employee Assistance Programs (EAP), and offers free, diverse assistance to employees, such as emotion management, workplace pressure, law service and medical treatment. This aims to prevent and improve troubles and stress in employee's life and at work. The services include work stress, relationship issue, finance and tax, law and medical care. Employees can dedicate themselves to work without being affected by individual or organization factors. MSI's dependents can feel at ease for mental and physical health of the employee. The services help the employee solve issues affecting work performance and bring benefits to MSI's workplace.

FACTORY	CONTACT OF EMPLOYEE ASSISTANCE PROGRAM (EAP)
MSIT/Taoyuan	Email: eaphelp@msi.com
	Hotline: Ext. 8585
MSIS	Hotline: Ext. 8858
MSIK	Hotline: Ext. 8085

5.4 Health and safety

5.4.1 Happiness at the workplace

The mental and physical health of employees are one of the most important cores of corporate sustainable development. Numerous health management and promotion events improve the health of employees. They prevent diseases and enhance personal health for employees. They work with all departments to enhance workplace quality, help employees work at ease and healthily, and create a happy, healthy workplace. Therefore, we continue to improve environmental, hygiene, safety and health risks at the workplace, and offer medical measures for emergency aid.

- ✓ Establish the Occupational Health and Safety Committee, hold meeting every quarter, and implement labor safety and health issues.
- ✓ Perform regular maintenance and care for air conditioning, and clean the cooling water and water dispenser, to maintain air quality of the office and ensure employee's health.
- ✓ Access control is implemented for the building. The central surveillance system is available and monitored by securities for 24 hours every day.
- ✓ The AED device is available to respond to sudden heart disease. Promote first aid knowledge such as CPR occasionally.
- ✓ Hold fire drill every half year. Perform "application for inspection and repair of fire safety equipment" every year. Promote common firefighting knowledge to employees.
- ✓ Firefighting management personnel is available to promote and implement fire safety education.

Sports in MSI

MSI has 13 corporate sports clubs in Taipei. Members of 10 of them work out at least one per week, e.g. aerobic exercise, yoga, dance, table tennis and weight training. These sports can be played in the space in the Company. Up to 20 courses are held per week. Sign-up discount is provided to club members at lunchtime or after work. Non-club members can also sign up as they wish. Employees are encouraged to participate in other ball sports, swimming and jogging clubs by providing a subsidy for venue fees. Besides building regular workout habits, all clubs hold large event such as health seminar, hiking, ball sports game or fun contests every quarter to every half year. These events are suspended or changed to a different way due to pandemic. However, full tacit agreement and centripetal force have been built among employees because achievements have been accumulated for a long time. Employees also get a chance to check their achievement, and enhance mental, physical and health knowledge. For instance, the mountain climbing club arranges numerous mountain climbing trips that last several days at 100 Mountains of Taiwan every year. The vice president leads the team and arranges training beforehand diligently. Sun Moon Lake swimming held by the swimming club is also one of the challenges MSI employees will definitely take. Daily regular exercise, contest in a short time period, achievement review and difficult self-challenge are best examples that sports has been rooted in MSI. Numerous senior executives participate in these events and set the example for MSI employees.

In 2022 at the Head Office in Taipei and MSIT1, we build an all-year large program "Dream Creator" combining sports, health, recreation and knowledge. The program helps employees to keep living healthily once they start. It helps employees start building healthy living habits and keep them for a long time. The

health promotion event this year is a long-term, diverse themed event. It effectively loses weight or helps employees build physique. We provide prizes by encouraging employees to collect points, to encourage the groups who usually do less exercise.

Themed events of Dream Creator in 2022

ACTIVITY NAME	NUMBER OF PARTICIPANTS
March Chinese medicine practitioner seminar – Create good constitution to sleep well	147
March Dietitian seminar – Eat healthily. Get rid of metabolic syndrome.	127
April to May Famous sports health team – It's not boring to stay at home. Take eight online exercise courses.	940
July to August Online walking – Individual and team contest	190
September Physical therapist seminar – Sitting position in office and relaxing exercise	145
October to November Fat burn activity – Individual and team contest	872
October Dietitian – Strategy for burning fat by eating	190



Employee activity center

MSI developed various staff activities and facilities, and built diverse activity venues, e.g. dancing classroom, library, massage room and workout space. Numerous sports courses are open regularly (e.g. yoga, boxing aerobics, street dance) to provide good relaxing spaces and abundant activities.



5.4.2 Workplace health management

The goal of health management is to improve employee’s awareness on health, help employees build correct idea of health, and further help employees learn more about health. Meanwhile, we help employees become more interested in health and improve their own concept of self-health management. MSI aims to prevent disease through three-sections and five-levels, and help employees stay healthy. MSI adopts the health guidance and measures based on HBM, and helps employees to learn about perceived benefits, perceived susceptibility and perceived severity to conduct health behaviors. The infirmary and specialized full-time nurse is available in all of MSI’s factories to help promote and arrange diagnosis and treatment services. They cooperate with the labor safety unit to execute ergonomic injury prevention, and prevention of abnormal disease stimulated by work. Besides this, we also have been focusing on health seminar, maternity protection, health promotion event and blood drive for a long time. All kinds of achievements in 2022 are shown in the table below:

ITEM	PURPOSE AND EXECUTION METHOD	RESULT
Health promotion	Provide latest epidemiology information through email, BBS in the factory, and mobile app of the factory in China for employees to read and enhance health knowledge. We hope that employees understand more health information subtly. We introduce the idea of preventive healthcare. We build a healthy lifestyle and behavior for all employees through active health education promotion, to help employees in the factory to learn more about health condition. Besides this, we organize relevant health education promotion events and workplace health seminars to adapt to changes in epidemiology every quarter, to provide relevant health education promotion, and the latest knowledge on disease change.	◆ The Company’s infirmary and Welfare Committee held 6 seminars and 713 people joined the seminar. ◆ 4 health promotion emails ◆ 12 COVID-19 promotion emails
Clinic and medical service	To implement occupational disease prevention, health check-up, health rating management and health promotion, a clinic is available at the factory infirmary with qualified physicians and professional nurses to provide health counseling service. It is convenient for employees and onsite contractors to seek medical attention at work without leaving the factory.	◆ 1,641 people visited the clinic and 584 people visited the clinic online. ◆ 128 people received mental and physical health counseling (physical and online in total).
Workplace maternity protection plan	To take care of maternity protection at the workplace and enhance medical care performance, professional health counseling and evaluation interview by the physician is provided to female employees who are pregnant or delivered baby within a year. Work suitability advice is also arranged for them. In addition, the breastfeeding room is also available in the infirmary, providing a hidden, comfortable environment for breastfeeding moms. This service has won the good breastfeeding room certification in the Friendly Workplace Section of New Taipei City. We provide “MSI Pregnant Gift,” containing baby care product, small food scissors and safe spoon.	46 female employees at MSI in Taiwan have been helped.
Employee health check-up and risk rating management	A general health check-up is provided for all employees at MSI every two years. A certain time for health check-up is also available for temp workers and senior executives. Employees check their health check-up report in all years and health promotion event information through the system, and participate in health event sign-up. They can use the personalized account to check and download the annual health check-up report, and provide articles on popular medical knowledge to enhance self-health management concept. Provide relevant health management measures based on risk rating. ◆ Low – Health education guidance ◆ Medium – Health education guidance, suggest regular follow-up depending on the case, continue to care for the employee ◆ High – Health education guidance, require the employee to seek medical advice and provide recheck condition, arrange interview with physician, and continue to track the follow-up condition	◆ 2,198 people took part in routine health check-up in Taiwan. The attendance rate is 99%. ◆ Continue to track the follow-up condition and care for 349 employees based on health check-up result of employees in Taiwan. Provide health education to and interview with 910 employees.
Health promotion event	Actively implement health promotion, create healthy atmosphere, and organize activities meeting the need of employee based on the data analysis after health check-up. Besides this, a free flu shot is provided in the flu season every October. Employees can feel free to take the shot. Employees are prioritized to take the shot to achieve secondary preventive protection. The flu shot event is integrated with the four-cancer screening activity and blood drive held by communities and all parties. MSI has been honored healthy workplace certification – health promotion badge extension by the Ministry of Health and Welfare for years.	◆ 1,405 people took the flu shot in Taiwan. ◆ 194 people took part in the four-cancer screening event. ◆ 344 people joined the blood drives in total in Taiwan and China. 639 bags of blood were collected, 151,400 CC.

Medical service information

SERVICE		MSIT	MSIT1	MSIS	MSIK
Medical service		Health insurance clinic, health advisory, ergonomic hazard prevention management	Health advisory, ergonomic hazard prevention management	Clinic, psychological counseling	Clinic
Employee health check-up		General, special operation			
Health promotion event		Speech, dynamic notification	Dynamic notification	Dynamic notification	Dynamic notification
Professional physician and nurse	Onsite clinic physician	2	1	1	1
	Nurse	3	1	1	1
Number of employees served during the report period		2,128	162	644	-
Note: There is no clinic at MSIT1.					

MSI employee health check-up

We offer health check-up to employees every two years, and temp workers and senior executives every year, and offer different health check-up items for male and female employees. A system is used to manage health check-up information of employee to track health check-up information, and provide health information and new medical knowledge for employees to manage this information themselves. Medical specialists in all factories can communicate with employees on health immediately.

ITEM/FACTORY	MSIT	MSIT1	MSIS	MSIK
General health check-up attendance rate	99%	-	-	98.9%
General health check-up item	Blood routine examination, general medical and surgical routine (blood pressure, auscultation), liver function, X-ray, B-scan ultrasonography. More Health check-up items are provided by MSIK based on age and job level: Cardiovascular function, cardiopulmonary function, gynecology, tumor screening, bone mass density and digestive system			
ITEM	SENIOR EXECUTIVE HEALTH CHECK-UP	HEALTH CHECK-UP FOR TEMP WORKER BEFORE ON-BOARD	TEMP WORKER HEALTH CHECK-UP	SPECIAL HEALTH CHECK-UP*
Number of employees	105	11	49	7

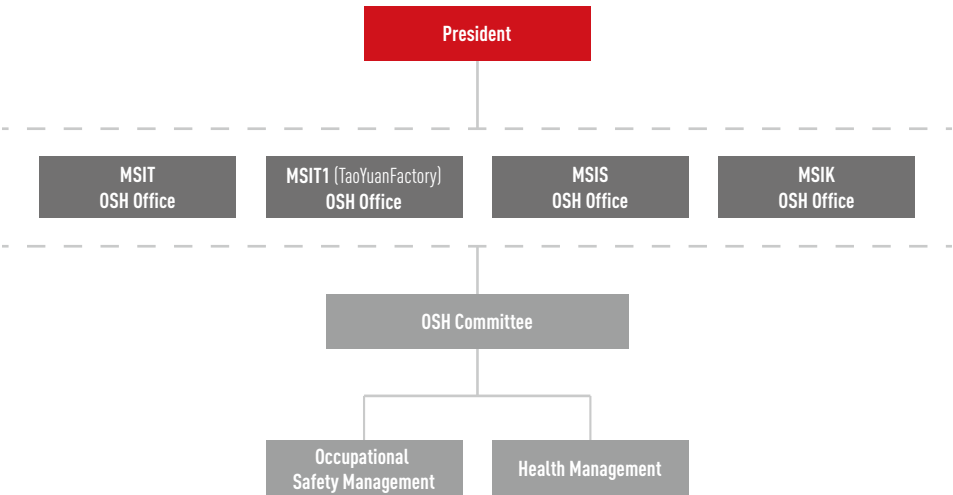
Note: Health check-up is based on items specified in China’s Technical specifications for occupational health surveillance. The employees work in areas with noise, dust and radiation will receive special health check-up. No abnormality was found in the result of the health check-up.

5.4.3 Occupational health and safety management

Employee is essential to sustainable operation of MSI and valuable intellectual capital of MSI. We fulfill good occupational health and safety measures to enhance the health and safety of all employees, and create healthy workplace and friendly environment. We implement contractor management, and create the goal of co-prosperity, reciprocity and value sharing.

MSI occupational health and safety organization

MSI strives to promote occupational health and safety (hereinafter referred to as OHS). OHS management system guideline and the management requirements specified by all departments on occupational safety are carried out sufficiently by internal control management. Conformity verification is executed regularly according to OHS guidelines of all factories, customer requirements or stakeholder requirements (e.g. RBA). MSI always endeavors to OHS management improvement at factories, and specifies rights to health, hygiene and safety for workers in the employee work rule and all kinds of OHS work rule. OHS and Environmental Committee have been established. Over half of members of the Committee are labor representatives. By supervision and implementation of the management system, we promoted and obtained ISO 14001 and ISO 45001 certification to achieve continuous improvement.



Executive items of safety and health management during the report period

ITEM	IMPLEMENTATION MEASURES
Regulation identification	Identify regulations regularly to confirm compliance: ✓ Laws applicable to safety and health management regulations: 246 ✓ Laws applicable to fire management regulations: 35 ✓ Laws applicable to food health management: 28 ✓ Regulations applicable to environmental protection: 226
Management system procedure	✓ Established 176 documents of health and safety management procedure. Perform review every year. ✓ ISO 45001 occupational safety and health management system: Relevant occupational safety and health staff fully complete education training and third-party assurance.
Education training	✓ Promote safety and health training of worker to meet safety and health laws and emergency response needs. ✓ Perform firefighting, evacuation, traffic safety and first aid training. ✓ New employees take occupational safety and health education courses.
Hazard identification	Perform safety and health hazard identification for operating environment and content. 3,475 cases have been handled.
Change operation management	Completed 24 cases of change management. There was no hazard or false alarm incurred from change operation.
Contractor management	The contractor completed 122 high risk operations. There was no hazard or false alarm incurred from high risk operation.
Operating environment monitoring	Use SEGs to group areas with possible hazard (e.g. laboratory, repair area, office area) for indoor workplace. Physical and chemical test is performed every year. Although lead-free solder wire is used for the products of the Company. To ensure health of workers, the environment test of lead and tin is still included in test items.
Implement audit improvement	824 suggestions are proposed during the report period. All of them were improved in the required time.
Occupational disaster prevention	Analyze the reason why the employee is injured. Promote relevant improvements, expecting to reduce the number of occupational disasters. Take MSI as an example. Traffic accidents are a primary reason for employee injury during the report period. We checked the tire wear of employee scooters by a walking patrol at the end of the year. The road safety seminar cannot be held due to the epidemic this year. It will be held again when pandemic slows down.

Description:
1. Worker refers to people doing work, including employee and non-employee worker responsible for his own occupational safety and health.
2. Non-employee worker generally refers to contractor, composed of supplier, subcontractor and contractor.

Scope of occupational safety and health management of worker during the report period

ITEM/CONTROL TYPE	THE TYPE OF POSITION CONTROLLED BY MSI	THE TYPE OF POSITION NOT CONTROLLED BY MSI
Scope of workplace controlled by MSI	Employee, contractor (vendor entering the factory)	Contractor (construction outsourcing)
The type of workplace not controlled by MSI	Employee (business trip, WFH), contractor (exhibition vendor)	Supplier (Peripheral manufacturer)

Description:
1. This refers to the position or workplace not directly associated with MSI or without contract with MSI.
2. Contractors include cleaning, securities and workers who perform construction in the factory.

Number and percentage of and total work hours of workers in the scope of OHS management system during the report period

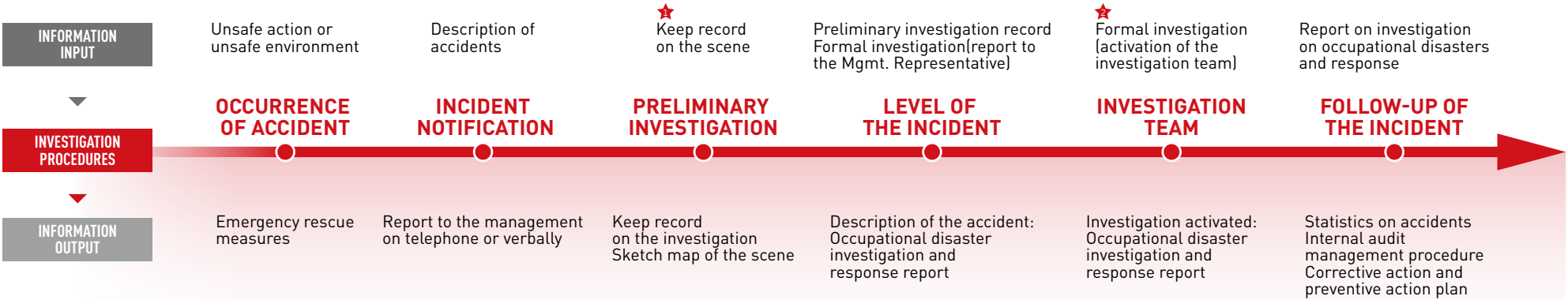
ITEM/FACTORY/GENDER	MSIT		MSIT1	
	EMPLOYEE	CONTRACTOR	EMPLOYEE	CONTRACTOR
Number of people as the basis of calculation	2,448	407	507	225
Percentage of these people in the factory	85.75%	14.25%	69.26%	30.74%
Total number of work hours	4,857,256	237,200	1,167,437	31,704
ITEM/FACTORY/GENDER	MSIS		MSIK	
	EMPLOYEE	CONTRACTOR	EMPLOYEE	CONTRACTOR
Number of people as the basis of calculation	The number of people is not provided due to the restriction in the non-disclosure clause of customer contract.			
Percentage of these people in the factory	99.48%	0.52%	86.93%	13.07%
Total number of work hours	7,125,492	549,120	719,280	747,728

Description:
1. Number of people as the basis of calculation: [Total of people per month] / 12. Take the average of the entire year [rounded to integers]. It is calculated differently from the number of people in [5.1 Attraction and retention].
2. Calculation for total work hours: [Number of people per month * Number of workdays per month * 8 hours]. Take the sum of the 12 results obtained for the formula [sum of the entire year].

Risk control and disaster prevention

To prevent occupational disaster, we identify hazards through trained safety and health management staff to evaluate occurrence, frequency and severity of each occupational disaster, and evaluate risk based on the hazard factor in different degrees. The HSE management unit examines risks. We control unacceptable risks and hazardous operations that cannot accept any risk, and improve setting of the goal. We record and track the risks and hazardous operations to continue to minimize occupational hard in the operating area. For any occupational safety and health incident that occurs at the workplace, we formulate incident investigation regulations, and visit and track the incident after it occurs. We judge damage and work injury based on the incident, and implement the improvement plan after the incident investigation report is completed. The HSE management unit continues to supervise and track improvement to reduce incident loss and prevent reoccurrence of similar incidents.

OCCUPATIONAL ACCIDENTS INVESTIGATION PROCESS



1 IDENTIFICATION OF DISASTERS		
Occupational Disasters	Diseases, injuries, disability or death of the workers caused by the building, machinery, equipment, raw materials, materials, chemical substances, gas, steam, dust or operation, or other occupational causes.	
Damage-causing Disasters	Occupational causes as defined by the above occupational disasters without causing human injuries but causing property damage, and damage to the work environment.	
False Alarm Events	Incidents that cause no property damage or human injuries, diseases, or death.	

2 Risk Assessment Matrix			
RISK LEVEL	RISK SCORING	COUNTERMEASURES	
Class 4 Extreme High Risk	≥ 320	The OSH function shall determine if it is necessary to halt the operation depending on the status of work and launch a full review of the protection measures being taken and the hardware, and proceed to corrective action at once and put follow-up management on the list.	
Class 3 High Risk	$160 \leq \text{scoring} < 320$	Establish corrective action plans, review the protective equipment and revise related work process. Intensify the training of personnel and refer to monitoring and control. Where necessary, put follow-up management on the list and keep track at regular intervals.	
Class 2 Moderate Risk	$50 \leq \text{scoring} < 160$	Stay with current practice of operation or evaluate to introduce additional protection measures. Related functions should organize training for corrective action on their own.	
Class 1 Low Risk	< 50	Acceptable risks.	

TYPE OF CONTROL	TYPE OF MEASURES
Chemicals	Select low-hazardous chemicals, control the source, and ensure factory and employee safety.
Operation hazard	Report the staff of the unit for this operating type and provide individual education training depending on the type of operation, and offer adequate PPE, occupational disease health check-up, health management, and operating environment monitoring.
Machinery equipment	Evaluate safety and install more equipment protection measures.
Electrical equipment	Check electrical equipment occasionally and prevent abnormality as early as possible.

The table below shows the result of operational risk evaluation inventory in 2022. Factory areas with high or extreme high risks refer to the large soldering machine, reflow oven, chemicals warehouse, switchboard room, and the units with a higher number of confirmed cases of COVID-19 during severe pandemic.

FACTORY/RATING OF OPERATIONAL RISK	LOW	MEDIUM	HIGH	EXTREMELY HIGH
MSIT	203	524	3	2
MSIT1	431	270	1	22
MSIK	561	138	31	0
MSIS	905	10	1	0

Occupational safety education training

◆ Employee safety and health education training
We hold the safety and health seminar, post posters, send emails and post information on the internal webpage to help employees become aware of workplace hazard and learn about prevention. Besides regularly providing safety and health education training and firefighting training to in-service employees, these staff may also communicate on safety and health through the suggestion box and occupational safety and health grievance channel, and enhance the safety culture. Education training is held regularly in factories in Taiwan through the Occupational Safety and Health Committee and in factories in China through the employee seminar. The relevant outcomes are shown below:

ITEM	COURSE NAME	TOTAL NUMBER OF HOURS				SUBJECT
		MSIT	MSIT1	MSIS	MSIK	
Occupational safety and health education training and hazardous substance general education course	New employee consensus training	1,243.5	936	12,600	91,512	New employee
In-service employee safety and health education training	Occupational safety education training	602.5	1,443	15,246	3,068	Internal employee
	Executive safety and health education training	66	78	51	88	Sales supervisor
Environmental education	Environmental education	51	37.8	210	3,068	Internal employee
Traffic safety	Traffic law promotion seminar	496	19	3,800	-	Internal employee
	Safety protection for scooters of the entire factory	125	-	-	-	Internal employee

◆ Contractor safety and health education training
We formulate the contractor safety, health and operation directions. Contractors who enter the factory must comply with occupational safety and health laws and MSI's rules. They may enter the factory to perform operation after completing MSI's promotion or education training. For onsite contractors, we also arrange occupational safety and health courses for them, and urge the employer of onsite contractor to pay attention to labor condition of the employee to make sure that it meets the local labor regulations. Onsite course is canceled to adapt to health competent authorities in all locations during the pandemic. An online course is held instead for some factories. The table below shows the contractor HSE education training during the report period:

ITEM	COURSE NAME	NUMBER OF EMPLOYEES				TOTAL NUMBER OF HOURS				SUBJECT
		MSIT	MSIT1	MSIS	MSIK	MSIT	MSIT1	MSIS	MSIK	
Safety and health/ firefighting training	Safety and health and firefighting management education training	327	92	286	368	163.5	92	143	368	Onsite contractor
	Permanent vendor education training	44	13	Not applicable		44	13	Not applicable		
	Permanent vendor internal seminar	0	13			0	13			
Operation safety promotion	Construction worker operation safety rule promotion	327	225	68	1466	163.5	38	68	1466	Special operation contractor
Food hygiene education	Food hygiene and safety	0	Not applicable	74	48	0	Not applicable	74	192	Catering contractor

Note: There is no restaurant in MSIT1. Food hygiene and safety course is not required.

5.4.4 Outcome of occupational health and safety management

To ensure operating environment safety of workers, and satisfy environmental protection and labor safety and health regulations, the “Occupational Safety and Health Committee” and “occupational safety and health suggestion box” are available. Workers may use them as the main communication channels for engaging in occupational safety and health. Workers can communicate with the management directly through email, employee representative of the department, or the Committee. If there’s any industrial accident such as hazardous incident or false alarm, we have a corresponding communication procedure for workers to report it any time. If there’s any immediate risk for relevant industrial accident, workers may terminate operation, evacuate to a safe place, and report to the management unit immediately according to MSI Emergency Response Management Procedure without harming other workers. The worker is not held accountable or punished for the aforementioned hedging according to MSI’s work rules.

Construction safety management during the report period

To reinforce construction safety and health of public works, and prevent occupational disaster, we appoint appropriate staff for supervision, monitoring, audit, check or spot check of construction safety and health depending on the nature and scope of construction, to prevent accidents and environmental pollution.

PRIMARY ITEMS OF CONSTRUCTION SAFETY MANAGEMENT
① Operation hazard notification and construction application review
② Safety check and occasional onsite inspection are required before special operations, such as hot work, elevated work, confined space, suspension and suspension cage.

PERFORMANCE OF CONSTRUCTION SAFETY MANAGEMENT DURING THE REPORT PERIOD				
ITEM/FACTORY	MSIT	MSIT1	MSIS	MSIK
Number of audited cases in the factory	100	157	1,982	1,632
Number of nonconforming cases	151	3	410	71
Number of improved cases	151	3	410	71
Improvement rate	100%	100%	100%%	100%

Number of general occupational injuries and traffic accidents of the employee during the report period

In this report period, the number of work injuries did not increase significantly compared to the previous report period. We will continue to promote three levels of safety and education training to raise employee’s hazard awareness. Traffic accidents of employees in the Head Office in Taipei decreased significantly compared to last year. We will continue to promote employee safety. Besides reminding employees of specific road sections, we also remind them of tire and brake system care of scooters to reduce

ITEM/FACTORY/GENDER	MSIT		MSIT1		MSIS		MSIK	
	MALE	MALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Number of general occupational injuries	0	2	0	2	6	2	2	1
Number of traffic accidents	5	1	8	2	0	0	0	0

Description: General occupational injury: This refers to the case where the injured employee can recover in six months.

Statistics table for the employees suffering from disabling injury during the report period

We set frequency rate and severity rate of disabling injury as the management goal (target value as shown in the table below), and list the implementation result. MSIS failed to reach the goal. The failure has been put on record for management, and we will continue to strengthen and implement various safety and health management.

ITEM/FACTORY/GENDER	MSIT	MSIT1	MSIS	MSIK	TOTAL FOR THE GROUP
Target value of disabling injury frequency rate (FR)	0.24	0	1.5	0.9	-
Target value of disabling injury severity rate (SR)	6	6	7	6.3	
Total number of losses	2	2	8	3	15
Total number of days lost	8	1	77	27	113
Disabling injury frequency rate (FR)	0.41	0.86	1.14	0.43	1.08
Disabling injury severity rate (SR)	1	1	11	1.95	8
Total number of work hours	4,857,256	1,167,437	7,125,492	719,280	13,869,465

Formula description: ♦ Statistics benchmark date of the number of employees: December 31, 2022
Disabling injury frequency rate (FR) = Number of disabling injuries X Number of millions of work hours / Total work-hour (round up to two decimal points)
Disabling injury severity rate (SR) = Number of days lost due to disabling injury X Number of millions of work hours / Total work-hour (round up to integer)
Note: No employee suffered from severe occupational injury (suffering from disability injury at least 6 months). Most of the injuries are cuts, pinches and rolling.

No contractor suffered from general disability injury or severe occupational injury during the report period. There was no worker suffering from occupational disease or injured or died due to occupational disease during the report period, either.

CH6.
SOCIAL RESPONSIBILITY
AND CORPORATE VALUE



NT\$80.83 million
donated in 2022 *

*Note: Donation is the total donation of the Group. The rest of the performance is from the factory in Taiwan.

44
public welfare programs

Employee engagement:
More than 500 employees

349 computer and information
equipment donated

Benefited students:
More than 20,000 students

MSI is committed to corporate social responsibility, and combines the charity philosophy “change starts now, service is to cast one’s bread upon the waters, contribution is many a little makes a mickle, dream is being down-to-earth.” MSI offers the greatest support and assistance, and continues to collaborate with corporate volunteers and numerous stakeholders (e.g. government, school) to contribute to charity regarding the goal of school lunch, education care, resource donation, and disadvantage assistance for a long time, to create a society with equal wealth, equality and without poverty.

Change Starts now

Service is to cast one’s bread upon the waters

Contribution is many a little makes a mickle

Dream is being down-to-earth

To find out MSI’s public welfare program,
please search for  Love in MSI • Spread Love
or click on: <https://www.facebook.com/MSICSR>

6.1 Technology sustainability and digital inclusion

As the leader of global e-sports brand, MSI cares about popularity and inclusion of digital education for children and youths to understand the world of computer science, hardware and software. MSI helps the government and disadvantaged community gain the rights to digital life, and builds the foundation of diverse development of the new generation.

2022 PowerTech

To adapt to emerging maker trend around the world, and fulfill the education mission of “STEAM,” science, technology, engineering, arts and math, we deepen the hands-on method and popular science creation learning method, guide youths to explore the science domain and develops their potential in popular science, and cultivate tech talents in the new generation.

DONATION ITEM	DONATION AMOUNT	OUTCOME OF THE ACTIVITY
We subsidized summer camps in elementary schools and middle schools in New Taipei City, founded PowerTech Club in school, and joined relevant courses and activities such as student training for New Taipei City Contest and National Contest.	1,300,000	◆ We promote PowerTech to all schools, and help students and teachers improve hands-on skills and teach them about popular science related to these skills. ◆ We activate school courses, and create the trend of popular science and hands-on learning at school.

★ NT\$6,600,000 donated since 2017

MSI technology regeneration computer and information talent training program

MSI knows well that digital gap is not just an issue for remote area. Lots of young adults and the workers returning to the job market in urban communities and neighborhoods also need to enter the digital technology era quickly. Therefore, MSI brought up the “Technology regeneration computer and information talent training program” for schools that wish to open relevant courses to apply for donation of MSI computer, and offer a complete course plan. MSI also provides advice and counseling in time to extend industry-academia collaboration to communities to help teachers, students and the public.

The plan in 2022 is as follows:
◆ New Taipei Municipal Yongping High School: The all-age information class, “Wa Yao Ching Ying Sharing”, digital academic guidance class, and emerging technology camp help new immigrants, people who were deprived of education when they were young, middle school students who need academic guidance or language learning, and residents around the community who are interested in metaverse/AR/VR. They can use a higher-grade computer to gain access to digital network resources.

◆ Ginling Girls' High School: The third information classroom has been built for benefitting teachers and students. "IQ Light" and "3D action figure flowerpot design" courses are held on holidays. Students of these courses can enjoy creation via computer graphics and online 3D design modeling software.

This plan will still be in operation in 2023 and has attracted several dozens of students.

Digital protection, MSI computer donation
Besides encouraging local schools to open courses, MSI spares no effort in donation to stakeholders such as government units and NGOs. In this era, learning, work and daily life is inseparable from network. However, many people still cannot enjoy adequate resources. Therefore, MSI has been donating laptops, tablets and desktops to numerous units, expecting to bridge the digital gap and urban-rural gap, help the disadvantaged family or support government resources.



Ms. Chen Yu Chai from Kohu Township in Yunlin County has been offering her own building to create Keliao School for more than 20 years for free to provide an after-school program to disadvantaged students. Unfortunately, it was burned down in July 2022. After hearing this bad news, MSI integrated resource and donated 20 recycled computers to Keliao School for digital education. Besides appreciating Ms. Chen’s public welfare service, MSI expects to fulfill corporate social responsibility by helping local students.





Local government and elementary education

Government’s digital transformation demands immediate action but resources are limited. Sometimes the government cannot satisfy urgent needs. MSI continues to donate resources such as laptops and monitors, and provides equipment to fulfill the needs of all locations and different types of government agencies.

In 2022, 154 laptops, 38 tablets, 10 monitors and 50 mice were donated.

In addition to police agency, in 2022 MSI also donated computers to three schools in Nantou County for remote teaching in class, and after-school tutoring for disadvantaged students, directly and indirectly helped over 9,600 students. MSI helped the Social Welfare Department of New Taipei City and Taoyuan to serve families, shelters and care centers, help families, children and youths in difficulties, and ensure their rights to learn at home.

NGO and disadvantaged group

In 2022, MSI offered 77 laptops to numerous social welfare agencies and NGOs. They are provided to groups lacking resources, such as disadvantaged people, children with physical and mental disabilities, homeless and Taiwanese aboriginals in remote areas. MSI aims to bridge the digital gap and become one of network citizens.

2022 Chung Yuan Christian University Power Up – Topic and Creativity Competition

MSI continues to seek great talents in colleges and universities in Taiwan. Besides joining the GOLF to bridge education–employment gap, MSI actively participates in campus events. In 2022, MSI collaborated with Chung Yuan Christian University College of Electrical Engineering and Computer Science to organize the Topic and Creativity Competition, which divided into topic project section and creativity section. MSI encouraged students for creative thinking and teamwork, and learn from each other at the same time. The total prize was up to NT\$230 thousand.

In addition, MSI provided the prize for development, one workstation computer and two laptops to Chung Yuan Christian University College of Electrical Engineering and Computer Science as the public resource for all kinds of experiments and student learning and creation. MSI expects that students can learn diligently, reach their full potential, and build a good foundation for their future.

6.2 Disadvantage assistance and education guidance

Disadvantage assistance

MSI knows well the predicament disadvantaged groups face during social change or social structure transformation, and knows that they need immediate, adequate social security, medical service, education and labor to break the bondage from the family and environment. Through official collaboration or cross-industry collaboration, MSI helps disadvantaged groups, offers fund, resources or actual assistance for them to take the journey to a hopeful, bright life.

Learning fun day for students with special educational needs in New Taipei City

To help students with mental and physical disabilities enjoy abundant life experience, the New Taipei City Education Department holds the Learning fun day for students with special educational needs every year. If physically challenged children, cerebral palsy children and the children with multiple disabilities, the Education Department arranged activities and shuttles for them to ease burden for their family significantly. Children will be more willing to go

outdoors, and the Education Department will help them learn at ease and grow happily. MSI has been sponsoring the event since 2017 and works with Taiwan Taxi LOHAS Club to help these students enjoy life in different activities. In 2022, MSI, the New Taipei City Government and Taiwan Taxi continues to work with Decathlon Sanchong Flagship. The event in 2022 is called the “Decathlon Party,” continuing from the event in 2021. Students with mental and physical disabilities learn about body potential and learn to cherish life through specially designed courses.

YEAR	2020	2021	2022
Organizer	New Taipei City Education Department, Taiwan Taxi LOHAS Club		
Sponsor unit	Micro-Star International Co., Ltd.		
Co-organizer	Leofoo Village Theme Park	Decathlon Sanchong Flagship	Decathlon Sanchong Flagship
Sponsor amount	263,000	250,800	267,000
Number of participants (Number of teachers and students)	500	550	500
Number of families participated in the event	80	40	80

★ NT\$1,325,980 donated since 2017



High-risk caregiver care MSI plan

Social cases involving caregiver who were crushed by long-term care stress occurred these years reflect that mental and physical health of caregivers and the cared are equally important regarding long-term care issues. MSI noticed hidden risks of caregivers that come with aging society. It has been sponsoring local care agencies since 2017. Workers with diverse and cross-domain expertise (nurse, social worker, Taiwanese/foreign caregivers) offer specific support depending on the needs of caregiver in high-risk families, which is a patrol service that is offered several times a day, in a short time, mobile and in a small area. MSI does its own part to help people in need, supplements resources for shortage of long-term care resources provided by the government, and fulfills corporate social responsibility.

YEAR	2020	2021	2022
Donation item	◆ All In One service ◆ Family caregiver service ◆ Respite care ◆ Care on festivals, caregiver support service		
Nursing organization	Hondao Senior Citizen’s Welfare Foundation		
Number of people served by the nursing organization per month	755	671	2,051
Donation amount	907,320	928,654	1,172,010



Sistema Taiwan

Sistema Taiwan was initiated in Venezuela 40 years ago and it is now spread all over the world. It endeavors to help disadvantaged children and the children in remote areas to receive music education. In 2016, Sistema initiated the public welfare music education, implemented equality of music education, reused used space, offered instruments and great teachers, and offered chances to learn music. It has helped 60 schools and opened 2,200 courses as of today.

MSI holds fast to the idea that “music brings the opportunity to change life” and activates public welfare music education. We invested in music education through this program, and discovered that music has been rooted in children’s hearts. We were deeply shocked by the fact that music changed children’s lives and helped them become confident and ambitious when they grow. Expenditure for sponsoring instruments and teachers in the past three years:

YEAR	2020	2021	2022
Donation amount	219,800	311,500	311,500



Education guidance

Education is an important power for facilitating social mobility and enhancement. Everyone shall have a fair, rational, equal, good chance to receive education though inheritance and environment are different for everyone. MSI offers interventional help via education resource, improve adverse impact of environment on disadvantaged student regarding education learning, and mitigate the gender gap at the starting point of learning.

“MSI’s care for students,” academic guidance and club activity for disadvantaged students

MSI has been in operation in New Taipei City for several decades. It has been working with New Taipei City Government to pay attention to rights of disadvantaged students. We use resources to hold academic guidance and club activity programs, and help 44 high schools, middle schools and elementary schools in total in Ruifang, Luzou, Banqiao and Zhonghe District, New Taipei City. In this program, teachers for after-school tutoring or club are hired to offer diverse learning opportunities to disadvantaged students. Besides helping them improve subjects they have difficulties with, we create special activities such as language, folk arts, physical education or dance, to help they become confident, develop their advantage, and explore their potential. We aim to create a caring, warm society that people are willing to help each other. About NT\$23 million has been donated since 2012. In 2022, MSI sponsored over 50 schools and helped over 3,000 students. The achievement is shown as follows:

DONATION ITEM	DONATION AMOUNT	NUMBER OF BENEFITED STUDENTS	NUMBER OF BENEFITED SCHOOLS (NUMBER)	NUMBER OF CLASSES	NUMBER OF LESSONS
“MSI’s care for students,” academic guidance and club activity for disadvantaged students plan	3,491,801	3,154	51	188	10,178

Warm student loan

Warm Student Loan Foundation, founded in 2005, sponsors 200 public school students registered in New Taipei City on average per year. MSI has been serving as a committee of Warm Student Loan Foundation in New Taipei City for a long time. The Enterprise-government-university Committee selects outstanding poor students, and shows care and grants fund to remote areas in New Taipei City, to improve life difficulties for outstanding poor students in remote areas with the Warm Student Loan Foundation. MSI hopes that they can focus on their study, do not need to worry about student loan or living expense, can graduate smoothly, and enjoy a happy school life.

DONATION ITEM	DONATION AMOUNT	NUMBER OF BENEFITED STUDENTS
Warm Student Loan	10,500,000	108

★ Donation amount as of today (since 2010): NT\$30,500,000

Gap of Learning & Field (GOLF) Internship Plan

MSI aims to connect college and university education with expertise required for the corporation and industry effectively, and help fresh graduates become battle ready. Therefore, MSI works with numerous enterprises also in the computer industry to establish a diverse education platform in 2018 to build self-learning ability, offer knowledge exchange among majors, industries and domains, and facilitate hands-on mechanism in diverse domains. MSI strives to help students respond to workplace change and challenge in future. MSI works with numerous companies in the same industry. Through course credit recognition, online expertise training, building offline hands-on experience, matching students with corporations based on internship evaluation, and sharing successful experiences in the campus seminar, MSI and these companies help them get a job right after graduation.

In 2022, MSI offered two types of collaboration for students to gain experience in the industry:

INTERNSHIP IN JUNIOR YEAR	INTERNSHIP IN SENIOR YEAR
◆ Continue to study after returning to school in senior year ◆ Focus on bridging the gap between school course and job.	◆ Get a job right after graduation ◆ Shorten the time for adapting to work
Work design → An explicit work process shifts existing jobs with basic skills to the entry-level employee. Connect these jobs to the courses in school.	
Cost effectiveness → Treat interns as a part of the work process. Every job can contribute to productivity. The cost for training fresh graduates to adapt to the job is reduced.	
Impact on internal employee → Re-design jobs to enhance technical level of existing employee, enhance employee knowledge and achievement, and train internal professional instructors at the same time.	
Benefits to interns → Interns can check their career path through internship, give themselves space for adjustment and consideration, and seek help and support from the industry. Talent competence of corporation is enhanced. Help fresh graduates become less anxious or restless in future.	

In 2022, MSI took part in three corporate campus seminars. The topic is “Reveal industry trend, master your work in future.” The executive shares problems at the workplace, how to use what students learned in school in job skills, and the skills and attitude that students must be ready for when they want to apply for a job. In the meantime, a current MSI intern will share how he, who was a campus ambassador, became an intern.



Other social donations

MSI has been recognized by lots of community members and consumers in global operation and development. MSI knows well that it must take from the community and give back to society. Every year MSI allocates a certain amount of funds to sponsor disadvantaged groups or helps the government invest in aid for the disadvantaged, to do their own part for social welfare.

- ① Green channel implementation plan of early intervention identification for placed children from the age of 0 to 6: In 2022, MSI sponsored NT\$1 million to help the Social Welfare Department of New Taipei City invest in labor and material resources to help out-of-home placements such as foster families, similar families, kinship families and child and youth placement agencies in New Taipei City. The Social Welfare Department of New Taipei City manages these placements separately, and takes care of 100 people with possible developmental delay or need early intervention.
- ② Language hearing training for hearing-impaired children: Help hearing-impaired children from the age of 0 to 6 with audio acuity, hearing assessment, health education counseling, language hearing training and assistive device adjustment. Help them open a bridge to communicate with the world. 500 children benefited from the training in 2022.
- ③ Happywork: Support and take care of people with physical and mental disabilities. Train them for diverse talents, OEM function, self-care ability and stable development. 40 families benefited from these services in 2022, including 30 people with intellectual disability and 10 elders who live alone.
- ④ “Medical care plan for hard-to-place children under urgent, short-term placement” by the Social Welfare Department of New Taipei City: NT\$6 million was donated in 2022 to help children and youths who need urgent placement and protection due to dysfunctional family and maltreatment. Urgent, short-term placement and protection service is promoted to offer temporary, safe residence, life care and relevant guidance services.
- ⑤ “Placement plan for disadvantaged people without welfare status” by the Social Welfare Department of New Taipei City: NT\$2 million was donated in 2022. The Social Welfare Department of New Taipei City and Shuanghe Hospital helped place disadvantaged people without welfare status in nursing home after they were discharged from the hospital.
- ⑥ Social Welfare Department of Taoyuan City Government: NT\$2 million was donated in 2022. It helped disadvantaged children and youths to get a chance for labor capital, such as higher education, vocational training and self-employment. It helped them stand on their own feet to mitigate intergenerational transmission of poverty. 1,990 people benefited from the donation.
- ⑦ “After-school program for middle school and elementary students with physical and mental disabilities” by the Education Department of New Taipei City: NT\$6 million was donated in 2022 to fulfill the education philosophy for taking care of disadvantaged students. 140 students benefited from the donation.

6.3 Care and sustainable inclusion in remote area

MSI cares about the philosophy of diverse growth and social inclusion. It strives for new technology and technique breakthroughs in business, but also reaches out to remote and local communities. By school lunch subsidy, community culture cohesion, and local environment protection, MSI fully fulfills corporate social responsibility and conveys the spirit inside out.

Sponsorship for school lunch and food ingredient purchase by students in remote areas

Students in remote areas often cannot acquire food in a condition the same as that of typical students because they are in a remote area or they are from economically disadvantaged families. The resources for schools in remote areas are poor, leading to a heavy burden on the school lunch budget. MSI understands the dilemma in remote areas, hence it sponsors school lunches for a long time to improve school lunch quality in remote areas, and help students enjoy sufficient, nutritionally balanced school lunches. MSI aims to improve malnutrition and underweight problems, and use warm social support to help students learn to become grateful to society. Besides this, we sponsor elementary and middle schools in remote areas to subscribe to rice or vegetables grown in Taiwan, help promote local rice and agricultural farming, and sponsor schools to grow their own rice and vegetables for school lunches. We hope that schools can feel the warm social support. In 2022, 68 schools were subsidized and about 15,101 disadvantaged students benefited from the sponsorship. MSI has donated over NT\$52.7 million since 2010 and helped tens of thousands of students in remote area to enjoy school lunch without trouble.

MSI worked with Sunny Founder and Renyou Sanatorium to carry out the “Green energy public welfare 100+ plan”

MSI responds to Green energy public welfare GW100+ and initiates the “2022 MSI green energy public welfare plan.” MSI will donate to this plan by depositing the funds in the donation account of Taiwan Green Energy for Charity Association through the green energy public welfare mode initiated by the Taiwan Green Energy for Charity Association and Sunny Founder. MSI will purchase solar panels owned by Sunny Founder. The electricity income made by solar panel later on will be donated to Renyou Sanatorium by Taiwan Green Energy for Charity Association after deducting necessary tax. MSI aims to help make profits and create environmental sustainability and multi-win value.

In 2022, MSI donated NT\$2.088 million for establishment of solar power facilities. In the next 20 years, the charity group will continue to benefit from revenues of green power. MSI will stably contribute to carbon emissions for the Earth.

Material donation to police and fire department

MSI knows well how hard police and firefighters work, and has been continuing to donate supplies, equipment or funds to all units. The outcome in 2022 is shown below:

- ① Fire Department of the New Taipei City Government: Donated medical supplies to the 7th Rescue & EMS Battalion, Fire Department of the New Taipei City Government.
- ② Fire Department of the Taoyuan City Government: Donated firefighting training equipment to the 1st Rescue & EMS Battalion, Fire Department of the Taoyuan City Government.
- ③ Zhonghe Precinct, New Taipei City Police Department: Donated and purchased police duty equipment, and sent gift for appreciation to police.
- ④ Taoyuan Precinct, Taoyuan Police Department: Donated and purchased police duty equipment, and sent gift for appreciation to police.
- ⑤ New Taipei City Police Department: Supported consolation money distribution to injured and dead staff of New Taipei City Police Department.



Environmental protection and social inclusion

- ① MSI identifies itself with “contract and outsourcing farming” in Nanao Natural Farm, and realized the idea of sustainable farming “clean food, clean land.” Therefore, MSI adopted about 0.48 hectares. Nanao Natural Farm is responsible for rice milling and farming. The crop yield exceeding the guaranteed crop yield will be shared equally by all contract farming companies. In 2022, 2,000 kg of organic brown rice were harvested. It will be donated to numerous charity groups or partners. About 9,400 kg of organic rice has been adopted and purchased since 2017.
- ② MSI cares about environmental sustainability of the Earth and ecological conservation. It protects water source in Pinglin, maintains Feicui Reservoir, and takes care of health and life of tea farmers in Pinglin. Organic Transportation and Sale Co-op of New Taipei City in Pinlin promotes the organic tea farming and promotion plan. MSI adopted all tea plantations in this plan, and harvested and donated tea to Good Day for elders in disadvantaged groups can gather and enjoy great tea. 11,000 organic tea bags have been donated in 2022.
- ③ In 2022, MSI adopted 2,200 kg of organic pomelos and donated them to Good Day for disadvantaged families.
- ④ In 2022, MSI continued to donate to Lord of the land Cultural Festival in Zhonghe District and did its own part for local folk culture.
- ⑤ Wugu Wetland has the wetland ecosystem with the most intensive bird population in Northern Taiwan. Thanks to the hard work by The Society of Wilderness, Wugu Wetland has been certified as an important wetland. MSI recognized the efforts made by The Society of Wilderness for the wetland environment. In 2022, MSI sponsored the Wugu Wetland restoration program. Besides donating and

adopting Wugu Wetland, MSI organized the environmental education life seminar for staff and help them build green habits in life gradually, expecting that everyone can cherish our living environment.

- ⑥ We respond to the Tamshui River Covenant and do one thing for Tamshui River. Tamshui River and its upstream rivers, Xindian River and Dahan River, are the lifelines running through the Greater Taipei area. Studies by The Ocean Cleanup indicate that Tamshui River ranks 16th out of the 20 most polluted rivers around the world. About 14.7 thousand metric tons of plastic trash flow from Tamshui River to the sea on average every year. The Earth is facing the risk of climate change, water shortage and loss of biodiversity, impacting the ecosystem and animal and plant habitats in the basin of Tamshui River, and each family and corporation upstream, midstream and downstream of Tamshui River. Therefore, MSI promises that:

- ◆ We will not discharge untreated wastewater or sewage that fails to meet the discharge standard.
- ◆ We will monitor the trash cleaner not to dump waste arbitrarily.
- ◆ We will strive for green procurement, including sustainable product, green power and low carbon product.
- ◆ We will encourage employees to actively engage in public governance of Tamsui River System and become a responsible corporate citizen of water system.

6.4 Love in MSI and value transmission

“Love Spreads in MSI” blood drives

Since 2002, MSI has been continuing to promote blood drives. Factories in Taipei, Taoyuan and China host blood drives occasionally for numerous MSI employees to donate blood for public welfare. MSI’s infirmary arranges blood donation truck from blood drive center to visit the Company every year, and invites employees to donate blood for saving life of the injured. 239 employees participated in the blood drive during the report period, 472 bag of blood were collected.

Guard the coast, MSI’s tree planting event

To enhance the function of ecological habitat and biodiversity restoration for wetland and coast, increase adaptation to environment and climate change, and reinforce natural carbon sink, MSI works with Tse-Xin Organic Agriculture Foundation in 2022:

◆ Adopt forestation at Wangzailiao Sandbank of Taijiang

MSI supports the “Local symbiosis – Consolidate the critical sandbank of lagoon by coastal afforestation, protect natural and cultural inheritance of Taijiang National Park” plan. MSI donated **1,000 trees** to the Wangzailiao Sandbank of Taijiang National Park in Qigu District, to protect the important ecosystem of the coastal wetland.

◆ Tree planting for loving the Earth at Zhuangwei Dune in Yilan

We called on **122 employees** and their dependents to join the event, and planned over **500 trees**, expecting to reduce over **10 metric tons of** carbon dioxide emissions per year. We root the idea of sustainability for MSI, Taiwan and the next generation. Meanwhile, we spread the idea of ecosystem protection and environmental sustainability.



Appendix

I. GRI Index

- ◆ Statement of use: MSI prepared the 2023 Sustainability Report based on the GRI Standards. Data in the Report is recorded from January 1 to December 31, 2022. Any discrepancy is explained.
- ◆ Version of GRI Universal Standards: 2021. Version of GRI Topic Standards: Specified in the index.
- ◆ GRI Sector Standards: No.

GRI 2 General Disclosures

INDICATOR	DISCLOSURE ITEM	CHAPTER IN THE REPORT	PAGE	NOTE/REASON FOR OMISSION
1. Organization and its reporting practices				
2-1	Organizational details	2.1 Company profile	16	
2-2	Entities included in the organization's sustainability reporting	About the Report	5	
2-3	Reporting period, frequency and contact point	About the Report	5	
2-4	Restatements of information	About the Report	5	
2-5	External assurance	Appendix V	85	
2. Activities and workers				
2-6	Activities, value chain and business relationships	2.1 Company profile 4.1 Supplier management	16/42	
2-7	Employee	5.1 Attraction and retention	50	
2-8	Workers who are not employees	5.1 Attraction and retention	50	
3. Governance				
2-9	Governance structure and composition		-	2-9b. There is no committee in MSI Board of Directors responsible for topics in impact on economy, environment and people. All relevant decisions are made and all supervision is executed by the Board of Directors directly. 2-9c. Please refer to the Company's website for composition of the Board of Members and committee: https://tw.msi.com/about/corporateGovernance
2-10	Nomination and selection at the highest governance unit		-	a. Director election of the Company is based on candidate nomination system according to Article 14 of the Articles of Association. The Board or shareholders nominated candidates during the period announced for accepting nomination. Nominees are elected by the shareholders' meeting. b. According to the "Corporate Governance Standard," board members specialized in the technology industry, sales, business, financial accounting and law are applicable to the diversity policy. (Please refer to page 22 in the shareholders' meeting annual report.) Besides members of the Remuneration Committee selected by the Board, all independent directors form the Audit Committee. Please refer to page 22 in the shareholders' meeting annual report for professional qualification and independence of independent director. Impact management ability in "environment, economy and people" has not become the requirement for selection of the members of the Board. The selection system will continue to be improved in future. Please refer to "Board member diversity section" on the MSI website for the rest of the information. https://tw.msi.com/about/corporateGovernance
2-11	Chairman of the highest governance unit	-	-	The chairman of the highest governance unit is not a member of senior management.
2-12	The role the highest governance unit plays in monitoring impact management	-	-	MSI sets up the direction for sustainable development goal via regular meeting of ESG Committee, and complies with development vision of the Company. In the meantime, strategy and action of environmental and people topics are adjusted and executed every year depending on the situation after being discussed by the ESG Committee and determined by senior management. The Board monitors impact on economy, environment and people for the Company through regular report by internal audit executive and the report by the President. Please refer to the section "Communication between independent directors, internal audit executives and CPAs" on the MSI website. https://tw.msi.com/about/corporateGovernance
2-13	Person in charge of impact management	2.2 Governance structure	20	
2-14	The role of the highest governance unit plays in sustainability reporting	2.2 Governance structure	20	
2-15	Conflict of interests		-	a. MSI's "Board Meeting Rules of Procedure" and "Rules Governing the Conduct of Board Meeting" specified that directors shall avoid any agenda they hold a stake in. Meanwhile, the employee work rules specify that no employee may participate in the business or a part-time job involving conflicts of interests with the Company for himself or others or work in a business or part-time job involving conflicts of interests of the Company with others during employment. b. Please refer to pages 42-44 in the shareholders' meeting annual report for avoidance of conflicts of interests. Please refer to page 10 in the shareholders' meeting annual report for concurrently serving other positions. Please refer to page 108 in the shareholders' meeting annual report for cross ownership. Please refer to page 51 in the shareholders' meeting annual report for controlling shareholder. Please refer to page 168-171 in the shareholders' meeting annual report for stakeholder trading.

INDICATOR	DISCLOSURE ITEM	CHAPTER IN THE REPORT	PAGE	NOTE/REASON FOR OMISSION
2-16	Communicate on critical material incidents	-	-	If any major incident associated with environment, economy and people, the responsible executive being reported or the responsible executive in charge of internal handling will bring up the major incident, and communicate and discuss with the top executive of corporate governance, legal affairs and internal audit. The meeting decides whether to report the incident to the President for the decision or at the Board of Meeting. In addition, MSI Board of Meeting on August 11, 2022 passed the "Internal Material Information Handling Procedure" to make sure that there's a standard response method internally and externally for topics meeting specific criteria. No material negative incident was reported to the Board of Meeting during the report period.
2-17	Group intelligence of the highest governance unit	-	-	Please refer to pages 27-29 in the shareholders' meeting annual report for advanced studies of the members of the Board. Please refer to page 11 in the shareholders' meeting annual report for professional experience and skill. Please refer to the section "Director attendance (presence) at the Board meeting and advanced studies" on MSI's website. https://tw.msi.com/about/corporateGovernance
2-18	Performance evaluation of the highest governance unit	-	-	Self-evaluation of the Board of Members, Remuneration Committee and Audit Committee is executed at least once a year. The procedure and result of self-evaluation is disclosed on page 23 in the shareholders' meeting annual report. Employees may also refer to the section "Performance evaluation guidelines and self-evaluation of the Board" on MSI's website. There is no external evaluation of the Independent Board for now. https://tw.msi.com/about/corporateGovernance
2-19	Remuneration policy	-	-	a. Please refer to pages 18 and 30-31 in the shareholders' meeting annual report. Please refer to pages 147-150 and 204-206 in the shareholders' meeting annual report for the retirement benefit of the members of the Board and top management. b. There's performance appraisal in "environment, economy and people" for MSI's Board and some of the top management teams. However, the impact management ability of "environment, economy and people" is not the primary basis for determining remuneration of all members of the Board or top management yet. Continuous adjustment and improvement will be made in future.
2-20	Process for determining remuneration	-	-	Please refer to pages 30-31 in the shareholders' meeting annual report, and Remuneration Committee Organization Charter on MSI website. https://tw.msi.com/about/corporateGovernance
2-21	Annual total remuneration ratio	-	-	a. 3.38-6.77 (It is announced in the shareholders' meeting annual report that the highest pay in the organization is NT\$5 to 10 million. The median salary of non-managerial employees is NT\$1.478 million.) b. 10.45-10.04 (It is announced in the shareholders' meeting annual report that the highest pay in the organization is: NT\$30 to 50 million in 2021, and NT\$5 to 10 million in 2022. The median salary of non-managerial employees is NT\$1.606 million, NT\$1.478 million in 2021.)

4. Strategy, policy and practice

2-22	Statement for sustainable development strategy	Words from the Chairman and President 1.1 MSI sustainable development strategy and commitment	5 8	
2-23	Policy commitment	Please visit this link for MSI environmental and supplier policy: https://csr.msi.com/global/Environmental-Sustainability-Policy https://csr.msi.com/global/supplier-policy	-	
2-24	Included in the policy commitment	4.1 Supplier management	42	
2-25	Procedure for negative impact remedy	1.2 Identification and analysis of material topics in 2023 – Material topic management 2.5.3 Grievance reporting mechanism, 5.3.1 Communication channel and employee interaction	12 26 60	
2-26	The mechanism for seeking advice and raising a concern	2.5 Ethics and compliance	24	
2-27	Compliance	2.1 Company profile	16	
2-28	Membership of public association			

5. Stakeholder engagement

2-29	Guideline for stakeholder engagement	1.2 Material topic identification and analysis in 2023 – Stakeholder engagement	10	
2-30	Collective bargaining agreement	5.3 Communication and care	59	

GRI 3 Material topic disclosure

INDICATOR	DISCLOSURE ITEM	CHAPTER IN THE REPORT	PAGE	NOTE/REASON FOR OMISSION
3-1	The process for determining material topics	1.2 Identification and analysis of material topics in 2023	9	
3-2	List of material topics	1.2 Identification and analysis of material topics in 2023 – Evaluation/Sorting	11/12	
3-3	Management of material topics	1.2 Identification and analysis of material topics in 2023 – Sorting	12	

Disclosure of specific GRI topics

SUSTAINABLE DEVELOPMENT TOPIC	GRI STANDARD ^{NOTE}	DISCLOSURE ITEM	CHAPTER IN THE REPORT	PAGE
Material topics in 2022				
Corporate performance	GRI 201 Economic Performance	201-1 Direct economic value generated and distributed	2.3 Operating performance	22
Product responsibility	GRI 416 Customer Health and Safety	416-1 Assessment of the health and safety impacts of product and service categories 416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	3.3 Green production and manufacturing 3.3.2 Product safety and hazardous substance management 2.5 Ethics and compliance	33 35 24
Climate change	GRI 305 Emissions	305-1 Direct (Scope 1) GHG emissions 305-1 Indirect greenhouse gas (GHG) emissions (Scope 2) 305-4 GHG emissions intensity	3.2.2 GHG emissions	31
Talent cultivation	GRI 404 Training and Education	404-1 Average hours of training per year per employee 404-3 Percentage of employees receiving regular performance and career development reviews	5.2.1 Training and development 5.2.3 Performance appraisal	56 59
Employee rights and friendly workplace	GRI 202 Market Presence GRI 401 Employment	202-1 Ratios of standard entry level wage by gender compared to local minimum wage 202-2 Proportion of senior management hired from the local community 401-1 New employee hires and employee turnover 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees 401-3 Parental leave	5.1.1 Employee overview 5.1.2 New and resigned employee 5.1.3 Parental leave and paternity leave 5.1.4 Remuneration and welfare	50 52 53 54

Disclosure of other specific topics

Corporate governance	GRI 405 Diversity and Equal Opportunity	405-1 Diversity of governance bodies and employees	2.2 Governance structure 5.1 Attraction and retention	20 50
Compliance	GRI 205 Anti-corruption	205-1 Operations subjected to reviews on the risk of corruption	2.5 Ethics and compliance MSI did not violate environmental, social or economic laws or regulations during this report period.	24
Occupational health and safety	GRI 403 2018 Occupational Health and Safety	403-8 Workers covered by an occupational health and safety management system 403-9 Work-related injuries 403-10 Work-related ill health	5.4.3 Occupational health and safety management 5.4.4 Outcome of occupational health and safety management There is no worker suffering from occupational disease or injured or died due to occupational disease during the report period.	64
Human rights management and labor relations	GRI 402 Labor-Management Relations	402-1 Minimum notice periods regarding operational changes	5.3.1 Communication channel and employee interaction	59

Note: The GRI guideline without year specified is the version in 2016.

II. SASB Index

TC-HW-230a.1: Description of approach in identifying and addressing data security risks in products

Refer to 2.2.3 Information Security Management Committee.

TC-HW-330a.1: Percentage of gender and racial/ethnic group representation for: (1) management, (2) technical staff and (3) all other employees

REGION/FACTORY ITEM	TAIWAN					
	MSIT			MSIT1		
	MALE	FEMALE	OTHER	MALE	FEMALE	OTHER
Management level	15.5%	5.1%		4.1%	1.3%	
Technical position	46.2%	33.2%		48.9%	45.7%	
Other employees						
Total	61.7%	38.3%		53.0%	217	
REGION/FACTORY ITEM	CHINA					
	MSIS			MSIK		
	MALE	FEMALE	OTHER	MALE	FEMALE	OTHER
Management level	10.7%	4.9%		8.8%	4.3%	
Technical position	20.6%	7.7%		48.4%	27.9%	
Other employees	34.5%	21.5%		4.4%	6.1%	
Total	65.9%	34.1%		61.6%	38.4%	

Description: Workers of production line in factories in China are listed as other employees. The ones in factories in Taiwan cannot be listed specifically. Therefore, general non-managerial employees are considered a technical position. For now MSI has not re-investigated employee gender. The gender displayed is based on statutory identity. However, MSI respects gender identification of all employees and the philosophy of diverse equal rights.

TC-HW-410a.1: Percentage of products by revenue that contain IEC 62474 declarable substances

99.9%.

5.1.11 Control use of substance in MSI Green Product Control Specifications stated that declaration must be completed for the substances in IEC 62474 Declarable Substance List. The substance lists of manufacturing process of products of the Company (including motherboard, graphics card, laptop/desktop, server, display, automotive electronics and other computer peripherals must be restricted by the Green Product Control Specifications, and confirmed by the GPM system. Some of the marketing items of peripherals do not belong to the electrical and electronic products. They are not restricted by Green Product Control Specifications and do not need to be confirmed by the GPM system.

TC-HW-410a.2: Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent

0%.

Since 2023, numerous MSI products have obtained the EPEAT silver level green mark, and apply for the EPEAT golden level green mark in 2025.

TC-HW-410a.3: Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria

ITEM	PERCENTAGE OF PRODUCTS BY REVENUE THAT MEET ENERGY STAR PRODUCTS
Desktop	18.79%
Laptop	69.38%
Total of all system products	59.06%

TC-HW-410a.4: Weight of end-of-life products, e-waste recovered, and percentage recycled

The gross weight of recycled and scrapped MSI products in the Netherlands is 356.164 metric tons.

The gross weight of recycled and scrapped products / gross weight of total products sold * 100% = 56.44%.

Refer to 4.4 Product disposal and recycling for product disposal and recycling in other regions.

TC-HW-430a.1: Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP), or equivalent, by (a) all facilities and (b) high-risk facilities

	ALL SUPPLIERS	HIGH RISK SUPPLIER
MSIT1	No supplier audit was performed in 2022. It is expected to be completed in 2023.	
MSIS	23.1%	66.7%
MSIK	23.3%	66.7%

TC-HW-430a.2: Tier 1 suppliers’ (1) nonconformance rate with the RBA Validated Audit Process (VAP), or equivalent, and (2) associated corrective action rate for (a) priority nonconformances and (b) other nonconformances

	PERCENTAGE OF SUPPLIERS THAT DID NOT PASS	DEFECT IMPROVEMENT RATE
MSIT1	No supplier audit was performed in 2022. It is expected to be completed in 2023.	
MSIS	33.3%	Major: 100% Other: 100%
MSIK	28.6%	Major: 100% Other: 100%

TC-HW-440a.1: Description of the management of risks associated with the use of critical materials

Refer to 4.2 Responsible minerals management.

The disclosure content of sustainable disclosure indicator – computer and peripheral industry as required by the Taiwan Financial Supervisory Commission:

NO.	INDICATOR	ANNUAL DISCLOSURE
1	Total energy consumption, percentage of purchased electricity and usage of renewable energy	Refer to 3.2 Climate change response.
2	Total water intake and total water consumption	Refer to 3.3 Green production and manufacturing.
3	Percentage of weight of generated hazardous waste and percentage of recycled generated hazardous waste	Refer to 3.4 Pollution and waste.
4	Describe the type of occupational disasters, number of people suffering from occupational disaster and percentage of people suffering from occupational disaster	Refer to 5.4 Occupational health and safety.
5	Disclosure of product lifecycle management: Including the weight of scrapped product and electronic waste, and percentage of recycled product and electronic waste	Refer to SASB-TC-HW-410a.4.
6	Description of risk management related to use of key material	Refer to 4.2 Responsible minerals management.
7	Total monetary loss incurred from legal action associated with anti-competitive practice regulations	No
8	Main product yield based on product type	Refer to page 76 in the shareholders’ meeting annual report.

III. ISO 26000 comparison table

TYPE	MAIN TOPIC	CHAPTER IN THE REPORT	PAGE	DESCRIPTION
Organization governance	The system making decisions and carrying out implementation when executing the goal	2.2 Governance structure	20	
Human rights	Comply with regulations and avoid inspection of risk incurred from human rights problems	2.5 Ethics and compliance	24	
	Human rights risk situations	4.1 Supplier management	42	
	Avoidance of complicity		16	
	Resolving grievances	CH2 About MSI	10 24 59	
	Discrimination and vulnerable groups	1.2 Material topic identification and analysis in 2023 – Stakeholder engagement	N/A	None of the MSI’s operating policies and systems is affected by gender, religion, ethnicity, nationality or political party.
	Civil and political rights	2.5 Ethics and compliance	42 50	
	Economic, social and cultural rights	5.3 Communication and care	50	
	Fundamental principles and rights at work	N/A	50	
	Employment and employment relationships	4.1 Supplier management	50	
	Conditions of work and social protection	CH5 Talent Attraction and Retention	50	
	Social dialogue	CH5 Talent Attraction and Retention	10	
	Health and safety at work	CH5 Talent Attraction and Retention	61	
	Human development and training	5.2 Cultivation and development	56	
Labor practices	Prevention of pollution	3.4 Pollution and waste	39	
	Sustainable resource use	CH3 Climate Action and Green Manufacturing	28	
	Climate change mitigation and adaptation	3.2 Climate change response	28	
	Protection of the environment, biodiversity and restoration of natural habitats	N/A	N/A	All of MSI’s factories are located in the industrial park, passed the environmental assessment standards, and have no impact on creatures in the surrounding area.
Environment	Anti-corruption	2.5 Ethics and compliance	24	
	Responsible political involvement	N/A	N/A	MSI stays politically neutral, does not make any political donation or lobbying or participate in relevant political activity.
	Fair competition	2.5 Ethics and compliance	24	
	Promoting social responsibility in the value chain	4.1 Supplier management	42	
	Respect for property rights	2.5 Ethics and compliance	24	
Fair operating practices	Fair marketing, factual and unbiased information and fair contractual practices	2.5 Ethics and compliance	24	
	Protecting consumers’ health and safety	3.3 Green production and manufacturing	33	
	Sustainable consumption	3.3 Green production and manufacturing	33	
	Consumer service, support, and complaint and dispute resolution	4.3 Customer service and privacy	45	
	Consumer data protection and privacy	4.3 Customer service and privacy	45	
	Access to essential services	4.3 Customer service and privacy	45	
	Education and awareness	N/A	N/A	Through digital channels such as technology forums, online communities, MSI combines experience marketing at key retail stores and cross-industry collaboration of business partners for users to understand industrial development and perform technical exchange. Refer to MSI’s website for relevant information: https://www.msi.com/index.php .
Consumer issues	Community involvement	CH6 Social Responsibility and Corporate Value	71	
	Education and culture	CH6 Social Responsibility and Corporate Value	71	
	Employment creation and skills development	CH6 Social Responsibility and Corporate Value	71	
	Technology development and access	2.1 Company profile	16	
	Wealth and income creation	CH2 About MSI	16	
	Health	5.4 Health and safety	61	
	Social investment	CH6 Social Responsibility and Corporate Value	71	

IV. United Nations Global Compact Comparison Table

TYPE	10 PRINCIPLES	CHAPTER IN THE REPORT	PAGE
Human rights	Businesses should support and respect the protection of internationally proclaimed human rights.	2.5 Ethics and compliance	24
	Make sure that they are not complicit in human rights abuses.		24
Labor standard	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	MSI executes collective bargaining according to all regulations in locations in which all MSI factories are located.	N/A
	The elimination of all forms of forced and compulsory labor.	2.5 Ethics and compliance 5.1 Attraction and retention	24
	The effective abolition of child labor.		50
	The elimination of discrimination in respect of employment and occupation.		
	Businesses should support a precautionary approach to environmental challenges.	CH3 Climate Action and Green Manufacturing	28
Environment	Undertake initiatives to promote greater environmental responsibility.		
	Encourage the development and diffusion of environmentally friendly technologies.		
Anti-corruption	Businesses should work against corruption in all its forms, including extortion and bribery.	2.5 Ethics and compliance	24

V. GRI & SASB external statement



INDEPENDENT ASSURANCE OPINION STATEMENT

2023 Micro-Star Sustainability Report

The British Standards Institution is independent to Micro-Star International Co., Ltd. (hereafter referred to as MSI in this statement) and has no financial interest in the operation of MSI other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of MSI only for the purposes of assuring its statements relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by MSI. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to MSI only.

Scope

The scope of engagement agreed upon with MSI includes the followings:

- 1. The assurance scope is consistent with the description of 2023 Micro-Star Sustainability Report.
- 2. The evaluation of the nature and extent of the MSI's adherence to AA1000 AccountAbility Principles (2018) and assessment of sustainability disclosure to be in conformance with the applicable SASB industry standard(s) in this report as conducted in accordance with type 1 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.
- 3. The assessment of disclosure to be in conformance with the applicable SASB industry standard(s) in this report as conducted in accordance with type 1 of AA1000AS v3 sustainability assurance engagement.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the 2023 Micro-Star Sustainability Report provides a fair view of the MSI sustainability programmes and performances during 2022. The sustainability report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the MSI and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are fairly represented. The sustainability performance information disclosed in the report demonstrate MSI's efforts recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that MSI's description of their approach to AA1000AS v3 and their self-declaration in accordance with GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a review of issues raised by external parties that could be relevant to MSI's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 4 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AP (2018).
- an assessment of the organization's use of metrics or targets of SASB Standard(s) to assess and manage topic-related risks and opportunities.

Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness and Impact of AA1000AP (2018), GRI Standards and SASB Standard(s) is set out below:

Inclusivity
This report has reflected a fact that MSI has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the MSI's inclusivity issues.

Materiality
MSI publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of MSI and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the MSI's management and performance. In our professional opinion the report covers the MSI's material issues.

Responsiveness
MSI has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for MSI is developed and continually provides the opportunity to further enhance MSI's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the MSI's responsiveness issues.

Impact
MSI has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. MSI has established processes to monitor, measure, evaluate and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the MSI's impact issues.

GRI Sustainability Reporting Standards (GRI Standards)
MSI provided us with their self-declaration of in accordance with GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the MSI's sustainability topics. However, the future report will be improved by the following areas:
— The organization disclosed "2-21 annual total compensation ratio" by taking the highest total compensation range published in their annual report as numerator. It is encouraged that the organization take the exact annual compensation as numerator, according to the instruction of 2-21, so the precision of the organization's sustainability report can be enhanced.

SASB Standards
MSI provided us with their self-declaration of in accordance with SASB Standard(s) (Technology and Communication Sector- Hardware, Ver. 2018-10). Based on our review, we confirm that the sustainability disclosure topics & accounting metrics of SASB Standard(s) (Technology and Communication Sector- Hardware, Ver. 2018-10) are reported, partially reported or omitted. In our professional opinion the self-declaration covers disclosure topics, associated accounting metrics and activity metrics for applicable SASB industry standard(s).

Assurance level
The moderate level assurance provided is in accordance with AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.
The moderate level assurance provided is in accordance with AA1000AS v3 in our review of SASB Standard(s).

Responsibility
The sustainability report is the responsibility of the MSI's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence
The assurance team was composed of Lead auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064 and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI: 
Peter Pu, Managing Director BSI Taiwan



AA1000
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000-4/V3-HWTBS

Statement No: SRA-TW-2022051
2023-06-07

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